

INDEPENDENT TECHNICAL REPORT



GMHCAAB 2027

Technical Crosswalk to

WHO Mental Health Atlas 2024

Patient-pathway measurement framework for practical and financial access

CORE CONTRIBUTION

WHO Mental Health Atlas 2024 provides the authoritative national system baseline. GMHCAAB 2027 adds a complementary patient-pathway layer focused on whether a defined person can initiate a defined outpatient treatment pathway.

48

GMHCAAB VARIABLES

5

EQUIVALENT

19

PARTIAL OVERLAP

24

DISTINCT LEVEL

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CORE CONTRIBUTION

WHO Mental Health Atlas 2024 provides the authoritative national system baseline. GMHCAAB 2027 develops a complementary patient-pathway layer focused on whether a defined person can initiate a defined outpatient treatment pathway under specified eligibility, waiting-time, residual-price, geographic and digital-access conditions.

Independent publication. Use of WHO sources does not imply WHO endorsement.

Executive overview

WHO Mental Health Atlas 2024 provides the authoritative Member State-reported picture of national mental-health policies, financing, workforce, information systems and services. This report maps 48 GMHCAAB 2027 variables to Atlas indicators and adjacent WHO concepts to identify where GMHCAAB should rely on WHO context, harmonise terminology or add a distinct patient-pathway observation.

Five variables are equivalent, 19 partially overlap and 24 address a different operational level. The pattern supports a clear division of labour: WHO measures national mental-health systems, resources and services; GMHCAAB develops a complementary layer describing the conditions under which a specified person can reach treatment initiation through a specified outpatient pathway.

The distinct measurement opportunity is organised around entry rules, waiting-stage intervals, residual patient price after reimbursement, barrier-attributed unmet need, geographic reach and practical telehealth access. Appendix A publishes the row-level definitions, conceptual relationships, comparability issues, terminology recommendations and treatment decisions.

Crosswalk result

Relationship	Variables	Methodological implication
Equivalent	5	Use as attributed WHO context, preserving the WHO definition, denominator, reference year and source.
Partially overlapping	19	Harmonisation set: align population, unit, sector, pathway and time period before comparison.
Different	24	Patient-pathway set: operationalise through purpose-built evidence protocols rather than infer from national system indicators.

SCOPE OF THIS REPORT

This edition establishes the methodological crosswalk and measurement framework. Country evidence packages, estimates and comparative analyses are produced as separate empirical outputs, keeping conceptual mapping and country inference clearly distinguished.

1. Research purpose and complementarity

1.1 Primary research question

Which GMHCAAB variables correspond to WHO Mental Health Atlas 2024, where do their operational definitions diverge, and which patient-pathway constructs could add decision-useful information without duplicating WHO system measurement?

1.2 Central proposition

COMPLEMENTARITY BY DESIGN

WHO provides authoritative measurement of mental-health systems, resources and services. GMHCAAB develops a complementary patient-pathway layer that connects formal system arrangements to the eligibility, time, residual price and geographic or digital conditions under which a defined outpatient treatment can begin.

1.3 Complementarity principles

- WHO-first context: equivalent variables remain attributed WHO measures rather than proprietary GMHCAAB indicators.
- No proxy substitution: workforce, facilities, contacts or formal benefits are not treated as proof that an individual obtained care.
- Pathway specificity: patient-facing observations are defined by service, pathway, eligibility vignette, sector, geography and reference period.
- Construct separation: provider price, residual patient price, income-relative burden and household financial protection remain distinct concepts.
- Transparent inference: missingness, source conflict, sampling limits and uncertainty remain visible in any empirical implementation.

PATIENT-PATHWAY MEASUREMENT CHAIN

System context -> formal entitlement -> pathway entry -> waiting interval -> residual price and reach -> treatment start

2. WHO measurement architecture and the complementary layer

Atlas 2024 draws on 144 countries and covers policies and programmes, laws, mental-health information systems, financing, workforce and services. It monitors the Comprehensive mental health action plan 2013-2030 and connects with WHO data resources for expenditure, workforce, financial protection and digital health.

Architecture	WHO measurement	Patient-pathway measurement opportunity
Governance and policy	Policies, plans, laws, rights, implementation resources and action-plan targets.	Eligibility, referral and pathway rules for a defined person and service.
Financing	Public-scheme inclusion, patient-contribution bands, expenditure per capita/share and distribution.	Service-specific reimbursement rules, residual patient price and coverage gaps.
Workforce	Specialised mental-health workers by professional category per 100,000 and composition.	Subnational distribution, funded vacancies and local appointment capacity.
Services	Facility availability, outpatient contacts, community care, primary-care integration and selected coverage measures.	Entry events, queue stages and successful treatment initiation.
Digital and telehealth	National availability and use within the wider digital-health strategy.	Eligibility, patient price, wait, language, device/connectivity usability and clinical scope.
Information systems	Surveys, digital records, unique identifiers and routine core-indicator reporting.	Traceable pathway evidence and barrier-specific observations.
Financial protection and UHC	Household hardship from out-of-pocket spending and coverage of needed quality services.	Residual price and income-relative burden, reported distinctly from household financial hardship.

2.1 Interpretation

The opportunities above arise primarily from a difference in unit of observation, not a deficiency in the Atlas. Atlas is designed for national system surveillance. Patient-pathway questions require additional administrative, household, provider or service-level evidence tied to defined pathway events.

This distinction is especially important for affordability. A listed provider fee or price-to-income ratio can describe price exposure, while WHO financial-protection measures address experienced household hardship. Both are useful, but they are not interchangeable.

3. Crosswalk methodology

3.1 Unit of analysis and source hierarchy

The unit of analysis is one GMHCAAB variable definition. WHO Mental Health Atlas 2024 is the primary reference, supported where necessary by current official WHO sources for financial protection, expenditure, workforce, digital health, data governance and information systems.

