Journal of Carcinogenesis
Covering Genesis to Therapeutics

Journal of Carcinogenesis, ISSN: 1477-3163
2025; Vol 24: Issue 8s, https://carcinogenesis.com/

Community mental health programs: A systematic review of quality assurance mechanisms

Tameem Alhomaid[*1], Khadijah Mohammed Ayoub[2], Lojean Mubarak Alharbi[3], Abdullah Saleh Saud Alghamdi[4], Fatima Alzhra Esameldeen Abujamal[5], Shareefah A. Alassiri[6], Nariman Mohammed Alghamdi[7], Eman Attyah Alqurashi[8], Abduallah Zaid alzaidy[9]

[*1]Family medicine and mental health consultant, Qassim Health Cluster
[2]Eli Lilly and company
[3]PNU - KFSHRC intern
[4]Critical care doctor, MOH
[5]Independent Researcher
[6]Consultant Family Medicine, Administration of Public Health, Branch of the Ministry of Health, Jeddah, Saudi Arabia
[7]Family medicine, king fahad medical city , Riyadh Saudi Arabia
[8]King Abdulaziz Hospital - Al-Fadilah PHC- Jeddah
[9]King Saud bin Abdulaziz University for Health Sciences (KSAU-HS)
***Corresponding Author:**
Tameem Alhomaid
Email ID: tameem@missionacademy.sa

ABSTRACT

Community mental health programs (CMHPs) are vital for delivering accessible, patient-centered care, yet their effectiveness hinges on robust quality assurance (QA) mechanisms. This systematic review synthesized evidence on QA mechanisms in CMHPs, examining their types, implementation, effectiveness, and contextual influences.

We searched MEDLINE, EMBASE, PsycINFO, CINAHL, and Cochrane Library and included 12 studies, published between 2015 and 2025, with diverse designs (randomized studies, quasi-experimental studies, observational quality improvement studies, longitudinal analyses). QA mechanisms included fidelity monitoring, continuous quality improvement (CQI) methodologies like Plan-Do-Study-Act (PDSA) cycles, routine outcome measurement (ROM), structured patient feedback, and community engagement.

Key findings demonstrated that fidelity monitoring improved program sustainment, employment outcomes, and adherence to evidence-based models. PDSA cycles enhanced compliance with physical health monitoring and reduced errors, while ROM increased clinician adoption of outcome tools. Structured patient feedback (e.g., DIALOG+) improved quality of life and empowerment, and community engagement bolstered accountability and equity. However, effectiveness varied by context; multi-component QA strategies and active implementation supports (e.g., learning collaboratives) were most impactful. Some interventions improved fidelity without enhancing patient satisfaction, underscoring the need for holistic QA designs.

Gaps persist in comparative effectiveness, long-term sustainability, and applicability to low-resource settings. Future research should prioritize adaptive, participatory QA frameworks, equity-focused designs, and technology integration to bridge these gaps. This review affirms QA as a cornerstone of high-quality CMHPs, offering actionable insights for policymakers, practitioners, and researchers to optimize service delivery and outcomes.

Keywords: *Community mental health, quality assurance, systematic review, fidelity monitoring, continuous quality improvement, patient outcomes.*

How to Cite: Tameem Alhomaid, Khadijah Mohammed Ayoub, Lojean Mubarak Alharbi, Abdullah Saleh Saud Alghamdi, Fatima Alzhra Esameldeen Abujamal, Shareefah A. Alassiri, Nariman Mohammed Alghamdi, Eman Attyah Alqurashi, Abduallah Zaid alzaidy, (2025) Community mental health programs: A systematic review of quality assurance mechanisms, *Journal of Carcinogenesis*, *Vol.24, No.8s*, 608-621

1. INTRODUCTION

Mental health disorders affect millions of individuals worldwide, contributing to significant social, economic, and healthcare burdens.[1] In response, community mental health programs have emerged as a critical approach to delivering accessible, patient-centered care outside traditional institutional settings.[2,3] These programs aim to promote recovery, enhance social integration, and reduce hospitalization rates by providing services such as counseling, crisis intervention, case management, and psychosocial rehabilitation.[3] However, the effectiveness of community mental health programs largely depends on the implementation of robust quality assurance (QA) mechanisms to ensure service delivery aligns with evidence-based practices and meets the needs of diverse populations.[4]

QA refers to the systematic processes, activities, and structures designed to monitor, assess, maintain, and improve the quality of care provided.[5] In the context of CMH, QA encompasses a broad spectrum, ranging from structural elements (staffing ratios, facility adequacy, training programs) and process indicators (e.g., adherence to clinical guidelines, care coordination, timeliness of interventions) to outcome measures (symptom reduction, functional improvement, service user satisfaction, reduced hospitalizations).[6] Effective QA mechanisms are essential for accountability (demonstrating to funders, policymakers, service users, and the public that resources are used effectively to achieve desired outcomes), identifying strengths, weaknesses, and variations in care delivery to drive targeted enhancements and innovation, minimizing risks and preventing adverse events for service users and staff, ensuring programs are implemented as intended, particularly for evidence-based practices, and monitoring and addressing disparities in access and outcomes across different population groups.[7]

Despite this recognized importance, the landscape of QA mechanisms specifically tailored and applied within CMH programs remains complex and heterogeneous. Approaches vary widely, including accreditation standards, clinical audits, performance indicators, routine outcome measurement, service user feedback systems (e.g., surveys, experience interviews), peer review, and continuous quality improvement (CQI) methodologies like Plan-Do-Study-Act cycles.[8] Questions persist regarding which mechanisms are most feasible, acceptable, valid, reliable, and impactful in the unique, often resource-constrained, and multifaceted environment of community mental health services. Therefore, a comprehensive synthesis of the existing evidence is needed.

This systematic review aims to synthesize the available evidence on the types, implementation processes, effectiveness, and contextual factors influencing Quality Assurance mechanisms within community mental health programs. This review seeks to inform the selection and implementation of practical, effective QA strategies, guide investment, policy development, and regulatory frameworks for CMH quality, identify gaps in the current evidence base and inform future research priorities, and understand how quality is measured and assured, promoting transparency and user-centered care.

