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From bedside to risk board: Harmonizing mental status, neurological findings and risk assessment in contemporary psychiatric practice

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Abstract

Fragmented psychiatric assessments—separating the mental status examination (MSE), neurological screening, and risk formulation—drive diagnostic delay, safety incidents, and inequity, particularly in emergency and primary-care interfaces and low-resource settings. We conducted a narrative review informed by realist synthesis, mapping determinants to CFIR and reach/sustainment to RE-AIM. Evidence and guidance were synthesized into a pragmatic pathway that standardizes the first clinical hour: history/MSE, a brief neurological screen with explicit thresholds (e.g., delirium screen, rapid EEG rules for suspected nonconvulsive status epilepticus), and structured risk (e.g., C-SSRS, BVC/HCR-20) translated into an actioned plan. Handover uses a minimum dataset (working diagnosis, MSE anchors, neuro red flags, risk formulation, named follow-up ≤7 days). Measurement emphasizes run/SPC charts, audit-and-feedback, and equity stratification (e.g., HEAT). This standardized core with locally adaptable periphery is feasible under mhGAP task-sharing, supports safer disposition, reduces restraints/readmissions/self-harm, and strengthens ethical, rights-based care while minimizing costs. Done well, bedside reliability becomes risk-board assurance, linking first cues to system-level learning and sustained improvement.

Keywords: Psychiatric Evaluation; Delirium Screening; Safety Planning and Follow-Up; Violence Prevention; Structured Handover; Primary Care Integration

1. Introduction

Psychiatric assessment is the core clinical process that converts undifferentiated presentations into coherent formulations, care plans, and safety strategies. In modern services, this process must integrate four pillars – history, the mental status examination (MSE), a focused neurological examination, and structured risk assessment, because symptom clusters frequently straddle neuropsychiatric boundaries, are patterned by social determinants, and carry immediate implications for patient rights and safety [1], [2], [3]. Fragmentation across these pillars contributes to diagnostic error, delayed recognition of medical mimics (e.g., delirium or nonconvulsive status epilepticus), missed vulnerabilities, and weak safety planning, particularly at emergency and primary-care interfaces and in low-resource settings [3], [4], [5], [6].

Global and system-level forces make this integration urgent. The social distribution of mental disorders and service access, exposed during the COVID-19 era in low- and middle-income countries (LMICs), demands reliable, equitable assessment pathways from first contact through follow-up [1], [2]. Task-sharing frameworks (e.g., WHO mhGAP)

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already provide scalable algorithms for priority conditions; integrating brief neurological screens and structured risk into those workflows is both feasible and high-yield in LMIC contexts [7]. Quality-improvement (QI) initiatives show that co-designed "assessment bundles" (MSE + brief neuro screen + structured risk template) paired with bedside coaching and audit-and-feedback improve documentation completeness, shorten time-to-action, and reduce adverse incidents in real-world units [4], [5], [8], [9], [10].

Clinically, the MSE remains the structured lens for describing appearance/behavior, speech, mood and affect, thought form and content, perception, cognition, and insight/judgment. Yet MSE in isolation is vulnerable to medical mimics. Delirium remains under-recognized without targeted attention and cognition testing; incorporating a rapid screen such as the 4AT improves early detection and escalation in acute settings [11], [12], [13]. Likewise, nonconvulsive status epilepticus (NCSE) may present with confusion, behavioral change, or psychosis-like symptoms; a brief neurological screen with explicit thresholds for urgent EEG and neurology liaison is therefore integral to acute psychiatric assessment [14]. Broader neuropsychiatric interfaces (e.g., depression in neurology clinics, medication-induced psychiatric syndromes, cognitive/behavioral sequelae after stroke or head injury) underline the need for routine neurological "micro-exams," medication safety checks, and disciplined escalation rules across psychiatry–neurology boundaries [12], [15], [16], [17], [18], [19].