Level	Source class	Use
1	Official WHO publication, indicator metadata or data portal	Controlling definition and locator
2	Official WHO programme, regional or policy page	Current programme context and organisational interpretation
3	Other UN or national official source	Used where WHO does not provide the required operational detail
4	Peer-reviewed or recognised institutional method	Supporting methodology; does not redefine WHO indicators
Not eligible	Commercial summaries, search snippets or unsourced claims	Not accepted as evidentiary support

3.2 Relationship classification

Class	Decision rule	Treatment
Equivalent	Same core construct with compatible unit, population, denominator, setting/sector and period.	Use as WHO-derived context with attribution.
Partially overlapping	A core concept is shared, but operational scope differs materially.	Harmonise terminology and preserve the non-equivalence.
Different	No corresponding Atlas operational measure, or only a remote adjacent concept exists.	Develop an independent patient-pathway protocol and avoid implying an Atlas comparison.

3.3 Recommended treatment

Treatment	Meaning
WHO CONTEXT	Use the WHO-defined measure, retaining attribution, edition, denominator and reference year.
RETAIN	Keep the variable with the stated definition and source controls.
REFINE	Clarify the definition, unit, denominator or interpretation before empirical implementation.
OPTIONAL MODULE	Develop outside the minimum core under a dedicated protocol.
SOURCE-LEVEL EVIDENCE	Retain as raw provenance rather than infer a country-level result from a single observation.

3.4 Verification, conflict and missingness

Each row records the WHO concept, GMHCAAB definition, relationship, added information, comparability issue, terminology recommendation and treatment. Sources retain title, issuer, date, URL, locator, access date, verification status and rights note. Conflicts are resolved by source authority, edition currency, definition fit and row-level evidence; unresolved conflicts remain visible.

Code	Definition	Use
NOT REPORTED	The eligible source does not report a value for the required construct and reference period.	Future evidence packages only; never recode as zero.
NOT PUBLICLY OBSERVABLE	A value may exist operationally but could not be observed in eligible public evidence.	Describes evidence visibility, not service absence.
SOURCE INACCESSIBLE	An identified source could not be lawfully or technically accessed at the audit date.	Record URL, attempted date and access issue.
DEFINITION INCOMPATIBLE	A reported value exists but its construct, population, unit, sector or period is not compatible.	Do not substitute as a proxy without a prespecified mapping rule.
NOT APPLICABLE	The construct genuinely does not apply to the defined system or pathway.	Requires a written reason; not a synonym for missing.
UNRESOLVED CONFLICT	Two or more eligible sources disagree and the conflict protocol cannot establish a controlling value.	Publish competing sources and withhold the value.

4. Findings and design implications

4.1 Relationship and treatment

Dimension	Category	Count
Relationship	Equivalent	5
Relationship	Partially overlapping	19
Relationship	Different	24
Treatment	Refine	33
Treatment	Optional module	5
Treatment	Retain	6
Treatment	WHO context	3
Treatment	Source-level evidence	1

4.2 Domain insights

Domain	Complementary information	Design requirement
Coverage and pathways	Scheme-, vignette-, eligibility- and referral-specific pathway rules.	Separate formal entitlement from realised pathway entry.
Timeliness	Request-to-triage, accepted-request-to-assessment and decision-to-treat-to-start intervals.	Use common start/end events and administrative denominators.
Availability and workforce	Local distribution, appointment capacity and funded vacancies alongside WHO context.	Keep national headcounts distinct from practical appointment supply.
Unmet need and barriers	Cost-, wait- and distance-attributed unmet need.	Use a compatible need definition, population denominator and survey period.
Price and reimbursement	Eligible residual patient price for a defined service vignette.	Separate listed price, residual price, income-relative burden and financial protection.
Telehealth	Eligibility, price, wait, language, connectivity and clinical scope.	Measure practical usability in addition to formal availability.
Geography	Subnational provider/service distribution and travel-time reach.	Use common rurality and travel-time definitions.
Information systems	Traceable source coverage and evidence visibility.	Use observability as a data-quality diagnostic, not an access score.

WHAT THE DISTRIBUTION MEANS

Equivalent variables anchor the WHO system context; partially overlapping variables define the harmonisation agenda; different variables define the patient-pathway data-collection agenda. The intended result is a layered evidence model, not a competing substitute for WHO measurement.

5. Proposed patient-pathway measurement framework

SCIENTIFIC DEFINITION

The GMHCAAB patient-pathway access layer describes the conditions under which a defined person seeking a defined outpatient mental-health service through a defined pathway can reach treatment initiation, measured across eligibility, elapsed time, residual patient price, geographic reach and digital usability.

Priority module	Core observation	Complementary value
Entry and eligibility	Referral requirements, scheme eligibility, covered service and visit limits.	Connects formal benefit design to the pathway available to a defined person.
Wait-stage intervals	Request, triage, assessment, decision-to-treat and treatment-start timestamps.	Distinguishes policy targets from observed pathway time.
Residual patient price	Eligible patient payment after public or insurance reimbursement for a fixed vignette.	Adds service-specific price exposure without relabelling it as financial protection.
Barrier-attributed unmet need	Non-receipt or delay attributed separately to cost, waiting time, distance or eligibility.	Identifies the mechanism through which need remains unmet.
Geographic reach	Provider/service distribution and travel time for urban, rural and remote populations.	Shows whether national capacity is locally reachable.
Practical telehealth	Clinical scope, eligibility, price, wait, language, device/connectivity and regional reach.	Distinguishes formal availability from usable access.

5.1 Empirical implementation standard

- Predefine service and patient vignettes so eligibility, price and waiting observations refer to the same pathway.
- Record public, reimbursed-private and self-pay pathways separately rather than blend them into one national value.
- Use official administrative or probability-sample evidence where available, with a documented source hierarchy for supplementary evidence.
- Preserve local currency, service code, reimbursement rule, observation date and conversion metadata for every price observation.
- Report missingness, source conflict, sampling coverage, uncertainty and country confidence alongside every empirical output.
- Prefer domain profiles and evidence bands where a single ranking would imply more precision than the underlying evidence supports.

6. Collaboration and open research

GMHCAAB welcomes focused technical collaboration from global mental-health, health-financing, health-services, statistics, implementation, disability and lived-experience specialists. Contributors can engage at the level of a single domain or across the full implementation framework.