2. METHODS

Study design

This systematic review employed the PICOS framework (Population, Intervention, Comparison, Outcomes, Study Design) to synthesize evidence on quality assurance (QA) mechanisms in community mental health programs (CMHPs). The research question guiding the review was: *"What quality assurance mechanisms have been implemented in community mental health programs, and how effective are they in improving service quality, safety, and outcomes?"*

PICOS-based eligibility criteria

Population comprised CMHPs delivering mental healthcare outside institutional settings, including service providers, organizations, and systems.

Intervention focused on QA mechanisms such as accreditation, clinical audits, performance indicators, routine outcome measurement, service user feedback, peer review, and continuous quality improvement (CQI) methodologies like Plan-Do-Study-Act (PDSA) cycles.

Comparisons included programs with versus without QA mechanisms, different QA approaches, or pre-/post-implementation data.

Outcomes included five domains: (1) service quality (adherence to best practices, fidelity to evidence-based models, staff competency); (2) safety, such as reduction in adverse events, risk management, etc.; (3) clinical/functional outcomes (symptom reduction, recovery rates, hospitalization rates); (4) service user experience, such as satisfaction, engagement and perceived quality of care; and (5) system-level outcomes (efficience, cost-effectiveness, equity in access).

Study designs (eligible) included randomized controlled trials (RCTs), quasi-experimental studies, cohort studies, case-control studies, other observational primary studies with comparative component, and mixed-methods research designs.

Search strategy

A literature search was conducted across five electronic databases (MEDLINE, EMBASE, PsycINFO, CINAHL, Cochrane

Library) from January 2015 to December 2025 to capture recent evidence. Grey literature sources (e.g., OpenGrey, WHO reports) and reference lists of included studies were hand-searched.

Search terms combined MeSH terms and keywords related to: *Population* (“community mental health,” “community-based mental health services,” “outpatient mental health care”); *Intervention* ("quality assurance,” “fidelity monitoring,” “clinical audit,” “outcome measurement,” “continuous quality improvement”); and *Outcomes* (“service quality,” “patient safety,” “recovery rates,” “hospitalization reduction,” “cost-effectiveness”).

Bolean operators were used to make search strings with the following example: (“community mental health” OR “community-based mental health”) AND (“quality assurance” OR “clinical audit” OR “fidelity monitoring” OR “PDSA cycles") AND (“service quality” OR “patient safety” OR “symptom reduction” OR “hospitalization rates”)

Study selection process

Two reviewers independently screened titles/abstracts against inclusion criteria, resolving discrepancies through discussion or third-reviewer consultation. Full texts of potentially eligible studies were also assessed for eligibility. The process adhered to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines[9].

Studies were excluded if they focused solely on inpatient/hospital-based services, lacked empirical data on QA effectiveness, were published before 2015 or in non-English languages, and did not fit the aforementioned eligibility criteria.

The selection process involved two independent reviewers who first screened titles and abstracts for relevance. Full-text articles of potentially eligible studies were then assessed for final inclusion based on the inclusion criteria. Any discrepancies between reviewers were resolved through discussion or consultation with a third reviewer. Figure 1 shows further details of this process.

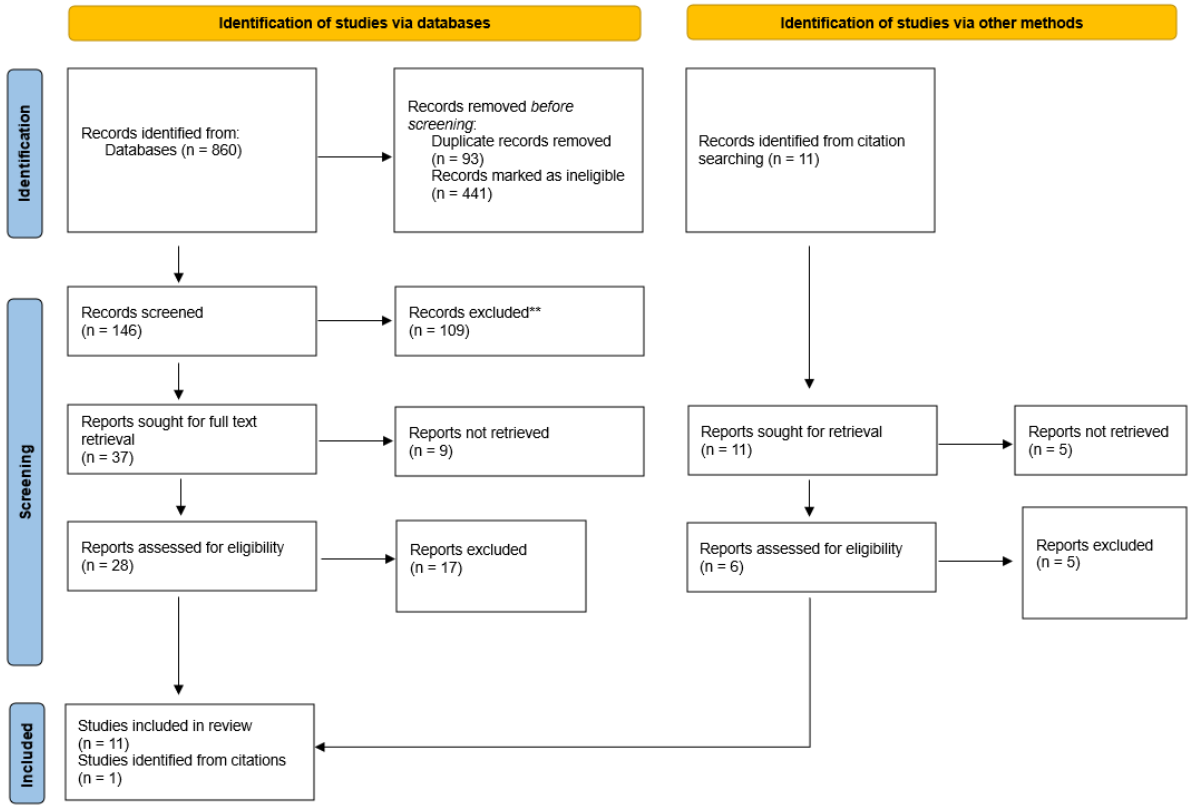

Figure 1. PRISMA Flow chart showing the study selection process

Data extraction

Data were extracted using a standardized template capturing study characteristics (authors, year, design, setting), population (sample size, demographic details, program type), intervention (QA mechanism, duration, implementation strategy), comparator (usual care, alternative QA approaches, or pre/post-data), outcomes (effect sizes, statistical significance, user feedback), and implementation factors (barriers and facilitators)

Quality assessment

To evaluate methodological rigor, a multi-faceted approach was employed using established tools tailored to study designs. For randomized controlled studies, the Cochrane Risk of Bias Tool (RoB 2.0)[10] was applied across five domains: randomization process, deviations from intended interventions, missing outcome data, outcome measurement, and selective reporting. Each study received a risk rating (low/some concerns/high), with particular attention to allocation concealment and blinding where feasible.