Structured risk assessment and formulation, the fourth pillar, has evolved beyond checklists. Best practice couples structured instruments with individualized, hypothesis-driven formulation that distinguishes acute intent/means from chronic drivers (neurocognitive impairment, substance use, perinatal stressors, neurodevelopmental conditions), and then translates the profile into specific, time-bound actions (observation level, means restriction, de-escalation plan, carer involvement, early post-discharge contact). For suicide/self-harm, the C-SSRS provides common language and graded severity to anchor decisions; for violence, tools such as HCR-20 V3 and the Brøset Violence Checklist (BVC) support short-term prediction and safety planning in inpatient settings [20], [21], [22], [23], [24], [25], [26]. Embedding these tools within routine assessments is associated with safer care transitions and lower readmissions when combined with follow-up reliability (e.g., ≤7-day post-discharge contact) and community supports [5], [6], [27].

Implementation science explains why integration succeeds or fails. Using CFIR and RE-AIM, determinants such as leadership, workflow fit, data usability, and staff confidence in neurological screening and risk documentation are consistently implicated; matched strategies include checklists, simulation/drills, coaching, and audit-and-feedback cycles visualized with run/SPC charts [8], [9], [10], [28], [29]. Equity-sensitive design requires stratifying process/outcome data (e.g., completion of risk formulations, restraint use, 30-day self-harm) by key demographics and access variables to detect gaps and tailor responses [1], [2], [30]. Within primary care and emergency settings, where comorbidity and substance use are common, integrated assessment supports earlier recognition, safer disposition, and more consistent follow-up [3], [7], [27].

This narrative review therefore pursues three aims. First, to synthesize best-practice content for an integrated psychiatric assessment—what should be done, for whom, and when—spanning MSE, focused neurological examination, and structured risk appraisal across emergency, inpatient, outpatient, and primary-care settings [3], [4], [5], [7], [11], [15], [16], [17], [21]. Second, to foreground medical mimics (delirium, NCSE, metabolic and autoimmune encephalitis flags) and common neuropsychiatric interfaces (stroke, movement disorders, neurodevelopmental conditions), clarifying "red flags" and escalation rules relevant to resource-constrained realities [11], [12], [13], [14], [16], [17], [18], [21]. Third, to translate evidence and practice-based learning into an implementation playbook, linking assessment to measurable safety and quality outcomes (readmissions, restraint reduction, self-harm), and laying out pragmatic strategies (checklists, coaching, data feedback, standardized handovers) that drive sustained reliability in diverse systems [4], [5], [8], [9], [10], [28], [29], [30].

By harmonizing bedside techniques with risk-board reliability (unit-level visibility, daily huddles, and follow-up discipline), integrated assessment promises safer, faster, and fairer decision-making for psychiatry, clinical psychology, and public mental health—especially where resources and specialist access are limited [1], [2], [3], [4], [5], [7], [27].

2. Methods

2.1. Design and approach

We conducted a narrative review informed by realist synthesis principles to explain what works, for whom, and under what conditions when integrating the mental status examination (MSE), focused neurological examination, and structured risk assessment in psychiatric practice [7], [31]. Context–mechanism–outcome (CMO) logic guided synthesis. Implementation constructs were mapped to CFIR and RE-AIM to illuminate adoption, reach, and sustainment [28], [29].

2.2. Eligibility criteria

We included peer-reviewed studies, guidelines, quality-improvement (QI) reports, and implementation evaluations that addressed at least one of the target pillars (MSE, neurological screen, structured risk) and reported clinical, process, or safety outcomes relevant to emergency, inpatient, outpatient, primary-care, or liaison psychiatry across age groups (adolescents to older adults). Study designs spanned randomized and quasi-experimental trials, interrupted time-series, before–after studies, cohort/case–control, and mixed-methods implementations. We excluded single-case reports without generalizable methods and purely basic-science work.

2.3. Information sources and search

Between database inception and October 2025, we searched PubMed/MEDLINE, PsycINFO, Embase, CINAHL, Scopus, Cochrane Library, and WHO IRIS, plus forward/backward citation chaining. Grey literature included major guideline repositories (WHO, NICE) and implementation/QI texts [7], [13], [25], [29]. Search strings combined terms for psychiatric assessment ("mental status examination," "MSE," "psychiatric evaluation"), neurological screening ("delirium," "4AT," "nonconvulsive status epilepticus"), risk instruments ("suicide risk," "C-SSRS"; "violence risk," "HCR-20," "Brøset Violence Checklist"), and implementation/QI ("CFIR," "RE-AIM," "audit and feedback," "statistical process control") [9], [22], [23], [26], [28], [29], [31],

2.4. Study selection and data charting

Two reviewers independently screened titles/abstracts and full texts; disagreements were resolved by consensus. We charted data on setting, population, assessment components, instruments (e.g., 4AT, C-SSRS, HCR-20 V3, BVC), implementation strategies, comparators, outcomes (clinical, safety, process, balancing), equity/rights considerations, and resource needs [1], [13], [22], [23], [25], [26], [30]. Given heterogeneity, risk-of-bias tools were tailored to design; time-series and before–after studies emphasized SPC signal rules and plausibility probes [9].