Collaboration area	Focused technical question
WHO indicator and terminology review	Where do labels, denominators or concept boundaries diverge from current WHO usage?
Health financing and financial protection	How should residual patient price and reimbursement gaps be specified without conflating household hardship?
Waiting-time and service-pathway methods	Which start/end events produce comparable pathway clocks across systems?
Country and LMIC feasibility	Which data sources and vignettes are realistic across diverse financing and delivery arrangements?
Lived experience and disability access	Which eligibility, communication, navigation and practical barriers are missing from the proposed pathway?
Statistics and evidence quality	How should uncertainty, evidence coverage and confidence be communicated without artificial precision?

INVITATION TO CONTRIBUTE

Review may focus on a single domain, row or terminology boundary. Substantive feedback will be logged, responded to and attributed with permission. Contributors may participate in a personal or institutional capacity, with attribution agreed in advance.

6.1 Open research record

Component	Format	Research use
Technical report and crosswalk	PDF + DOCX	Narrative method and full 48-variable mapping
Crosswalk and data dictionary	CSV + XLSX	Machine-readable definitions, decisions and allowed values
Source ledger	CSV + XLSX	Titles, issuers, URLs, locators, dates and rights notes
Verification and correction record	CSV + XLSX	Traceable review and version history
Calculation and verification code	Python	Reproducible counts and release-integrity checks
Persistent citation	DOI	https://doi.org/10.5281/zenodo.22167163

7. Governance, scope and reuse

Item	Statement
Chief Editor	Dr Benedict de St Amatus holds final editorial responsibility for this edition.
Publisher	AIHEM publishes this edition.
Funding	The work is supported through Therapy Near Me staff time and publication infrastructure.
Independence	This work is independent. WHO endorsement is neither claimed nor implied.
Publisher context	Therapy Near Me is a private healthcare company. This report contains no service advertising, purchasing recommendation or commercial comparison.
Reuse	Original report text and tabular metadata are available under CC BY 4.0; original code is available under the MIT Licence. Third-party materials remain under their source terms.
Corrections	Substantive corrections are documented in a dated version record; prior DOI versions remain citable.

7.1 Suggested citation

Therapy Near Me Research Team. (2026). GMHCAAB 2027 Technical Crosswalk to WHO Mental Health Atlas 2024 (Version 1.0.0). AIHEM. <https://doi.org/10.5281/zenodo.22167163>

8. Conclusion

The crosswalk establishes a practical division of labour between national system measurement and patient-pathway measurement. WHO Mental Health Atlas 2024 should remain the authoritative baseline for mental-health policies, resources and services. GMHCAAB can add value by operationalising the conditions that connect those arrangements to treatment initiation for specified people, services and pathways.

The strongest contribution is therefore not a parallel system index. It is an auditable set of pathway observations showing how eligibility, delay, residual price, geography and digital usability shape practical access. The 48-variable crosswalk defines where WHO context should be adopted, where definitions require harmonisation and where new evidence collection is warranted.

COLLABORATION CONTACT

Technical comments, terminology corrections and pilot-collaboration proposals are welcome at admin@therapynearme.com.au. The complete crosswalk and source record are available through the DOI and permanent GMHCAAB research page.

Appendix A. Full 48-variable crosswalk

Each row maps one GMHCAAB variable to the corresponding WHO Atlas indicator or adjacent WHO concept. The table distinguishes direct equivalence, partial conceptual overlap and patient-pathway constructs that operate at a different level of observation.

A1. Coverage and pathway rules

ID / GMHCAAB variable	WHO indicator or concept / definition	GMHCAAB operational definition	Relationship	Complementary information	Comparability issue	Recommended term	Recommended treatment
COV01 Public entitlement to outpatient mental-health treatment	Publicly funded health/financial-protection scheme: whether mental-health care and treatment are included in a scheme intended to protect the national population against health-care costs. Atlas reports national scheme inclusion, not a patient-specific entitlement decision.	Whether a legal or administrative entitlement exists to publicly financed outpatient clinical mental-health treatment.	Partially overlapping	Can specify the scheme, patient group, condition, service and operational pathway through which an entitlement may be exercised.	A national yes/no can hide exclusions, subnational schemes, residency rules and non-operational benefits. Current unit of analysis is too broad and can be circular when sourced from Atlas.	Scheme-specific formal entitlement to defined outpatient mental-health care	REFINE: Record country × scheme × patient vignette × pathway; use Atlas only as contextual anchor.
COV02 Public coverage of psychologist-delivered treatment	Scheme inclusion plus patient contribution for psychological therapies: Atlas asks whether mental-health treatment is included and the contribution paid by a majority of people for psychological therapies, using broad percentage bands.	Whether psychologist-delivered treatment is covered by the public system.	Partially overlapping	Identifies whether a named professional service is an eligible benefit and under which benefit rule.	'Covered' can mean free provision, reimbursement, contracted care or nominal eligibility; psychologist scopes differ; benefit and supply are conflated.	Public-benefit eligibility for psychologist-delivered treatment, by scheme and vignette	REFINE: Separate eligibility, provider qualification, reimbursement rule, patient price and actual appointment access.
COV03 Standard access/referral route	Adjacent concept only: Atlas assesses integration of mental health into primary care and system organisation, but does not publish a harmonised patient-level referral-rule indicator.	The usual formal pathway for entering covered care, including referral requirements.	Different	Maps the administrative steps a defined patient must complete before treatment can begin.	'Usual' is ambiguous where self-referral and referral coexist; pathways vary by age, diagnosis, urgency, payer and locality.	Formal entry/referral rule for a specified care pathway	REFINE: Code each pathway separately and distinguish legal rule, published rule and observed practice.
COV04 Covered treatment limit	No direct Atlas indicator. Scheme inclusion does not state episode limits, annual session caps, renewal rules or clinical exceptions.	Maximum publicly covered treatment quantity, usually expressed as sessions or episodes.	Different	Shows the depth of a benefit after initial eligibility, not merely its formal existence.	Limits are not comparable across visit lengths, stepped-care models, diagnoses or rolling versus calendar-year periods; exceptions may dominate in practice.	Covered treatment limit under a specified benefit	REFINE: Store unit, period, renewal, extension criteria and exception pathway; report pathway-specific values rather than one national value.
COV05 Official reimbursement or scheduled payment	No direct Atlas reimbursement-schedule indicator. Atlas records broad financing and patient-contribution concepts, not the monetary payment attached to a service code.	The official monetary reimbursement or scheduled payment for the relevant outpatient psychological service.	Different	Allows a listed fee to be matched with a benefit and a residual patient-price calculation.	Schedule fee, payer reimbursement and provider-accepted payment are not interchangeable; currencies, code duration, provider type and balance-billing rules differ.	Public reimbursement amount for a specified service code	REFINE: Retain raw currency, service code, duration, payer, effective date and balance-billing rule.
COV06 Mandatory patient contribution	Majority patient contribution: Atlas groups the share paid by most people for inpatient care, outpatient care, psychotropic medicines and psychological therapies into 0-5%, 6-20%, 21-50% and 51-100%.	Whether the covered pathway requires a mandatory patient payment or contribution.	Partially overlapping	Can identify the legal cost-sharing mechanism and amount for a defined pathway rather than a national majority band.	A binary flag loses amount and mechanism; copayments, deductibles, coinsurance, balance bills and premiums create different burdens. Atlas and GM denominators are not equivalent.	Scheme-specific mandatory patient cost-sharing rule	REFINE: Split contribution type, amount/rate, exemptions and maximums; preserve the Atlas band separately when used.