For other observational studies, the Newcastle-Ottawa Scale (NOS)[11] assessed selection bias (representativeness of cohorts, ascertainment of exposure), comparability (control for confounding variables), and outcome assessment (independent validation, follow-up adequacy). Two reviewers independently conducted all assessments, with a third reviewer resolving discrepancies through consensus discussions.

Data synthesis

A narrative synthesis was conducted. Findings were summarized in structured tables and organized into four key themes: (1) effectiveness of QA mechanisms, evaluating impacts on fidelity to evidence-based models, clinical outcomes (e.g., symptom reduction), and system efficiency (e.g., reduced hospitalizations); (2) implementation strategies, examining the role of training, technology integration, and multi-component approaches (e.g., combining audits with PDSA cycles); (3) contextual influences, including resource availability, organizational culture, and equity considerations (e.g., rural/underserved populations); and (4) gaps in evidence, highlighting needs for comparative effectiveness data, sustainability analyses, and low-resource adaptations. The synthesis prioritized comparative insights to identify high-impact QA mechanisms (e.g., fidelity monitoring outperformed isolated audits for employment outcomes), real-world applicability, exploring how strategies like learning collaboratives enhanced implementation success, and equity considerations, assessing whether QA reduced disparities in access or outcomes across populations.

RESULTS

Included 12 studies were published between 2015 and 2025, and employed diverse designs, predominantly cluster-randomized trials,[12–16] followed by quasi-experimental studies,[17,18] observational quality improvement projects,[19,20] longitudinal analyses,[21,22] and an RCT.[23] The populations varied but often focused on high-need groups, including adults with severe mental illness (e.g., psychosis, depression), children/adolescents, and underrepresented communities (e.g., rural and low-income minorities). Sample sizes ranged from small single-site cohorts (e.g., n=30) to large multi-program analyses (e.g., thousands of participants). Key findings demonstrated the effectiveness of QA mechanisms: fidelity monitoring improved employment outcomes and program sustainability, PDSA cycles enhanced compliance with physical health monitoring and reduced errors, and routine outcome measurement increased clinician adoption of evidence-based tools. However, some interventions, like improvements in the crisis resolution team (CRT), boosted fidelity without significantly impacting patient satisfaction. Overall, the studies highlighted the positive impact of QA mechanisms on clinical outcomes, service quality, and system efficiency, though their effectiveness varied by context and implementation strategy (Table 1).

Table 1. Characteristics of included studies

Authors, Year*	Title	Study design	Population characteristics	Sample	Main findings
Abdussalam et al.[19] 2025	Reducing Physical Health Inequalities: A Community Mental Health Clinic Quality Improvement Project	Observational study; Quality improvement project using the PDSA framework	Individuals with severe mental illness (SMI) Compromised physical health status with greater physical health inequalities and lower life expectancy	30 service users	There was a significant improvement in compliance with physical health monitoring during the project. Outstanding blood test results decreased from 140 to 24, and pending ECG results decreased from 16 to 1 in four weeks. By eight weeks, full compliance (100%) was achieved.
Bond et al.[21] 2016	The IPS Learning Community: A Longitudinal	Multi-site longitudinal observational study	IPS team leaders in 129 programs actively participating in	129 programs	Nearly all IPS programs (96%) sustained over a two-year period, exceeding typical sustainment rates for

	Study of Sustainment, Quality, and Outcome.		the learning community		evidence-based practices. Sustaining sites showed improvements in quality indicators, including increased employment rates and fidelity scores. The learning community activities fostered both sustainment and quality improvements.
Omer et al.[13] 2016	Exploring the Mechanisms of a Patient-Centred Assessment with a Solution Focused Approach (DIALOG+) in the Community Treatment of Patients with Psychosis: A Process Evaluation within a Cluster-Randomised Controlled Trial	Cluster-randomised controlled trial	Adult men and women aged 18-65 clinically diagnosed with schizophrenia or a related disorder.	Total: 179 - Experimental: 94 - Control: 85	DIALOG+ is effective through four main mechanisms: a comprehensive structure, self-reflection, therapeutic self-expression, and empowerment. Patients took responsibility for the majority of actions agreed upon during sessions, indicating empowerment. The treatment effect was largest for living situation and mental health, which were commonly discussed topics during sessions.
Ong et al.[14] 2017	A Community-Partnered, Participatory, Cluster-Randomized Study of Depression Care Quality Improvement: Three-Year Outcomes.	Cluster-randomized trial	Participants were adults with depression. Majority were from ethnic minority backgrounds: Latino (41%), African American (46%), Non-Hispanic white (9%), Other (4%). Female participants made up 58% of the sample. 44% had less than a high school education. A significant portion was below the poverty level (74%). Many had multiple chronic health conditions (54%). - A history of depressive	Total: 981 RS: 46 programs (293 participants at 3-year follow-up) CEP: 49 programs (307 participants at 3-year follow-up)	At three years, CEP and RS did not have differential effects on primary mental health outcomes. CEP showed modest improvements in physical health-related quality of life and a reduction in behavioral health hospital nights compared to RS. These findings suggest potential long-term benefits of CEP in physical health and reduced hospitalization rates.