Synthesis. We first grouped evidence by domain (MSE, neurological, risk) and setting, then developed provisional CMO configurations (e.g., ED triage + brief neuro screen + explicit EEG thresholds → earlier NCSE detection → fewer adverse events) and iteratively tested/refined them across studies and contexts. We mapped strategies to ERIC categories (e.g., audit/feedback, champions, simulation/drills) and summarized measurement approaches using run/SPC charts where available [9], [26], [29]. Equity was assessed by whether studies stratified key outcomes or referenced tools such as WHO HEAT [30] Where feasible, we benchmarked against normative guidance (WHO mhGAP; NICE) [1], [25].

2.5. Ethics

This review synthesized published/aggregate data and did not require institutional review board approval.

2.6. Conceptual Model: "From First Cue to Risk Board"

This model links what clinicians see and do in the first minutes of contact to what a service reviews and improves at the board level. It operationalizes seven elements, Contexts, First Cues, Core Assessment, Risk Translation, Transitions, Measurement for Learning, and Implementation Mechanisms, to harmonize the mental status examination, a focused neurological screen, and structured risk assessment across settings.

- Contexts (where care happens). Five layers shape performance: setting (ED, inpatient, outpatient, primary care), capability (skills and confidence in MSE, neuro screen, risk), resources (diagnostics, supervision, referral routes), population risks (substance use, perinatal status, neurocognitive and neurodevelopmental conditions), and governance (policies, documentation, handover) [2], [4], [5], [7]. In LMIC systems, mhGAP algorithms provide a scalable backbone; brief neurological and risk components can be grafted onto routine pathways without major cost [2], [7].
- First cues → triage micro-bundle (minutes 0–10). The first 10 minutes prioritize safety and reversibility: (i) primary survey (environmental safety, vitals, glucose, tox/context), (ii) attention/orientation check with rapid delirium screen (e.g., 4AT) when indicated, (iii) brief neurological screen (consciousness/attention, cranial "look/listen," motor/tone/tremor, coordination, gait), and (iv) immediate risk triage (suicide/self-harm, violence, vulnerability) to determine observation and de-escalation needs [13], [14], [24], [25], [26]. Explicit escalation rules cover NCSE suspicion (urgent EEG/neurology) and thresholds for imaging [13], [14].
- Core assessment bundle (first clinical hour). Once safe, clinicians complete:
- Structured MSE (appearance/behavior, speech, mood/affect, thought form/content, perception, cognition, insight/judgment) with disciplined terminology and capacity documentation.