A2. Timeliness

ID / GMHCAAB variable	WHO indicator or concept / definition	GMHCAAB operational definition	Relationship	Complementary information	Comparability issue	Recommended term	Recommended treatment
TIM01 Referral/request to formal triage	No direct Atlas waiting-time indicator. Atlas measures system resources and service use but not elapsed time from a request or referral to triage.	Elapsed time from receipt of referral or request to formal triage.	Different	Measures an early operational delay experienced after attempting to enter care.	Start/end events, units, censoring, urgent cases, pauses and retrospective versus prospective data vary; official targets are not observed waits.	Observed request-to-triage interval	REFINE: Preregister event definitions; report median, IQR, tail percentile, observation window, urgency and censoring.
TIM02 Accepted request to first substantive assessment	No direct Atlas indicator for assessment wait. Service contacts cannot establish time from an accepted request to a clinical assessment.	Elapsed time from valid referral or accepted request to first substantive assessment.	Different	Captures delay after administrative acceptance and before clinical evaluation.	'Substantive assessment' differs across systems; rejected referrals and people who abandon the queue are often excluded, creating survivor bias.	Observed accepted-request-to-first clinical assessment interval	REFINE: Define qualifying encounter and include rejection, withdrawal and loss-to-follow-up outcomes.
TIM03 Decision-to-treat to first treatment	No direct Atlas treatment-start waiting-time indicator. Atlas psychosis coverage estimates use service-use counts and prevalence, not pathway timing.	Elapsed time from referral, assessment or decision-to-treat to first treatment.	Different	Measures whether accepted need becomes a treatment encounter and how quickly.	The current definition permits three incompatible starting events; first contact, assessment and treatment are frequently miscoded as each other.	Observed decision-to-treat-to-first treatment interval	REFINE: Use one start event; separately report request-to-treatment where available.
TIM04 Share starting within target	No harmonised Atlas target-compliance measure for mental-health treatment waits.	Proportion of patients beginning treatment within an official or service target.	Different	Adds distributional performance against a declared access standard.	Different target lengths, patient groups and clocks make percentages non-comparable; denominator exclusions can materially inflate performance.	Target compliance for a specified treatment-start interval	REFINE: Publish target definition and denominator; never rank percentages based on different targets as if equivalent.
TIM05 Official maximum/performance target	No direct Atlas indicator. A policy target is a governance commitment, not observed timeliness.	Published maximum waiting-time or performance target for the relevant pathway.	Different	Documents what a system promises and provides a benchmark against which TIM04 may be interpreted.	Targets may be non-binding, apply only to subsets, use different clocks and coexist with no performance data.	Policy waiting-time standard for a specified pathway	OPTIONAL MODULE: Treat as pathway context; report it as pathway context, distinct from realised access.

A3. Availability and workforce

ID / GMHCAAB variable	WHO indicator or concept / definition	GMHCAAB operational definition	Relationship	Complementary information	Comparability issue	Recommended term	Recommended treatment
AVL01 Psychologists per 100,000	Psychologists in the specialised mental-health workforce per 100,000. Atlas includes people with a recognised university psychology qualification who work in mental-health care; specialised workers may work in public or non-government settings and are allocated to the setting where they spend most time to avoid double counting.	Active psychologists per 100,000 population.	Partially overlapping	Potentially adds active-status, sector, FTE and patient-access qualifiers if independently measured.	Current wording may mix all licensed psychologists with the Atlas mental-health workforce; headcount/FTE, private-practice inclusion, year and denominator vary.	Specialised mental-health psychologists per 100,000 (headcount/FTE; sector specified)	REFINE: Adopt Atlas definition when comparing; label Atlas-sourced values as WHO context, not a GMHCAAB contribution.
AVL02 Psychiatrists per 100,000	Psychiatrists in the specialised mental-health workforce per 100,000. Atlas defines a psychiatrist as a medical doctor with at least two years of postgraduate training in psychiatry.	Active psychiatrists per 100,000 population.	Partially overlapping	Adds usable capacity only if activity, FTE, sector, acceptance and geographic deployment are measured.	Licensed, registered, practising and clinically active are different universes; headcount hides hours, vacancies and dual practice.	Specialised mental-health psychiatrists per 100,000 (headcount/FTE; sector specified)	REFINE: Align definitions and reference year; keep direct Atlas values as contextual anchors.
AVL03 Mental-health nurses per 100,000	Nurses in the specialised mental-health workforce per 100,000, counted across the relevant mental-health service settings.	Active mental-health nurses per 100,000 population.	Partially overlapping	Could add FTE, vacancies, setting and geography beyond a national headcount.	Specialist credential requirements differ; general nurses delivering some mental-health care may be included or excluded inconsistently.	Specialised mental-health nurses per 100,000 (headcount/FTE; setting specified)	REFINE: Use Atlas-compatible professional boundaries and disclose departures.
AVL04 Community/outpatient mental-health service facilities	Outpatient mental-health facility: a public, private non-profit or for-profit facility managing mental disorders and associated clinical/social problems, including community centres and outpatient departments; private practice and facilities solely for substance use or intellectual disability are excluded. Atlas reports counts/rates by facility type.	Number or rate of officially recognised community/outpatient mental-health service facilities.	Partially overlapping	Can add whether facilities accept the defined patient, have current capacity and deliver the relevant treatment.	Facility types and catchments differ; a facility count says nothing about hours, staffing, appointment availability or treatment mix. 'Officially recognised' is not an Atlas term.	Atlas-defined outpatient mental-health facility rate; separate service-readiness proportion	REFINE: Split structural count from patient-facing readiness; direct Atlas values are context only.
AVL05 Outpatient/community mental-health contacts	Annual visits to mental-health outpatient facilities/settings per 100,000 population. Atlas counts service contacts/visits, not necessarily unique people.	Recorded outpatient or community mental-health contacts per 100,000.	Partially overlapping	Could add setting, professional, modality and whether a contact was substantive treatment.	Visits, contacts, cases and people are not interchangeable; repeated visits and missing private-sector data can distort cross-country rates.	Annual mental-health outpatient visit/contact-event rate, by setting	REFINE: State event unit and sector coverage; never interpret contact rate as treatment coverage without a unique-person denominator.