			disorders was common (62%). Mean age was 45.4 years.		
McCaffrey et al.[17] 2023	Modelling the Clinical and Economic Impacts of Foundation-Funded versus Staff-Driven Quality Improvement Mental Health Strategies	Quasi-experimental study	School-aged children and adolescents with mental health concerns participating in a regional mental health program	SMILES Exposed: 25,719, Unexposed: 28,439 – CanREACH Exposed: 1,081 Unexposed: 2,912 IGS: Exposed: 6,031 Unexposed: 7,622 AAH Exposed: 2,603 Unexposed: 18,603	The pre-admission initial family group session was the most cost-effective innovation. The physician training program was both effective and cost-neutral. The acute at home project successfully diverted less suicidal patients away from inpatient readmission.
Smith et al.[18] 2020	Outcomes of a primary care mental health implementation program in rural Rwanda: A quasi-experimental implementation-effectiveness study.	Quasi-experimental study	Adults diagnosed with mental disorders or epilepsy Female gender dominated: 66% Age distribution: 50% aged 18-35, 36% aged 36-59, 14% aged 60 and up Education levels: 39% no education, 25% 1-3 years, 28% 4-6 years, 8% more than 6 years Marital status: 31% never married, 47% married, 11% separated, 12% widowed -	146	The MESH MH program was associated with high service use and improvements in mental health care delivery by primary care nurses. There were significant improvements in clinical symptoms and functional disability as measured by the GHQ-12 and WHO-DAS Brief scales. The program led to significant decreases in the percentage of service users unable to work and in the proportion of households where caregivers had to leave work to care for service users.

			Employment status: 59% subsistence farming/labor, 10% non-income generating work, 2% labor, 4% studying, 25% unemployed. Resided in a rural district in Rwanda		
Metz et al.[12] 2017	A National Quality Improvement Collaborative for the clinical use of outcome measurement in specialised mental healthcare: results from a parallel group design and a nested cluster randomised controlled trial	Cluster randomised controlled trial (RCT)	Specialized mental healthcare providers Clinicians: physicians, psychologists, nurses Treating different patient groups based on age, diagnosis, and setting Nurses typically work in chronic care; psychologists in short-term curative outpatient treatment	Total: 35 teams Intervention: 21 teams Control: 14 teams	Intervention teams demonstrated a significantly higher level of implementation of outcome measurement compared to control teams in both the parallel group design and the nested RCT. The overall effects were large, with effect sizes of d=0.99 for the parallel group design and d=1.25 for the RCT. The intervention was successful across different groups of clinicians, with psychologists, nurses, and physicians all showing significant improvements in the use of outcome measurement.
Mouko et al.[20] 2017	Systems for physical health care for mental health patients in the community: different approaches to improve patient care and safety in an Early Intervention in Psychosis Service.	Observational study; Quality improvement project	Individuals aged 14-35 experiencing psychosis or prodromal symptoms and have severe mental health problems	Total: 79	The combination approach was the most successful, with 48% of patients completing all physical health checks, blood tests, and ECGs. The mobile physical health clinic achieved completion rates of 60% for physical health checks and 65-70% for blood tests. Letters to GPs and patients resulted in a 92% completion rate for ECGs.
Lloyd-Evans et al.[15] 2020	The CORE service improvement programme for mental health crisis resolution teams: results from a cluster-randomised trial	Non-blind cluster-randomised trial	Adult men and women aged 42 (mean age). Majority white (around 86-87%) Experiencing mental health crisis Varied	Total: 25 Intervention: 15 Control: 10	The CRT service improvement programme did not improve patient satisfaction but showed promise in improving model fidelity. There were fewer in-patient admissions and lower in-patient bed use in the

			professional groups among staff (nurses, occupational therapists, psychiatrists, psychologists, social workers, support workers)		intervention group compared to the control group. The intervention improved staff psychological health.
Alhassan et al.[23] 2015	Effect of Community Engagement Interventions on Patient Safety and Risk Reduction Efforts in Primary Health Facilities: Evidence from Ghana.	Multi-Site Randomized Controlled Trial (RCT)	Primary healthcare facilities Diverse community groups, including religious/faith-based, traders, widows, community volunteers, musicians, artisans, and youth groups Predominantly female-dominated groups - Mix of literate and illiterate members From both rural and urban areas	Total: 64 Intervention: 32 Control: 32	Clinic staff efforts towards increasing patient safety and reducing risk improved significantly in intervention facilities, especially in leadership/accountability and staff competencies. Community groups with gender balance, religious/faith-based, and structured leadership were more effective in SCE. Systematic community engagement is a useful strategy for improving healthcare quality by enhancing provider accountability and client confidence.
De Winter et al.[22] 2020	Fidelity and IPS: Does quality of implementation predict vocational outcomes over time for organizations treating persons with severe mental illness in the Netherlands?	Longitudinal, multi-site, observational study	Individuals with severe mental illness	27 IPS programs	Both IPS fidelity and employment outcomes improved over time, with the largest improvement in employment outcomes achieved after 18 months of implementation. A significant positive longitudinal association was found between IPS-fidelity and employment outcomes. Improvement of fidelity is associated with improvement of employment outcomes over time.
Stanhope et al.[16] 2021	Implementing Person-Centered Care Planning: A Randomized Controlled Trial.	Cluster randomized controlled trial, multi-site	Provider teams trained in PCCP set in 14 community mental health clinics	Total: 14 clinic sites PCCP training: 7 clinic sites Service planning as usual: 7 clinic	The study tested the effect of PCCP training on person-centered care delivery in community mental health clinics. Significant improvements in delivering person-centered care were observed at 12 and 18 months in the PCCP

				sites	training group compared to the control group. PCCP training increased provider competency in delivering person-centered care.

Year of publication, **AAH — Acute at Home, **CanREACH** — Canadian Research and Education for the Advancement of Child Health, **CEP** — Community Engagement and Planning, **CORE** — Crisis Resolution Team Optimisation and Relapse Prevention Evaluation, **CRT** — Crisis Resolution Team, **d** — Cohen's d (effect size), **ECG** — Electrocardiogram, **GHQ-12** — 12-item General Health Questionnaire, **GP** — General Practitioner, **IGS** — Integrated Governance Structure, **IPS** — Individual Placement and Support, **MESH MH** — Mentoring and Enhanced Supervision at Health Centers for Mental Health, **PCCP** — Person-Centered Care Planning, **PDSA** — Plan-Do-Study-Act, **RCT** — Randomized Controlled Trial, **RS** — Resources for Services, **SCE** — Structured Community Engagement, **SMI** — Severe Mental Illness, **SMILES** — Strengthening Mental Health in Low-Income Settings, **WHO-DAS** — World Health Organization Disability Assessment Schedule*

The findings showed key themes of QA mechanisms in community mental health programs (Tables 1 and 2).