- Focused neurological exam proportionate to presentation and medication exposure, capturing medical mimics (delirium, stroke, parkinsonism, head injury, ASD-related features) and treatment adverse effects [9], [10], [13], [32].
- Structured risk assessment + formulation, coupling instruments with individualized hypotheses: C-SSRS (suicide/self-harm), HCR-20 V3 (longer-horizon violence risk in forensic/complex cases), and Brøset Violence Checklist (BVC) (imminent inpatient aggression) [24], [25], [26], [33]. The output is an actioned plan, observation level, means-restriction, de-escalation/safeguarding, carer involvement, and early follow-up (≤7 days), documented in standardized language and aligned to guidance (e.g., NICE NG225) [22], [24], [25].
- Translating risk into decisions. The model distinguishes acute intent/means from chronic drivers (neurocognitive impairment, substance use, perinatal stressors, neurodevelopmental conditions). Clinicians convert profiles into time-bound actions and specify who does what by when, reducing rework and adverse events [4], [5], [22], [24], [25].
- Transitions and referral spine. Standard handover (e.g., SBAR) carries working diagnosis, MSE anchors, neuro findings/red flags, and a named risk plan with responsibilities. Clear rules link primary care ↔ psychiatry ↔ neurology for stroke, movement disorders, seizure-related states, and neurodevelopmental interfaces [9], [10], [12], [13], [32], [34], [35].
- Measurement for learning (from bedside to board). Reliability is built on simple, visible measures: outcomes (self-harm, assaults/restraint/1,000 bed-days, readmissions), processes (% assessments with neuro screen; % with documented risk formulation; % early follow-ups), and balancing (staff injury, absconding). Units review weekly run/SPC charts, annotate change tests (checklists, coaching, simulation/drills), and stratify by equity variables (age, sex, setting) using tools such as HEAT [4], [5], [9], [10], [30], [36].
- Implementation mechanisms (why it sticks). Using CFIR and RE-AIM, leaders match barriers (e.g., low neuro-exam confidence; inconsistent risk documentation) to strategies from ERIC (champions, audit-and-feedback, training, simulation) and spread frameworks, balancing a standardized core (MSE + brief neuro + structured risk + handover) with locally adaptable periphery (forms, prompts, referral networks) [9], [10], [28], [29], [37]. In services with high substance-use comorbidity or perinatal burden, the model focuses scarce resources on first-hour reliability and follow-up discipline, where impact is largest [4], [5], [12], [27].

2.7. Special Presentations & Medical Mimics

Distinguishing primary psychiatric syndromes from medical mimics in the first clinical hour is central to safe care. Our pathway emphasizes rapid screens, explicit escalation rules, and translation into concrete safety actions (observation level, de-escalation, means restriction, carer involvement, early follow-up).

- Delirium (often misread as psychosis or mania). Fluctuating attention, altered arousal, and acute onset are cardinal; a rapid screen such as 4AT improves early detection and triggers reversible-cause work-ups (infection, hypoxia, drugs, metabolic) and non-pharmacological measures [11], [13]. Routine attention testing and level-of-consciousness observation are integral to every acute psychiatric assessment [11], [13].
- Nonconvulsive status epilepticus (NCSE). NCSE can present with confusion, behavioral change, catatonia-like mutism, or "psychosis." Red flags include abrupt onset, fluctuating awareness, myoclonus, and postictal phenomena; the pathway specifies urgent EEG/neurology consult and imaging thresholds when NCSE is suspected [14].
- Autoimmune encephalitis (AIE). Subacute psychiatric symptoms with seizures, movement phenomena, dysautonomia, or reduced consciousness should prompt AIE consideration. Early neurology input, MRI/EEG, and CSF antibody testing guided by Graus/Dalmau criteria reduce delays and complications [38], [39].
- Cerebrovascular and traumatic brain injury (TBI) interfaces. Post-stroke depression, executive dysfunction, and personality change are common and may be mistaken for primary mood or personality disorders. Focal neurological signs, vascular risk, or stepwise cognitive shifts trigger mini-neuro and stroke/TBI referral rules [12]. Medication choices (e.g., dopaminergic agents, antidepressants) warrant attention to neuropsychiatric side-effects and interactions [18].
- Substance-related states & perinatal considerations. Intoxication/withdrawal (alcohol, benzodiazepines, stimulants, synthetic cannabinoids) can drive agitation, psychosis, or delirium; tox/context checks and withdrawal screens reduce error. Given local epidemiology, perinatal alcohol use requires tailored screening, safeguarding, and follow-up [27], [36], [40].
- Endocrine/metabolic mimics. Thyroid disease, B12/folate deficiency, and antipsychotic-associated dysglycaemia may underlie affective or cognitive change; early glucose/metabolic panels and clear thresholds for medical referral are built into the pathway [17].
- Neurodevelopmental and pediatric contexts. ADHD and ASD modify phenomenology and tolerability. Evidence from local cohorts shows neurocognitive burden and potential roles for SSRIs and omega-3s in selected ADHD

cases; standardized cognitive screens and family-inclusive risk planning reduce misattribution [41], [42], [43], [44]. In early-onset psychosis, structured pediatric pathways help differentiate schizophrenia from neurodevelopmental, metabolic, or inflammatory etiologies [45].