A4. Unmet need and barriers

ID / GMHCAAB variable	WHO indicator or concept / definition	GMHCAAB operational definition	Relationship	Complementary information	Comparability issue	Recommended term	Recommended treatment
ACC01 Needed care not received in full or part	Adjacent concepts: Atlas reports selected service use/coverage and whether population mental-health surveys have been conducted, but no harmonised, barrier-specific unmet-need indicator. Its psychosis coverage estimate is the share of estimated cases using inpatient or outpatient services in the previous year.	Percentage of people who reported needing mental-health care but did not receive it fully or partly.	Different	Measures perceived need that system utilisation counts cannot observe, including partial treatment gaps.	Need definition, service scope, recall period, age range, survey mode and denominator differ; 'not in full' may mix inadequacy with non-use.	Self-reported unmet need for specified mental-health care	REFINE: Use a harmonised survey item/denominator; report no care and insufficient care separately.
ACC02 Cost-attributed unmet need	No direct Atlas barrier-rate indicator. Atlas contribution bands describe typical cost sharing; they do not estimate the proportion forgoing care because of cost.	Percentage unable to obtain needed mental-health care because of cost.	Different	Connects financial barriers to foregone care, which a benefit or price indicator cannot establish.	Single versus multiple reasons, direct versus indirect costs, recall period and universe vary. Attribution is self-reported and may not be exclusive.	Cost-attributed unmet need for specified mental-health care	REFINE: Harmonise wording and allow multiple barriers; publish numerator, denominator and uncertainty.
ACC03 Waiting-attributed unmet need	No direct Atlas indicator for inability or delay caused by waiting time.	Percentage unable to obtain, or delayed in obtaining, needed mental-health care because of waiting.	Different	Measures the population consequence of queues, including abandonment before treatment.	Combining 'unable' and 'delayed' creates a non-uniform outcome; waits may refer to referral, assessment or treatment.	Waiting-attributed unmet need for specified mental-health care	REFINE: Separate non-receipt from delay and identify the affected pathway stage.
ACC04 Distance/transport-attributed unmet need	No direct Atlas geographic-barrier rate. Atlas national facility and workforce rates can indicate capacity but not whether people forgo care because of distance or transport.	Percentage unable to obtain needed care because of geography or transport.	Different	Adds a patient-reported spatial-access outcome beyond national resource density.	Distance, travel time, transport availability and rurality are different constructs; combined survey items cannot isolate them.	Distance/transport-attributed unmet need for specified mental-health care	REFINE: Prefer standardised separate items or label the composite exactly; stratify by rurality where possible.

A5. Fees

ID / GMHCAAB variable	WHO indicator or concept / definition	GMHCAAB operational definition	Relationship	Complementary information	Comparability issue	Recommended term	Recommended treatment
FEE01 Advertised subsequent-session psychologist fee	No Atlas provider-price indicator. Atlas reports government spending and broad majority patient-contribution bands, not provider-listed monetary fees.	Exact advertised fee for a subsequent individual psychologist session meeting protocol eligibility.	Different	Creates an auditable price observation at the provider/pathway level.	One listed fee is not a country statistic; session duration, taxes, provider grade, city, telehealth, discounts and availability differ. Advertised price may not be transactable.	Single listed provider fee observation (subsequent individual session)	SOURCE-LEVEL EVIDENCE: retain as a provenance-level price observation. Any country estimate should use a prespecified provider sampling frame, service vignette and weighting protocol.
FEE02 Median eligible observed standard-session fee	No Atlas equivalent.	Unweighted median of eligible observed advertised fees for standard subsequent individual psychologist sessions in the authorised country sample.	Different	Summarises a reproducible provider sample and supports within-sample dispersion and residual-price estimates.	A small non-probability online sample is not nationally representative; provider mix, urban bias, session duration and live appointment availability matter.	Median of the preregistered observed advertised-fee sample	REFINE: Retain with non-representative label; increase/stratify sample, publish frame and weights if claims expand.
FEE03 Advertised initial psychological-assessment fee	No Atlas equivalent.	Exact advertised fee for an initial psychological assessment, excluding testing and reports.	Different	Shows the entry price where an initial consultation differs from subsequent treatment.	Initial assessment length/content varies sharply and may include intake tasks; one observation is not a country estimate.	Advertised initial clinical-consultation fee (testing/report excluded)	OPTIONAL MODULE: Place in supplementary price module unless a comparable sampling frame is established.