Effectiveness of diverse QA mechanisms

A wide range of QA mechanisms demonstrated effectiveness in improving specific aspects of CMHP service delivery and outcomes. Included studies consistently showed that monitoring fidelity to evidence-based models (e.g., individual placement and support, person-centered care planning, crisis resolution teams) and providing associated training led to improved program sustainment, higher fidelity scores, better employment outcomes, reduced inpatient admissions, and enhanced delivery of person-centered care.[15,16,21,22]

CQI methodologies, particularly PDSA cycles, were highly effective in addressing specific process deficiencies. They significantly improved compliance with physical health monitoring (100% compliance achieved), reduced prescription and medication administration errors, improved documentation, and cleared backlogs in tasks like blood tests and ECGs.[18,19] Multi-component CQI approaches (e.g., combining mobile clinics, GP letters, incentives) were notably successful in improving completion rates for physical health checks.[20]

Implementing routine outcome measurement, especially through structured collaboratives, significantly increased clinicians' use of outcome measures and their perceived utility and accessibility, with large effect sizes.[12] Clinical audits combined with feedback were also effective components of QA strategies.[18]

Interventions incorporating structured patient-centered assessment and feedback with solution-focused approaches improved patients' subjective quality of life (particularly in living situation and mental health domains), reduced unmet needs and symptoms, and empowered patients who took responsibility for agreed actions.[13]

Structured community engagement in quality assessment (e.g., involving community groups in QA processes) improved leadership, accountability, and staff competencies in primary health facilities offering mental health services. It fostered provider accountability and client confidence.[23] Community-partnered approaches to depression care improvement (CEP) showed long-term benefits in physical health-related quality of life and reduced behavioral health hospital nights compared to technical assistance models.[14]

Impact on key outcome domains

The QA mechanisms positively influenced various critical outcome domains. Improvements were seen in symptom reduction of conditions, such as psychosis, depression, functional disability, work ability, recovery rates, and reduced hospitalization/readmission rates.[13,16–18,24] QA led to better adherence to service quality and safety best practices (e.g., physical health monitoring), reduced errors (medication), improved documentation, enhanced model fidelity, and reduced adverse events/inpatient admissions.[19,21,24] Further improvements included increased patient satisfaction, perceived quality of care, patient knowledge, empowerment, and engagement.[13] However, some interventions, such as the CRT improvement toolkit, improved fidelity and reduced admissions without significantly impacting patient satisfaction scores.

QA contributed to system-level outcomes, such as increased efficiency, cost-effectiveness/cost savings (reduced hospital nights, effective training programs), potential equity in access via community engagement, and increased service utilization, such as referrals, and use of community services.[14,17,18,23]

Contextual factors and implementation

The effectiveness of QA mechanisms was often influenced by context and implementation strategies. For instance, multi-component approaches (combining training, workflow changes, audits, PDSA cycles, community engagement) frequently yielded stronger results than single interventions. Active implementation strategies like learning communities,[21] national

collaboratives,[12] structured community engagement,[14,23] and dedicated QI support were crucial facilitators. Moreover, staff factors such as training, confidence, and psychological well-being were positively impacted by some QA interventions, including CRT toolkit, and were also key to successful implementation.[19] Finally, organizational factors like leadership engagement and financial incentives played roles in success.[20,23]

Gaps and variations in effectiveness of QA mechanisms

While many mechanisms showed positive effects, questions persist about comparative effectiveness, long-term sustainability, generalizability across diverse settings (especially low-resource contexts), and cost-effectiveness. Some interventions showed differential effects (e.g., CEP improved physical health but not always mental health outcomes compared to control),[14] and patient satisfaction was not universally improved.

Table 2. Community Mental Health QA by Mechanism Type and Reported Outcomes

Author(s), Year*	QA Mechanism	QA Mechanism Type	Key Outcomes
Bond et al.[21] 2016	Fidelity assessments, transparent outcome reporting, learning community	Fidelity Monitoring	96% sustainment over 2 years; improved fidelity scores and employment rates
De Winter et al.[22] 2020	IPS fidelity monitoring over time	Fidelity Monitoring	Higher fidelity linked to better employment outcomes
Lloyd-Evans et al.[24] 2020	Service improvement toolkit, fidelity monitoring	Fidelity Monitoring + CQI	Improved model fidelity, reduced inpatient admissions, improved staff well-being
Stanhope et al.[16] 2021	PCCP training, fidelity assessment	Fidelity Monitoring + Training	Significant improvement in person-centred care delivery at 12 and 18 months
Abdussalam et al.[19] 2025	PDSA framework, staff training, workflow redesign, weekly backlog clearance	Continuous Quality Improvement (CQI)	100% compliance with physical health monitoring in 8 weeks; reduced outstanding blood tests and ECGs
Smith et al.[18] 2020	Training, supervision, audit & feedback, QI cycles	Audit & Feedback + CQI	Significant improvement in symptoms, functioning, work ability, and caregiver burden
Metz et al.[12] 2017	Routine outcome measurement (ROM) via national QI collaborative	Outcome Measurement & Audit	Significant improvement in ROM use, perceived utility, and accessibility
Alhassan et al.[23] 2015	Structured community engagement in quality assessment	Community Engagement	Improved leadership, accountability, and workforce competence
Omer et al.[13] 2016	Structured patient-centred assessment (DIALOG+), solution-focused review	Structured Review & Feedback	Improved quality of life, fewer unmet needs, lower symptoms, better social outcomes
Mouko et al.[20] 2017	Mobile clinics, GP letters, financial incentives, managerial engagement	Multi-Component QI	Higher completion rates for physical checks, blood tests, ECGs
McCaffrey et al.[17] 2023	Multiple QI strategies (training, family sessions, acute-at-home models)	Mixed QI Approaches	Increased referrals, cost savings, reduced re-admissions
Ong et al.[14] **2017**	Community-partnered depression care improvement processes	Community Engagement & CQI	Modest physical health gains; reduced behavioural health hospital nights