- Rare but high-impact presentations. Induced delusional disorder (folie à deux) requires assertive safeguarding, separation when indicated, and systematic risk planning; case literature highlights diverse precipitants and the importance of careful family assessment [46], [47]. Pathological gambling and other behavioral addictions may mimic hypomania/impulsivity; targeted screening avoids misdiagnosis and supports appropriate referral [48]. In mood presentations, distinguishing bipolar depression from unipolar or mixed substance-induced states guides treatment (e.g., lamotrigine considerations) and safety planning [49].
- Actioning the mimic: from sign to step. For each red flag, the pathway specifies the next step (e.g., 4AT ≥4 → delirium bundle; abrupt behavioral change + motor phenomena → urgent EEG; focal deficits → stroke pathway; tox positive/withdrawal signs → observation and protocolized withdrawal care) and risk translation (observation level, de-escalation plan, means restriction, ≤7-day follow-up). Standardized handover ensures these mimics, once recognized, remain visible to the risk board across transitions of care.

2.8. Settings, Pathways, and Handover

- Emergency departments (EDs). In the first 10 minutes, a triage micro-bundle prioritizes reversibility and safety: primary survey (vitals, glucose, tox/context), rapid delirium screen when indicated (e.g., 4AT), a brief neurological screen, and immediate suicide/violence/vulnerability triage to set observation level and de-escalation needs [7], [11], [13], [14], [25]. Explicit escalation rules cover NCSE (urgent EEG/neurology) and imaging thresholds [14]. Disposition planning is anchored to a documented risk formulation and early follow-up consistent with guidance for post-crisis care [22], [25].
- Inpatient units. On admission, a standardized bundle (structured MSE, focused neuro exam, medication/ADR screen, and structured risk assessment) is completed within the first clinical hour. For self-harm risk, the C-SSRS provides shared language and graded severity; for violence risk, HCR-20 V3 supports longer-horizon formulation while the Brøset Violence Checklist (BVC) informs short-term (shift-to-shift) prevention and huddle planning [22], [23], [24], [26]. Daily safety huddles and visible run/SPC charts track process reliability (% assessments with neuro screen; % documented risk formulation) and outcomes (restraints/1,000 bed-days; inpatient self-harm), distinguishing signal from noise to guide change tests (checklists, coaching, simulation/drills) [9], [10].
- Outpatient and primary care, including LMIC contexts. mhGAP algorithms provide a scalable backbone for task-shared assessment and treatment of priority conditions; brief neuro screens, clear referral triggers (e.g., persistent cognitive change, first-episode psychosis with red flags), and structured risk tools can be grafted onto routine visits without major cost [7]. Where substance-use comorbidity is common, standardized risk formulation plus facilitated linkage to community supports improves continuity and reduces unsafe cycling between settings [1], [27].
- Transitions of care and handover. Communication failures drive adverse events; therefore handovers use SBAR/I-PASS-style structures and a minimum dataset that travels intact across settings: (1) working diagnosis and differentials; (2) MSE anchors with salient changes; (3) neurological findings/red flags and any pending tests; (4) risk formulation (acute intent/means vs. chronic drivers) and an actioned plan (observation level, means restriction, de-escalation/safeguarding, carer involvement); and (5) named responsibilities and follow-up timing (≤7 days after discharge/crisis where recommended) with crisis contacts [25], [50], [51]. Services embed handover reliability in their governance and learning systems (CFIR/RE-AIM) so that improvements spread and sustain beyond individual teams [9], [10], [28], [29].

Together, these setting-specific pathways ensure that bedside assessments translate into consistent service-level reliability, connecting first cues to risk-board oversight and safer outcomes across ED, inpatient, and community interfaces [7], [9], [10], [13], [22], [25], [27].

2.9. Measurement for Learning

Our aim is learning, not judgement: to see whether integrated assessment (MSE + brief neurological screen + structured risk) is reliably completed and whether it improves safety. We track a parsimonious set of outcome, process, and balancing measures and review them in weekly huddles and monthly “risk-board” meetings.

- Outcome measures. (a) Self-harm after ED contact or discharge (72-hour and 30-day); (b) restraint episodes per 1,000 bed-days and inpatient assaults; (c) 30-/90-day readmissions; (d) missed/late recognition of medical mimics (delirium, NCSE) detected after admission [7], [25].