A6. Price burden

ID / GMHCAAB variable	WHO indicator or concept / definition	GMHCAAB operational definition	Relationship	Complementary information	Comparability issue	Recommended term	Recommended treatment
AFF01 Residual patient price after reimbursement	Related Atlas concept: patient contribution for psychological therapies, expressed as the percentage paid by a majority of people. WHO financial protection is broader: direct payments should not cause financial hardship or threaten living standards.	Compatible advertised fee minus the official reimbursement amount for the matched service/pathway.	Partially overlapping	Provides a monetary, pathway-specific illustration of the residual price associated with a matched fee and benefit.	The fee and benefit must be genuinely matchable; deductibles, caps, eligibility, provider participation, balance billing and taxes can invalidate simple subtraction.	Illustrative residual patient price for a matched pathway	REFINE: Require a service-code match and scenario assumptions; label it as modelled residual patient price, distinct from actual out-of-pocket spending.
AFF02 Listed fee / monthly median equivalised disposable income	No Atlas equivalent. WHO financial protection concerns experienced spending relative to household resources and financial hardship, not the price of one hypothetical session.	Observed listed session fee divided by monthly median equivalised disposable household income.	Different	Standardises a listed service price against a central household-resource measure.	Fee is individual while income is household-equivalised; national medians conceal distribution; one session is not a course of care; price is not utilisation or hardship.	Listed session price as a share of monthly median equivalised disposable income	OPTIONAL MODULE: Report as price burden, not affordability or financial protection; add distributional/course-of-care scenarios.
AFF03 Residual price / monthly median equivalised disposable income	Related to, but not equivalent to, WHO financial-protection concepts; WHO measures hardship from direct health payments across household budgets.	Residual patient balance after reimbursement divided by monthly median equivalised disposable household income.	Partially overlapping	Combines a matched pathway price with an income scale and is more patient-relevant than a gross listed fee.	Still hypothetical and distribution-blind; benefit eligibility, household composition, repeated sessions and other health costs are omitted.	Residual session price as a share of monthly median equivalised disposable income	REFINE: Retain as a scenario metric; explicitly disclaim financial-protection equivalence and add sensitivity analyses.
AFF04 Fee / statutory gross hourly adult minimum wage	No Atlas equivalent.	Number of statutory minimum-wage work hours required to equal one listed session fee.	Different	Provides an intuitive labour-time price scale for countries with a binding national hourly wage.	Many countries lack a single national wage; gross wage ignores tax/benefits; informal workers and uncovered groups make the comparator unrepresentative.	Gross statutory minimum-wage work-time equivalent	OPTIONAL MODULE: Supplementary only; suppress where no valid national rate exists and never treat as household affordability.
AFF05 PPP-adjusted fee	No Atlas affordability indicator of this form. Atlas may express expenditure in US dollars but does not treat a PPP-converted provider fee as patient affordability.	Observed local provider fee converted using a consumption purchasing-power-parity factor.	Different	Supports cross-country comparison of the real-resource price represented by the sampled fee.	PPP conversions are price-level adjustments, not income or ability-to-pay measures; base year and conversion direction must be fixed.	PPP-standardised listed session price	OPTIONAL MODULE: Place in price context, not affordability; state PPP source, reference year and formula.

A7. Supplementary

ID / GMHCAAB variable	WHO indicator or concept / definition	GMHCAAB operational definition	Relationship	Complementary information	Comparability issue	Recommended term	Recommended treatment
SUP01 Regulated counsellors per 100,000	Atlas includes categories of specialised mental-health workers beyond psychiatrists, psychologists and nurses, but national professional categories are not automatically equivalent to 'regulated counsellor'.	Regulated counsellors per 100,000 population.	Partially overlapping	Can describe an access-relevant workforce omitted by narrow psychologist/psychiatrist counts.	Regulation, title protection, training and mental-health practice scope differ; registry counts may include non-practising members.	Regulated mental-health counsellors per 100,000 (jurisdictional definition stated)	REFINE: Keep supplementary; publish inclusion crosswalk and active/FTE status.
SUP02 Total mental-health workforce per 100,000	Total specialised mental-health workforce per 100,000, aggregating the Atlas professional categories under its counting rules.	Total mental-health workforce per 100,000.	Equivalent	None if copied from Atlas; value lies in contextual linkage to pathway measures.	Equivalence holds only when the same professional universe, headcount convention, sectors, year and denominator are used.	WHO Atlas specialised mental-health workforce per 100,000	WHO CONTEXT: Retain as attributed WHO context; present as attributed WHO context.
SUP03 Rural-urban workforce distribution	No harmonised Atlas rural-urban workforce-distribution output; Atlas national aggregates can mask subnational inequity.	Distribution of mental-health workforce between rural and urban areas.	Different	Tests whether national capacity is geographically reachable.	Rural definitions, denominator populations, provider workplace, commuting and telehealth coverage vary.	Rural-to-urban specialised mental-health workforce rate ratio	RETAIN: Retain as a supplementary module after adopting a common rurality taxonomy and geocoded denominator.
SUP04 Vacancy rate	No direct Atlas vacancy-rate indicator. Workforce headcounts do not measure funded but unfilled posts.	Percentage of funded mental-health workforce positions vacant.	Different	Distinguishes nominal establishment capacity from staffed capacity.	Funded-post definitions and reporting sectors differ; private markets often have no comparable denominator.	Funded specialised mental-health post vacancy rate, by sector/profession	RETAIN: Supplementary; require filled and funded-post counts, date and sector.
SUP05 Public-service acceptance/reject on rate	No Atlas equivalent.	Proportion of referrals or requests accepted or rejected by a public mental-health service.	Different	Directly measures administrative access after help-seeking and exposes hidden rationing.	Referral quality, duplicates, redirection, urgency, service thresholds and case mix differ; acceptance is not treatment receipt.	Disposition of valid access requests: accepted, redirected, rejected or pending	REFINE: Retain and consider promotion to core after harmonised event definitions and denominator validation.
SUP06 Treatment completion	Adjacent Atlas information-system concepts include routine collection of service-use, follow-up and outcome information, but Atlas does not supply a universally comparable treatment-completion rate.	Percentage of treatment episodes completed.	Partially overlapping	Adds continuity after entry and can reveal nominal access that fails to produce an adequate course.	Completion is treatment- and goal-specific; planned discharge, dropout and transfer must be distinguished; episode denominators vary.	Protocol-defined treatment-course disposition	REFINE: Report planned completion, transfer and unplanned discontinuation separately by treatment type.
SUP07 Nationally funded clinical telehealth availability	Telehealth availability and use: Atlas defines delivery by health professionals using information and communication technologies where distance is critical, and asks whether telehealth is available and used for mental-health services.	Whether nationally funded clinical tele-mental-health is available.	Partially overlapping	Can add the patient's eligibility, modality, residual price, language options and ability to book a funded service.	A national binary duplicates Atlas and says nothing about uptake, clinical scope, digital exclusion, regional restrictions or appointment supply.	Patient-accessible, publicly financed tele-mental-health pathway	REFINE: Redesign as pathway/readiness measure; keep a simple national availability flag as WHO context only.
SUP08 Legal insurance parity	Adjacent Atlas concepts cover mental-health law, rights and inclusion in publicly funded schemes; Atlas does not establish a single operational insurance-parity measure.	Whether law requires insurance coverage for mental health on terms comparable to physical health.	Partially overlapping	Could distinguish formal parity obligations from scheme inclusion and test operational exceptions.	Parity can concern quantitative limits, financial requirements or network rules; public/private insurance regimes differ; law may be unenforced.	Statutory mental-health benefit-parity requirement, by payer and dimension	REFINE: Retain as policy context; code scope, exemptions, commencement and enforcement evidence.
SUP09 Government mental-health expenditure per capita	Government mental-health expenditure, reported in local currency and/or US dollars per capita under Atlas reporting conventions.	Government mental-health expenditure per capita.	Equivalent	None if directly sourced from Atlas; it contextualises patient-pathway results.	Currency conversion, fiscal year, government boundary and missing expenditure outside the reporting authority limit comparability.	WHO Atlas government mental-health expenditure per capita	WHO CONTEXT: Retain as attributed WHO context; present as attributed WHO context.
SUP10 Mental-health share of government health expenditure	Government mental-health expenditure as a percentage of total government health expenditure.	Mental-health expenditure as a share of government health expenditure.	Equivalent	None if directly sourced from Atlas; useful for explaining system inputs.	Budget versus expenditure, fiscal boundaries and decentralised spending can differ; a share does not indicate adequacy or efficiency.	WHO Atlas mental-health share of government health expenditure	WHO CONTEXT: Retain with attribution, year and missing-data status.