***CQI** — Continuous Quality Improvement, **DIALOG+** — Digital Assessment and Intervention for Dialogue, **ECG** — Electrocardiogram, **GP** — General Practitioner, **IPS** — Individual Placement and Support, **PCCP** — Person-Centered*

*Care Planning, **PDSA** — Plan-Do-Study-Act, **QI** — Quality Improvement, **ROM** — Routine Outcome Measurement*

3. DISCUSSION

This systematic review synthesized the available evidence on the types, implementation processes, effectiveness, and contextual factors influencing Quality Assurance mechanisms within community mental health programs. The findings showed that robust QA mechanisms are feasible and effective in enhancing diverse outcomes within community mental health programs. Key mechanisms (fidelity monitoring, CQI methodologies like PDSA cycles, Routine Outcome Measurement (ROM), structured patient feedback, and community engagement) demonstrated significant positive impacts on clinical outcomes (symptom reduction, functional recovery, reduced hospitalizations), service quality (adherence to best practices, reduced errors), patient experience (satisfaction, empowerment), and system efficiency (cost savings, resource optimization).

These findings align with broader literature emphasizing the critical role of systematic QA in translating evidence-based practices into real-world effectiveness.[25–27] For instance, Proctor et al.[27] systematically categorized implementation strategies, highlighting fidelity monitoring and audit/feedback as core components crucial for successful uptake of interventions, reinforcing our findings on fidelity's impact on employment outcomes and ROM's effect on clinician adoption of evidence-based tools. Similarly, a meta-analysis by Woltmann et al.[28] on collaborative chronic care models (CCMs) found that structured QA elements like protocolized care and systematic follow-up were key drivers of improved outcomes for severe mental illness, agreeing with our observations on the effectiveness of multi-component CQI approaches. However, the review also reveals critical new insights and challenges. While QA mechanisms generally improved outcomes, their effectiveness was not uniform across all domains. For example, CRT fidelity toolkits improved model adherence and reduced admissions but failed to enhance patient satisfaction.[24] This discrepancy underscores that structural and process improvements do not automatically translate into perceived quality by service users, a finding also reported by other studies examining patient-centeredness in mental health care.[29,30] A meta-analysis by Gilbody et al.[31] noted that while ROM increased the *use* of outcome data, its impact on clinical outcomes was more variable and often dependent on how clinicians actively integrated feedback into treatment decisions. This aligns with our findings that ROM implementation via collaboratives significantly enhanced perceived utility and accessibility but required active facilitation strategies. Furthermore, community-partnered approaches, such as CEP, showed significant long-term benefits in physical health-related quality of life and reduced hospital admissions compared to technical assistance models, yet had inconsistent effects on core mental health symptoms. This aligns with a randomized study by Druss et al.,[32] on integrated care, suggesting that QA focused on specific physical health processes can yield tangible physical health gains, but impacting complex mental health trajectories may require deeper, more sustained integration or different mechanisms.

The critical role of context and implementation strategy emerged as a dominant theme influencing QA effectiveness. Multi-faceted approaches combining training, workflow redesign, audit/feedback, PDSA cycles, and community engagement consistently yielded stronger results than single-component interventions. This emphasizes the interplay of intervention characteristics, outer setting (e.g., community needs), inner setting (e.g., organizational readiness, leadership), and implementation processes. Aarons et al.[33] demonstrated that leadership engagement and organizational climate significantly moderate the success of evidence-based practice implementation, directly supporting our finding that leadership buy-in and organizational factors like financial incentives were key facilitators for QA success.[20] Active implementation strategies like learning communities[21] and national collaboratives[12] were crucial facilitators, acting as vehicles for shared learning, peer support, and accountability. These mechanisms were also highlighted by previous research,[34] as essential components of successful implementation drivers.

Significant gaps and challenges persist. First, questions about the comparative effectiveness of different QA mechanisms remain largely unanswered. While our review identifies effective types (fidelity, CQI, ROM, engagement), robust head-to-head trials comparing their efficiency, cost-effectiveness, and relative impact on specific outcomes (clinical vs. experiential) in similar contexts are scarce. Second, long-term sustainability of QA gains is a major concern. Few studies tracked outcomes beyond 2-3 years, and the resources required for ongoing activities like fidelity monitoring or ROM can be substantial. Future research must explicitly measure the maintenance of QA processes and their effects over extended periods, particularly in resource-constrained settings. Third, generalizability, especially in low-resource contexts, is a critical limitation, as most of the studies included were conducted in high-income countries. QA models reliant on technology, extensive training, or dedicated QI staff may be impractical in low-resource countries.

Innovative, context-adapted QA strategies are needed, potentially leveraging task-sharing (trained lay workers for basic fidelity checks or ROM collection) and low-cost mobile technologies for data collection and feedback, as shown to be effective in Africa by Hanlon et al.[35] While some studies targeted underserved populations, few QA mechanisms were explicitly designed or evaluated for their impact on reducing disparities in access, experience, or outcomes across racial/ethnic, socioeconomic, or geographic groups. Applying an equity lens to QA design and evaluation, as advocated by O'Neill et al.,[36] is essential.