- Process measures. (a) % of new presentations with all three elements documented within 1 clinical hour; (b) % at-risk cases with C-SSRS documented; (c) % indicated cases with 4AT completed; (d) % with actioned risk plan (observation level, means-restriction, de-escalation steps, carer involvement); (e) % with ≤7-day follow-up arranged when recommended [7], [10], [25].
- Balancing measures. Staff injury rate, absconding, observation hours, and average time-to-disposition—guarding against burden shifting or over-restriction.
- Display and analysis. We use run charts for new measures and SPC (p/u charts, XmR) when volume supports it, applying standard rules to distinguish signal from noise and annotating change tests (checklists, coaching, simulation) directly on the charts [8], [9], [10], [52]. To increase effect sizes, units pair data with audit-and-feedback (actionable, frequent, and from a respected source) and brief coaching at the point of care [8], [53].
- Equity lens. All primary measures are stratified (age, sex, setting, relevant social factors) with periodic reviews using WHO HEAT so that improvements are shared fairly and gaps trigger targeted tests of change [30].
- Operational discipline. Each measure has a one-line specification (denominator, numerator, inclusion/exclusion, sampling plan, and data source). Denominators are guided by normative standards (e.g., NICE NG225 for self-harm follow-up; mhGAP for primary-care pathways) to avoid gaming [7], [25]. Data governance follows minimum-necessary and role-based access principles.
- Learning system. Measurement is embedded in implementation: CFIR determinants (leadership, workflow fit, data usability) and RE-AIM (reach, effectiveness, adoption, implementation, maintenance) shape the local dashboard and review cadence, ensuring that reliable practices spread and sustain across services [8], [28], [29].

2.10. Implementation & Scale-Up

Aim. Move from pockets of excellence to reliable, system-wide practice by pairing an integrated assessment bundle (MSE + brief neuro screen + structured risk) with an implementation strategy and a spread plan.

- Determinants & design. Use CFIR to surface local barriers/enablers (leadership, workflow fit, data usability, training needs) and RE-AIM to define who should be reached and how impact will be maintained [28], [29]. Translate findings into a change package using the Model for Improvement/PDSA and explicitly resource bedside coaching and just-in-time prompts (checklists, EHR templates) [8].
- Core strategies (ERIC-informed). Select a small set of high-yield tactics: (a) audit-and-feedback that is frequent, specific, and delivered by a credible messenger; (b) a named local champion and peer modeling; (c) simulation/drills for the triage micro-bundle and de-escalation; (d) adaptable forms with a standardized core (terminology; risk formulation fields; handover minimum dataset) [8], [37], [53], [54].
- Measurement for learning. Run/process control charts (run/SPC) are the default analytic; annotate each change test to separate signal from noise and to accelerate team learning [9], [52]. Align denominators with NICE (self-harm follow-up) and mhGAP (primary-care pathways) to prevent measurement drift and to enable benchmarking across sites [7], [25].
- Equity & governance. Stratify key measures (e.g., completion of risk formulations; restraint/1,000 bed-days; 30-day self-harm) and use WHO HEAT reviews to close detected gaps [30]. Keep data minimum-necessary with role-based access; embed debriefing after critical events to reinforce least-restrictive, rights-based care.
- Scale-up & sustainment. Treat spread as a separate project. Use Diffusion of Innovations and the IHI Framework for Spread to stage roll-out from pilot units to routine care, privileging "ready" sites, packaging materials (one-page playbook; quick-start checklists; train-the-trainer), and establishing a community of practice with monthly cross-site huddles [1], [8], [37], [55]. In LMIC/primary-care contexts, leverage mhGAP, pre-existing supervision ladders, and low-cost triage tools (e.g., 4AT, C-SSRS, BVC) to keep costs low while maintaining fidelity [7], [25].
- De-implementation. Retire low-value forms and duplicative documentation as new workflows stabilize; make this explicit in the governance plan so net clinical time is returned to patient care.

2.11. Economic & Resource Considerations

An integrated assessment bundle (MSE + brief neurological screen + structured risk) is a low-cost/high-yield strategy because it repurposes existing clinician time, standardizes documentation, and prevents expensive failures of recognition and follow-up. In LMIC and primary-care contexts, embedding brief neuro and risk components into mhGAP pathways minimizes new spending while improving safety and throughput [2], [3], [7]. A recent LMIC-focused review emphasized that such integration reduces rework, readmissions, and adverse events, key cost drivers in constrained systems [3].