ID / GMHCAAB variable	WHO indicator or concept / definition	GMHCAAB operational definition	Relationship	Complementary information	Comparability issue	Recommended term	Recommended treatment
SUP11 Community versus hospital expenditure	Atlas reports distribution of mental-health expenditure across psychiatric hospitals, general hospitals, primary care/community settings, promotion/prevention and other specified categories.	Share or balance of spending on community services versus hospital care.	Partially overlapping	Could provide a simplified deinstitutionalisation context when the underlying components are preserved.	A two-way split may not map to Atlas categories and can omit primary care, general hospitals, prevention and MHPSS; transfer accounting varies.	Distribution of government mental-health expenditure by Atlas service setting	REFINE: Align to Atlas categories; use only as contextual system measure.
SUP12 Child/adolescent service coverage	Atlas reports selected child/adolescent service resources and use, but 'coverage' requires a population-in-need denominator and is not equivalent to facility availability.	Coverage of child and adolescent mental-health services.	Partially overlapping	Can add the proportion of children/adolescents in need who actually receive a defined service.	Age bands, need/prevalence denominator, service type, school-based care and unique-person counting differ; resource availability must not be called coverage.	Child/adolescent treatment coverage for a specified condition/service	REFINE: Require service-use numerator and need denominator; otherwise rename as availability or utilisation.
SUP13 Population coverage of designated psychological-therapy programmes	Related to Atlas scheme inclusion and service coverage, but Atlas does not provide a standard programme-level entitlement-and-use coverage measure for named psychological-therapy programmes.	Proportion of the population covered by designated psychological-therapy programmes.	Partially overlapping	Can distinguish programme eligibility from actual use for a defined intervention pathway.	'Covered' may mean residence, legal eligibility, enrolment, capacity or treatment receipt; denominator and programme boundaries vary.	Programme eligibility coverage; programme utilisation coverage	REFINE: Split the two concepts and define denominator, intervention and reporting period.

A8. Context

ID / GMHCAAB variable	WHO indicator or concept / definition	GMHCAAB operational definition	Relationship	Complementary information	Comparability issue	Recommended term	Recommended treatment
CTX01 Population	Atlas country profiles use national population denominators (including United Nations population estimates) to derive per-capita and per-100,000 rates.	Country population used for rate denominators.	Equivalent	No substantive addition; necessary denominator metadata.	Different vintages or territorial coverage create rate mismatch.	Mid-year resident population, source and reference year	RETAIN: Context only; lock denominator vintage to each indicator or state standardisation method.
CTX02 World Bank income classification	Atlas stratifies countries using World Bank income groups for a stated reference classification.	World Bank country income classification.	Equivalent	No substantive addition; supports stratified description.	Classifications change by fiscal year and are not a patient income measure.	World Bank income group (classification year stated)	RETAIN: Context only; never use as a substitute for household resources.
CTX03 Health-financing model	Atlas describes financing arrangements through government expenditure, schemes and patient contributions but does not impose GMHCAAB's single financing-model taxonomy.	Categorical description of the country's health-financing model.	Partially overlapping	May help explain benefit and price pathways if multi-payer structure is preserved.	Most systems are mixed; one label masks decentralisation, population groups and mental-health-specific arrangements.	External health-financing arrangement taxonomy, with mixed-system attributes	REFINE: Context only; use a recognised taxonomy and permit multiple attributes.
CTX04 Median equivalised disposable household income	No Atlas indicator.	Median equivalised disposable household income used in AFF02/AFF03 denominators.	Different	Provides a household-resource scale for scenario-based price burden.	Equivalence scale, income concept, survey year, imputation and national coverage differ; conversions can create denominator error.	Median equivalised disposable household income (definition, source and year)	RETAIN: Disclose scale and vintage; sensitivity-test mismatched years and suppress where no comparable measure exists.
CTX05 Statutory adult minimum wage	No Atlas indicator.	National statutory gross hourly adult minimum wage used in AFF04.	Different	Provides a narrow labour-price comparator.	There may be regional, sectoral, age or monthly rates, or no statutory minimum; gross wage does not measure disposable household resources.	Applicable statutory gross minimum-wage rate (scope and date stated)	RETAIN: Context only; link to AFF04 and suppress national comparisons when no single valid rate exists.

