



Foundations · Educational evidence summary

How UnifiedACB is building a reproducible anticholinergic evidence database

This foundation article explains how UnifiedACB is building a reproducible anticholinergic evidence database.

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Abstract

Objective: Describe the reproducibility features and directly verifiable contents of the UnifiedACB public anticholinergic evidence snapshot. **Source basis and approach:** This article uses a descriptive inspection of the preserved public dataset, medication-profile map and source metadata. The inspection counts records and examines their fields; it does not analyze patient outcomes or perform a systematic literature review. **Findings:** The snapshot contains 743 searchable concepts, of which 742 have public observations, and 2,140 source-observation rows from seven publicly represented source versions. It includes 1,132 explicit published-zero observations and four KABS source-anomaly records. Source-native values, original labels, versions and locators remain separate. **Interpretation:** These features support a traceable account of what the public directory contains. They do not establish a universal anticholinergic score, prove clinical validity of every source mapping or demonstrate that using the website improves patient outcomes. Reproducibility requires preserving both verified observations and the boundaries of missing or restricted evidence.

Introduction

A medication directory can appear consistent while concealing important differences among its sources. Renaming medications, filling missing cells or combining ordinal categories may make a table easier to scan, yet each operation can change what the original publications support. Reproducibility requires the reader to be able to trace a displayed result back through those decisions.

UnifiedACB addresses this problem by organizing source observations around searchable medication concepts while retaining the source-specific evidence. The objective of this article is narrow: describe the current public snapshot and the representation choices that can be checked from it. It is a project data-methods report, not a study of clinical effectiveness or a new validation of anticholinergic burden scales.



The distinction between data fidelity and clinical validity is central. A faithful transcription can still come from a source with limited applicability to a particular population. Conversely, a well-studied scale can be misrepresented by an incorrect identity match or missing-data rule. A reproducible resource must make both kinds of limitation visible.

Methods

Materials inspected

The inspection used the preserved [public_dataset.json snapshot](#), labeled v3.0 RC12 final, together with the medication-profile map in the same public release. The dataset contains source metadata, medication concepts, observations and source-anomaly notes. Only these public materials were used to derive the project counts reported below. No private patient records, new medication observations or unpublished clinical outcomes were introduced.

The units were counted separately: searchable medication concepts, concepts containing one or more public observations, individual observation rows and distinct source-version identifiers represented by those rows. Explicit published zeros were counted by their stored rating state. Source metadata records were not treated as evidence that a source's full medication table was publicly redistributed.

Identity, provenance and missingness

The field inspection examined the concept identifier, preferred label, aliases, route/formulation notes and the original source label retained with each observation. It also examined observation identifiers, source-version identifiers, source scores, rating states, locators and source links. This was an inspection of the representation, not a fresh clinical adjudication of every medication identity.

No route was inferred where the source did not provide one. No absent observation was converted to zero. Existing source-anomaly records were read as document-specific notes, and their contents were not used to manufacture missing medication-list rows. The profile map was checked as a separate artifact linking public concepts to medication pages.

Descriptive approach

The analysis consisted of record counts, enumeration of represented source versions and review of the stored anomaly types. No ordinal scores were averaged, normalized onto a new scale or combined into a patient-level risk estimate. No agreement coefficient, clinical effect estimate or prediction statistic was calculated. Literature cited below provides methodological context rather than additional data for the project counts.



Results

Public concepts and observations

The preserved snapshot contains **743 searchable concepts, 742 concepts with public rows and 2,140 public observations**. The medication-profile map contains 742 mappings. Quinupramine is the searchable provenance-only concept without public medication-list observations. These counts describe the released records; they are not the number of study participants or independent experiments.

Seven source versions contribute public observation rows: BAAS 2019, CALS 2022 primary Table 4, GABS 2018, JARS 2025, KABS 2020 validation supplement, SWE-ABS 2023 and Yamada ABS 2023. The broader source registry contains 12 metadata records. The distinction reflects the separation between a known source and publicly represented medication-level observations. All counts can be checked against the [preserved public snapshot](#).

Explicit zero and other rating states

The observation set contains **1,132 rows marked published_zero**. Other stored states distinguish published ratings, published final-table ratings and published validation-supplement ratings. Keeping these labels permits a reader to identify how the public row is represented without assigning a numerical value to a missing entry.

The snapshot therefore does not require every searchable concept to have a value in every scale. Source coverage remains visible. A comparison can report the observations actually available and distinguish them from absent or unavailable entries rather than treating the directory as a fully populated medication-by-scale matrix.

Documented source anomalies

Four KABS anomaly records are retained. The levodopa/decarboxylase inhibitor note identifies a main-text-versus-supplement value conflict. The quinupramine note identifies relevant main-text information without inferring a missing list row. Doxepin and chlorpromazine notes identify supplement omissions associated with category-count inconsistencies. The public notes preserve these distinctions without replacing the source-native observations.

The observation fields also retain literal source labels beside preferred medication names. This allows the grouping to be inspected rather than making the normalized name appear to be the exact wording of every source. Route and formulation notes explicitly limit inference where source detail is absent.

Discussion

The inspection demonstrates a reproducibility property: public findings can be described at the observation level with their source identity intact. It does not demonstrate that every classification predicts a clinical outcome. The [original ADS assay-association study](#) illustrates one validation question, while the [Drug Burden Index development study](#) illustrates another exposure-and-function



framework. Their findings cannot be transferred automatically to a different public directory or a new combined score.

Preserving source disagreement is also a substantive choice. A single synthesized output would require additional assumptions about category equivalence, source dependence and missingness. Those assumptions are not necessary to provide a useful evidence directory. Readers can inspect the source classifications and then decide which method is appropriate for a specified clinical or research question.

Separating metadata from public rows supports transparent publication boundaries. A registry can acknowledge a source and provide its provenance even when reuse conditions do not permit redistributing its medication table. Filling such a gap from another scale would create a misleading appearance of completeness and obscure the original source boundary.

Limitations

This is a descriptive inspection of a preserved snapshot. It is not an independent replication of every source extraction, a systematic review, a clinical validation study or a certification of every medication mapping. Record counts establish the size of the inspected artifacts, not their universal coverage or clinical usefulness.

The source set is heterogeneous in date, setting, methods and medication eligibility. Historical labels may lack route or formulation detail. Some sources are represented only by metadata, and documented anomalies remain unresolved where the source material does not justify correction. The counts may change in a later version, so the snapshot identity must accompany any reuse of these findings.

Conclusion

UnifiedACB's public snapshot supports a traceable description of medication evidence by retaining source-native observations, explicit zero states and document-specific uncertainties. Its verified record counts describe the released database structure. Clinical prediction, treatment benefit and any future synthesized score require separate, purpose-matched validation rather than inference from the existence or size of the directory.

References

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Explore the evidence

[Ask UnifiedACB](#) about a medication or source, browse the [Medication Library](#), or read the [methodology](#).

Disclosure

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