- Cost avoidance from early detection and safer transitions. Rapid delirium screening (e.g., 4AT) and explicit EEG thresholds for suspected NCSE avert diagnostic delay, length-of-stay inflation, and downstream complications [7], [25]. For self-harm crises, coupling structured assessment with Safety Planning Intervention and timely follow-up reduces suicidal behavior and increases outpatient engagement, lowering ED revisits and hospitalization costs [25], [56]. For inpatient violence prevention, short-horizon tools like the Brøset Violence Checklist (BVC) support targeted de-escalation and fewer restraint episodes,events with high human and financial cost [26].
- Operating a learning system efficiently. Routine run/SPC charts and audit-and-feedback are inexpensive but powerful levers that improve reliability without capital outlay; their effects are stronger when feedback is frequent, actionable, and delivered by credible peers [9], [53]. Aligning denominators to NICE and mhGAP prevents measurement drift and supports cross-site benchmarking [7], [25].
- Selecting affordable tools. The 4AT and C-SSRS are freely available, quick to administer, and require minimal training; BVC is brief and feasible for shift-to-shift monitoring [13], [22], [26]. Where license-bearing instruments (e.g., HCR-20 V3) are needed, use them selectively (for forensic/complex cases) and pair with lighter tools for routine practice to optimize cost.
- Macro-economic case. Scaling evidence-based mental health care yields favorable returns on investment via productivity gains and reduced health-service utilization; the global ROI for depression/anxiety treatment (psychological + pharmacological) is estimated at 2–5× over 10 years, strengthening the business case for foundational assessment reliability that powers those interventions [2], [57]. Finally, equity-stratified dashboards (e.g., via WHO HEAT) prevent hidden inefficiencies by revealing where care is unreliable for specific groups [30].

2.12. Ethical, Legal, and Data-Governance Issues

A rights-based, least-restrictive approach anchors integrated psychiatric assessment across settings. Clinicians must (i) assess capacity and support decision-making; (ii) obtain valid consent (or document legal grounds when care proceeds without consent); and (iii) ensure proportional, time-limited responses to risk, with clear routes for review and appeal [1], [7], [25], [30]. Structured risk tools (e.g., C-SSRS, BVC/HCR-20) inform, but never replace, clinical judgment; they should not be used as sole justification for coercion and must be explicitly translated into individualized, time-bound actions (observation level, means-restriction, de-escalation, early follow-up) [7], [25]. Carer involvement requires patient consent or lawful basis; documentation should make reasoning and responsibilities transparent [25].

Equity and cultural safety are ethical obligations. Services should stratify key outcomes (e.g., 30-day self-harm, restraint/1,000 bed-days, readmissions) and process measures (e.g., completion of risk formulations) by age, sex, setting, and locally relevant social factors, using simple dashboards and periodic HEAT reviews to detect gaps and direct corrective action [1], [2], [30]. In LMIC and primary-care contexts, mhGAP pathways, task-sharing, and brief neurological/risk screens improve fairness and access without major cost, provided escalation thresholds and referral rights are explicit [1], [7].

Data governance follows “minimum-necessary” and purpose-limited principles: collect only data required to deliver care and to learn from it; use role-based access, audit trails, and de-identification/aggregation for quality improvement [2], [9], [10], [28]. Each indicator needs a one-line specification (denominator, numerator, inclusion/exclusion, sampling plan, source) to prevent gaming and enable reproducibility [9], [10]. Analytic methods should prioritize run/SPC charts that distinguish signal from noise and support timely course-correction [8], [9], [10].

For digital decision support (e.g., checklists, prompts), maintain human-in-the-loop oversight, monitor performance across subgroups, and include a clear override pathway. Implementation governance (e.g., CFIR/RE-AIM-guided committees) should oversee training, auditing, incident review, and de-implementation of low-value documentation so that safety and rights improve while administrative burden decreases [8], [10], [28].