Moving forward, integrating implementation science frameworks into QA design is vital. Frameworks like the

Normalization Process Theory (NPT)[37,38] can help structure the understanding of barriers and facilitators, guiding the selection and tailoring of QA strategies to specific contexts and enhancing their potential for embedding into routine practice (normalization).[38] Furthermore, embracing adaptive and participatory QA designs holds promise. Adaptive designs allow for iterative refinement of QA interventions based on ongoing data, while truly participatory approaches co-design QA mechanisms with service users and frontline staff, ensuring relevance and buy-in[38,39]. This aligns with the principles of *"experience-based co-design"* and the recovery movement, emphasizing service user leadership in defining and measuring quality.[40] Previous research underscores the value of user-led evaluation in capturing meaningful aspects of recovery often missed by traditional QA metrics.[41] Finally, leveraging technology can enhance QA feasibility and impact. Digital platforms can streamline ROM collection and feedback, facilitate remote fidelity monitoring or peer review, support PDSA tracking, and enable real-time service user feedback. However, digital divides and ethical considerations regarding data privacy and algorithmic bias must be addressed, particularly for marginalized populations.[42]

4. CONCLUSION

This review solidifies the evidence that well-implemented QA mechanisms are vital for optimizing community mental health programs. Fidelity monitoring, CQI (especially PDSA cycles), ROM, structured patient feedback, and community engagement demonstrably improve a range of critical outcomes. These include clinical outcomes, service quality and safety, patient experience, and system efficiency. However, their success is dependent on context and implementation strategy, demanding multi-faceted, actively supported approaches. Future efforts must prioritize rigorous comparative effectiveness research, long-term sustainability studies, development and evaluation of QA models for low-resource settings, explicit integration of equity considerations, and the application of implementation science frameworks and participatory, adaptive designs. By addressing these priorities and thoughtfully leveraging technology, QA can evolve from a compliance exercise into a dynamic, integrated driver of continuous improvement and equitable, recovery-oriented care within community mental health systems. Future research should focus on comparative effectiveness, long-term impact, implementation in diverse settings, and standardized outcome measurement.

REFERENCES

[1] Word Health Organization. World Mental Health Report: Transforming Mental Health for All.; 2022. Accessed August 12, 2025. https://www.who.int/publications/i/item/9789240049338

[2] Adetola Anifat Ajayi, Matilda Akweley Thompson. Community-based approaches to mental health support in the United States. Int J Frontline Res Pharm Bio Sci. 2025;4(1):001-007. doi:10.56355/ijfrpbs.2025.4.1.0022

[3] Thornicroft G, Deb T, Henderson C. Community mental health care worldwide: current status and further developments. World Psychiatry. 2016;15(3):276-286. doi:10.1002/wps.20349

[4] Drake RE, Goldman HH, Leff HS, et al. Implementing Evidence-Based Practices in Routine Mental Health Service Settings. PS. 2001;52(2):179-182. doi:10.1176/appi.ps.52.2.179

[5] Donabedian A. The Quality of Care: How Can It Be Assessed? JAMA. 1988;260(12):1743. doi:10.1001/jama.1988.03410120089033

[6] Slade M. Mental illness and well-being: the central importance of positive psychology and recovery approaches. BMC Health Serv Res. 2010;10(1):26. doi:10.1186/1472-6963-10-26

[7] Hughes RG. Tools and Strategies for Quality Improvement and Patient Safety. In: Hughes RG, ed. Patient Safety and Quality: An Evidence-Based Handbook for Nurses. Advances in Patient Safety. Agency for Healthcare Research and Quality (US); 2008. Accessed August 12, 2025. http://www.ncbi.nlm.nih.gov/books/NBK2682/

[8] Boaden R, Harvey G, Moxham C, Poudlove N, eds. Quality Improvement: Theory and Practice in Healthcare. NHS Institute for Innovation and Improvement; 2008.

[9] Page MJ, McKenzie JE, Bossuyt PM, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ. Published online March 29, 2021:n71. doi:10.1136/bmj.n71

[10] Higgins JPT, Altman DG, Gotzsche PC, et al. The Cochrane Collaboration's tool for assessing risk of bias in randomised trials. BMJ. 2011;343(oct18 2):d5928-d5928. doi:10.1136/bmj.d5928

[11] Lo CKL, Mertz D, Loeb M. Newcastle-Ottawa Scale: comparing reviewers' to authors' assessments. BMC Med Res Methodol. 2014;14(1):45. doi:10.1186/1471-2288-14-45

[12] Metz MJ, Veerbeek MA, Franx GC, Van Der Feltz-Cornelis CM, De Beurs E, Beekman ATF. A National Quality Improvement Collaborative for the clinical use of outcome measurement in specialised mental healthcare: Results from a parallel group design and a nested cluster randomised controlled trial. BJPsych open. 2017;3(3):106-112. doi:10.1192/bjpo.bp.116.004366

[13] Omer S, Golden E, Priebe S. Exploring the Mechanisms of a Patient-Centred Assessment with a Solution Focused Approach (DIALOG+) in the Community Treatment of Patients with Psychosis: A Process Evaluation within a Cluster-Randomised Controlled Trial. Bearden CE, ed. PLoS ONE. 2016;11(2):e0148415. doi:10.1371/journal.pone.0148415

[14] Ong MK, Jones L, Aoki W, et al. A Community-Partnered, Participatory, Cluster-Randomized Study of Depression Care Quality Improvement: Three-Year Outcomes. PS. 2017;68(12):1262-1270. doi:10.1176/appi.ps.201600488

[15] Lloyd-Evans B, Osborn D, Marston L, et al. The CORE service improvement programme for mental health crisis resolution teams: results from a cluster-randomised trial. Br J Psychiatry. 2020;216(6):314-322. doi:10.1192/bjp.2019.21

[16] Stanhope V, Choy-Brown M, Williams N, Marcus SC. Implementing Person-Centered Care Planning: A Randomized Controlled Trial. PS. 2021;72(6):641-646. doi:10.1176/appi.ps.202000361

[17] McCaffrey E, Cawthorpe D. Modelling the Clinical and Economic Impacts of Foundation-Funded versus Staff-Driven Quality Improvement Mental Health Strategies. Published online January 24, 2023. doi:10.32388/0DKU2V

[18] Smith SL, Franke MF, Rusangwa C, et al. Outcomes of a primary care mental health implementation program in rural Rwanda: A quasi-experimental implementation-effectiveness study. Tran TD, ed. PLoS ONE. 2020;15(2):e0228854. doi:10.1371/journal.pone.0228854

[19] Abdussalam M, Smith T. Reducing Physical Health Inequalities: A Community Mental Health Clinic Quality Improvement Project. BJPsych open. 2025;11(S1):S113-S114. doi:10.1192/bjo.2025.10327