A9. Derived

ID / GMHCAAB variable	WHO indicator or concept / definition	GMHCAAB operational definition	Relationship	Complementary information	Comparability issue	Recommended term	Recommended treatment
MHAOG Mental Health Access Observability Gap	Related Atlas concept: strength of mental-health information systems, including surveys, digital records and routine collection of core indicators. Atlas itself notes stronger monitoring of administrative/service-use data than outcomes and patient experience.	100 × verified structural indicators/14 minus 100 × verified person-facing indicators/14; structural group COV01-06, AVL01-05, FEE01-03; person-facing group TIM01-05, ACC01-04, AFF01-05.	Partially overlapping	Could quantify imbalance in what GMHCAAB can verify, drawing attention to patient-facing evidence scarcity.	It measures GMHCAAB source observability, not country performance; all verified cells count equally; grouping is contestable; WHO-derived structural cells inflate the first term; source-search intensity affects scores.	GMHCAAB person-facing evidence observability gap (exploratory)	REFINE: Preregister source universe/search effort, weight or stratify evidence quality, separate imported WHO data and use this metric as a data-observability diagnostic rather than an access ranking.
RFD Relative Fee Dispersion	No Atlas equivalent.	Within the authorised fee sample, (Q3 - Q1) / median, using the project's specified quartile rule; relative MAD is a robustness statistic.	Different	Describes heterogeneity in observed listed prices within the project sample.	Small non-probability samples make quartiles unstable; Tukey hinges and inclusive-percentile quartiles can differ; zero/near-zero medians are problematic; dispersion is not national market variation.	Observed-sample relative fee dispersion	REFINE: Fix one quartile convention, publish n and uncertainty, retain raw observations and label the statistic as sample-specific.

Appendix B. Authoritative source ledger

ID	Title	Issuer	Date	URL	Locator	Verification	Rights / redistribution
WHO-ATLAS-2024	Mental health atlas 2024	World Health Organization	2025-09-02	https://www.who.int/publications/i/item/9789240114487	Methods pp. 11-22; financing pp. 48-52; workforce pp. 53-59; telehealth p. 63; outpatient services pp. 68-72; information systems pp. 81-83	VERIFIED - official WHO publication page and downloaded report	WHO source is linked and cited only; report, figures and tables are not redistributed in the GMHCAAB release.
WHO-ATLAS-PROGRAMME	Mental Health Atlas programme and country profiles 2024	World Health Organization	2025-09-02	https://www.who.int/teams/mental-health-and-substance-use/data-research/mental-health-atlas	Mental Health Atlas 2024 section and country-profile links	VERIFIED - official WHO programme page	Linked only; WHO country profiles are not redistributed.
WHO-CMHAP-2030	Comprehensive mental health action plan 2013-2030	World Health Organization	2021	https://www.who.int/publications/i/item/9789240031029	Global targets 2.1-2.3 and 4.1-4.2; Objective 4	VERIFIED - official WHO publication page and downloaded report	WHO source is linked and cited only; the report is not redistributed.
WHO-GHO-MH	Global Health Observatory: mental health	World Health Organization	Living data resource	https://www.who.int/data/gho/data/themes/mental-health	Mental-health theme and indicator catalogue	VERIFIED - official WHO data page	Linked only; users must follow the source terms and metadata.
WHO-FINPROT-2025	Financial hardship due to out-of-pocket health spending and its components (SDG 3.8.2, 2025 definition)	World Health Organization	2025 definition	https://www.who.int/data/gho/data/themes/topics/financial-protection	Current SDG 3.8.2 definition and metadata	VERIFIED - official WHO data page	Linked and paraphrased; no WHO dataset is redistributed.
WHO-GHED	Global Health Expenditure Database: data and analytics	World Health Organization	Living data resource	https://www.who.int/teams/health-financing-and-economics/health-financing/expenditure-tracking/data-and-analytics	Data and analytics overview	VERIFIED - official WHO programme page	Linked only; no underlying WHO data are redistributed.
WHO-WORKFORCE	Health Workforce statistics database	World Health Organization	Living data resource	https://www.who.int/data/gho/data/themes/topics/health-workforce	Health-workforce theme and metadata	VERIFIED - official WHO data page	Linked only; no underlying WHO data are redistributed.
WHO-DIGITAL-2025	Global strategy on digital health 2020-2027	World Health Organization	2025	https://www.who.int/publications/i/item/9789240116870	Strategy overview and objectives	VERIFIED - official WHO publication page	Linked only; the publication is not redistributed.
WHO-DATA-PRINCIPLES	WHO data principles	World Health Organization	Living policy page	https://data.who.int/about/data/who-data-principles	Transparency, metadata, responsible data use and reuse principles	VERIFIED - official WHO data page	Linked and paraphrased only.
WHO-GATHER	Guidelines for Accurate and Transparent Health Estimates Reporting (GATHER)	World Health Organization	Living guidance page	https://data.who.int/about/data/gather	Input data, analytical methods, code and transparency expectations	VERIFIED - official WHO data page	Linked and paraphrased only.
WHO-SCORE	SCORE for Health Data Technical Package	World Health Organization	Living technical package	https://www.who.int/data/data-collection-tools/score/faq/score-technical-package	Technical-package overview	VERIFIED - official WHO page	Linked only.

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