3. Discussion

This narrative review proposes an integrated assessment bundle, history and MSE, a brief neurological screen, and structured risk formulation, embedded in learning systems and adapted across settings. The approach addresses three persistent gaps: (i) late or missed recognition of medical mimics (notably delirium and NCSE), (ii) variable, weakly actioned risk assessment, and (iii) failure to carry key information across transitions of care. By standardizing first-hour tasks, escalation rules, and handover, the bundle advances safer, faster, and fairer decisions, resonating with mhGAP task-sharing in LMICs and NICE post-crisis guidance [12], [55].

Compared with prior work on global mental health and systems resilience, our model adds a focused neurological "micro-exam" and explicit risk-to-action translation to task-shared pathways, shifting emphasis from "which tool" to reliable workflows [1], [2], [12]. Evidence that delirium remains under-detected justifies routine attention testing and a rapid screen such as 4AT; similarly, NCSE warrants explicit EEG thresholds in psychiatric pathways [18], [22], [23], [24]. Neuropsychiatric interfaces, stroke sequelae, antidepressant side-effects, and antipsychotic-associated dysglycaemia, argue for proportionate neurological and medication reviews during psychiatric assessments, with clear referral rules to neurology/medicine [22], [28], [29]. For safety, pairing C-SSRS, HCR-20 V3, and the BVC with individualized formulation strengthens immediate and longer-horizon planning [51], [52], [53], [55], [56].

A measurement-for-learning stance is crucial. Simple run/SPC charts (with annotated change tests) reliably separate signal from noise and shorten learning cycles, while audit-and-feedback increases effect sizes when frequent, specific, and credible [14], [17], [52], [53]. Equity-stratified dashboards (e.g., WHO HEAT) ensure improvements are shared and gaps addressed [30]. Clinical guidance supports embedding early follow-up after self-harm, and Safety Planning Intervention reduces suicidal behavior and ED revisits, benefits that depend on reliable handover and tracking [55], [56]. On a scale, improved assessment reliability underpins the broader ROI of mental-health care [57].

Implementation success hinges on matching CFIR determinants to RE-AIM goals, then selecting a small set of ERIC-informed strategies (champions, checklists, simulation/drills, audit-and-feedback) and packaging them for spread [28], [29]. Rogers' diffusion and the IHI Framework for Spread guide staging from pilots to routine care and help balance a standardized core with local adaptation [37], [55]. In EDs and inpatient units, first-hour micro-bundles, BVC-anchored huddles, and SBAR/I-PASS handovers operationalize reliability; in primary care, mhGAP-aligned triggers and referral rights protect equity under resource constraints [7,25,50,51].

Limitations. Evidence is heterogeneous and context-dependent; many evaluations are before–after or time-series rather than randomized. Risk tools must inform, not replace clinical judgment and should never be the sole basis for coercive measures [25]. Diagnostic pathways for autoimmune encephalitis are largely based on expert criteria with limited LMIC data [37], [38], [39]. Digital prompts require governance, human-in-the-loop oversight, role-based access, and transparent specifications for metrics [8], [10], [28].

Future directions. Priorities include pragmatic, multi-site time-series of first-hour bundles; co-produced equity dashboards; prospective evaluations of handover minimum datasets; and staged scale-up with train-the-trainer models. These steps can convert bedside reliability into risk-board assurance across diverse systems.

4. Conclusion

Across emergency, inpatient, and primary-care settings, the core message is simple: standardize the first hour, translate risk into action, and make the process visible to the team. An integrated bundle, history and MSE, a brief neurological screen with explicit escalation rules, and structured risk formulation, reduces missed medical mimics, clarifies decisions, and improves safety. Reliability then depends on handover that travels (minimum dataset, named responsibilities, early follow-up) and a measurement-for-learning stance that uses run/SPC charts and rapid feedback to separate signal from noise and accelerate improvement.

Equity must be built in, not added on; stratified dashboards and clear referral rights ensure the same standard of assessment for every patient, even when resources are tight. Economically, this approach repurposes existing time and low-cost tools, avoiding the downstream expenses of delayed diagnosis, readmission, and restrictive interventions.

Implementation should focus on a standardized core with locally adaptable periphery, supported by coaching, simulation, and audit-and-feedback, then scaled through structured spread. Done well, bedside reliability becomes risk-board assurance, delivering safer, faster, fairer psychiatric care that endures beyond individual clinicians and shifts.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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