[20] Mouko J, Sullivan R. Systems for physical health care for mental health patients in the community: different approaches to improve patient care and safety in an Early Intervention in Psychosis Service. BMJ Qual Improv Report. 2017;6(1):u209141.w3798. doi:10.1136/bmjquality.u209141.w3798

[21] Bond GR, Drake RE, Becker DR, Noel VA. The IPS Learning Community: A Longitudinal Study of Sustainment, Quality, and Outcome. PS. 2016;67(8):864-869. doi:10.1176/appi.ps.201500301

[22] De Winter L, Couwenbergh C, Van Weeghel J, Bergmans C, Bond GR. Fidelity and IPS: does quality of implementation predict vocational outcomes over time for organizations treating persons with severe mental illness in the Netherlands? Soc Psychiatry Psychiatr Epidemiol. 2020;55(12):1607-1617. doi:10.1007/s00127-020-01890-0

[23] Alhassan RK, Nketiah-Amponsah E, Spieker N, et al. Effect of Community Engagement Interventions on Patient Safety and Risk Reduction Efforts in Primary Health Facilities: Evidence from Ghana. Noor AM, ed. PLoS ONE. 2015;10(11):e0142389. doi:10.1371/journal.pone.0142389

[24] Lloyd-Evans B, Fullarton K, Lamb D, et al. The CORE Service Improvement Programme for mental health crisis resolution teams: study protocol for a cluster-randomised controlled trial. Trials. 2016;17(1):158. doi:10.1186/s13063-016-1283-7

[25] Titler MG. The Evidence for Evidence-Based Practice Implementation. In: Hughes RG, ed. Patient Safety and Quality: An Evidence-Based Handbook for Nurses. Advances in Patient Safety. Agency for Healthcare Research and Quality (US); 2008. Accessed October 5, 2024. http://www.ncbi.nlm.nih.gov/books/NBK2659/

[26] White J, Grant K, Sarkies M, et al. Translating evidence into practice: a longitudinal qualitative exploration of allied health decision-making. Health Res Policy Sys. 2021;19(1):38. doi:10.1186/s12961-020-00662-1

[27] Proctor E, Silmere H, Raghavan R, et al. Outcomes for Implementation Research: Conceptual Distinctions, Measurement Challenges, and Research Agenda. Adm Policy Ment Health. 2011;38(2):65-76. doi:10.1007/s10488-010-0319-7

[28] Woltmann E, Grogan-Kaylor A, Perron B, Georges H, Kilbourne AM, Bauer MS. Comparative Effectiveness of Collaborative Chronic Care Models for Mental Health Conditions Across Primary, Specialty, and Behavioral Health Care Settings: Systematic Review and Meta-Analysis. AJP. 2012;169(8):790-804. doi:10.1176/appi.ajp.2012.11111616

[29] Kilbourne AM, Beck K, Spaeth-Rublee B, et al. Measuring and improving the quality of mental health care: a global perspective. World Psychiatry. 2018;17(1):30-38. doi:10.1002/wps.20482

[30] Wong E, Mavondo F, Fisher J. Patient feedback to improve quality of patient-centred care in public hospitals: a systematic review of the evidence. BMC Health Serv Res. 2020;20(1):530. doi:10.1186/s12913-020-05383-3

[31] Gilbody SM, House AO, Sheldon T. Routine administration of Health Related Quality of Life (HRQoL) and needs assessment instruments to improve psychological outcome – a systematic review. Psychol Med.

2002;32(8):1345-1356. doi:10.1017/S0033291702006001

[32] Druss BG, Rohrbaugh RM, Levinson CM, Rosenheck RA. Integrated Medical Care for Patients With Serious Psychiatric Illness: A Randomized Trial. Arch Gen Psychiatry. 2001;58(9):861. doi:10.1001/archpsyc.58.9.861

[33] Aarons GA, Hurlburt M, Horwitz SM. Advancing a Conceptual Model of Evidence-Based Practice Implementation in Public Service Sectors. Adm Policy Ment Health. 2011;38(1):4-23. doi:10.1007/s10488-010-0327-7

[34] Villalobos Dintrans P, Bossert TJ, Sherry J, Kruk ME. A synthesis of implementation science frameworks and application to global health gaps. glob health res policy. 2019;4(1):25. doi:10.1186/s41256-019-0115-1

[35] Hanlon C, Luitel NP, Kathree T, et al. Challenges and opportunities for implementing integrated mental health care: a district level situation analysis from five low- and middle-income countries. PLoS One. 2014;9(2):e88437. doi:10.1371/journal.pone.0088437

[36] O'Neill J, Tabish H, Welch V, et al. Applying an equity lens to interventions: using PROGRESS ensures consideration of socially stratifying factors to illuminate inequities in health. Journal of Clinical Epidemiology. 2014;67(1):56-64. doi:10.1016/j.jclinepi.2013.08.005

[37] May C, Finch T. Implementing, Embedding, and Integrating Practices: An Outline of Normalization Process Theory. Sociology. 2009;43(3):535-554. doi:10.1177/0038038509103208

[38] Knowles SE, Ercia A, Caskey F, Rees M, Farrington K, Van Der Veer SN. Participatory co-design and normalisation process theory with staff and patients to implement digital ways of working into routine care: the example of electronic patient-reported outcomes in UK renal services. BMC Health Serv Res. 2021;21(1):706. doi:10.1186/s12913-021-06702-y

[39] Lauffenburger JC, Choudhry NK, Russo M, Glynn RJ, Ventz S, Trippa L. Designing and conducting adaptive trials to evaluate interventions in health services and implementation research: practical considerations. bmjmed. 2022;1(1):e000158. doi:10.1136/bmjmed-2022-000158

[40] Mur-Veeman I. Bringing user experience to healthcare improvement: the concepts, methods and practices of experience-based design. Int J Integr Care. 2008;8(4). doi:10.5334/ijic.250

[41] Wallcraft J, Schrank B, Amering M, eds. Handbook of Service User Involvement in Mental Health Research. 1st ed. Wiley; 2009. doi:10.1002/9780470743157

[42] Torous J, Bucci S, Bell IH, et al. The growing field of digital psychiatry: current evidence and the future of apps, social media, chatbots, and virtual reality. World Psychiatry. 2021;20(3):318-335. doi:10.1002/wps.20883