Los Angeles County | Department of Mental Health



EPSDT FHIR Migration Companion Guide

Document Information

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Version	1.2.0
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Version History

Version	Date	Summary of Changes
1.2.0	10/2026	**Breaking.** CANS instrument replaced: `cans-50` retired, replaced by `cans-ip` (CANS-IP, 50 rating items across the same 7 domains, form-accurate item numbering). Trauma section corrected to 12 two-state (NO/YES) items T1–T12 in MH 735 order; the phantom "Other Trauma" item removed. Non-Trauma linkIds realigned to the real CANS-IP/system-of-record scheme (`CBQuestionNN` , `LDQuestionNN` , `RBQuestionNN` , `CFQuestionNN` , `SDQuestionNN` , `CRQuestionNN[b|c|d]`) — the previous `CB01` / `LD01` / `RB21` / `CF01` / `SD32` / `CR41` scheme in this guide never matched the deployed artifact and is corrected here. PSC items 5, 6, 17, 18 now accept a fourth **Not Applicable** answer option (code `8`). Level 1 Level of Care description renamed to `"Level 1 – Prevention"` . New `ActualAssignedLevelOfCare` and `ReasonForVariance` items added. Answer-code validation against the DMH Dictionary Service and the per-instrument Administrative Close reason codes documented explicitly. **No transition window** — see Section 9.
1.1.1	9/11/2026	Trauma field naming corrected to `T03` in the field mapping tables; title page cleanup. **Superseded by 1.2.0** — the entire Trauma section is renumbered T1–T12 and the `T03` linkId no longer exists.
1.1.0	7/1/2026	Endpoint URLs and onboarding content updated for the HIDEX website release.
1.0.0	6/23/2026	Initial release.

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1. Introduction

This guide is for providers and vendors who currently submit EPSDT assessments (CANS and PSC-35) via the legacy SOAP/WCF interface and are transitioning to the **HIDEX Provider Access API** (FHIR R4). The CANS instrument on the FHIR side is **CANS-IP** (`cans-ip`) — the predecessor `cans-50` questionnaire is retired for new writes; see Section 9.

The HIDEX Provider Access API accepts CANS and PSC assessments as FHIR R4 `QuestionnaireResponse` resources. The API validates submissions against business rules and persists them to the FHIR store. For CANS assessments, a Level of Care score (1–5) is calculated and returned as an extension on the response.

> **Important**: The SOAP intake path continues to operate during and after the migration period. Existing legacy XML clients keep working unchanged. Behind the scenes, the SOAP path translates each XML message into a FHIR `QuestionnaireResponse` and submits it to the **same authenticated endpoint** a native FHIR client uses, so both paths share one validation, persistence, and identity routine.

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2. What Changes vs What Remains the Same

Aspect	Legacy (SOAP/WCF)	New (FHIR R4)
Protocol	SOAP over HTTPS	REST over HTTPS
Data Format	XML	JSON (FHIR R4)
Authentication	WS-Security / custom headers	API subscription keys via APIM gateway
Endpoint	`/ClientService/`	`/fhir/QuestionnaireResponse`
Intake convergence	SOAP-only	XML/SOAP and native FHIR converge on one authenticated endpoint
Validation	Server-side after write	Shared server-side pre-processing (before persistence)
Persistence	SOAP proxy wrote data	HIDEX Provider Access API writes to FHIR store
Identity link	SOAP stamped the EPSDT ID	API includes the EPSDT ID in the FHIR resource identifier collection with timestamp
Error Format	SOAP Fault	FHIR OperationOutcome (JSON)
Level of Care	Returned in SOAP response	Returned as extension on FHIR response
Duplicate Check	Server-based	FHIR store query-based
Assessment Instruments	CANS-50, PSC-35	**CANS-IP** (`cans-ip`, retired `cans-50` predecessor), PSC-35 — see Section 9
Business Rules	Same validation rules	Same validation rules (JSON-configured, shared core)
Data Content	Same fields	Same fields, plus newly surfaced optional fields (see Section 9)

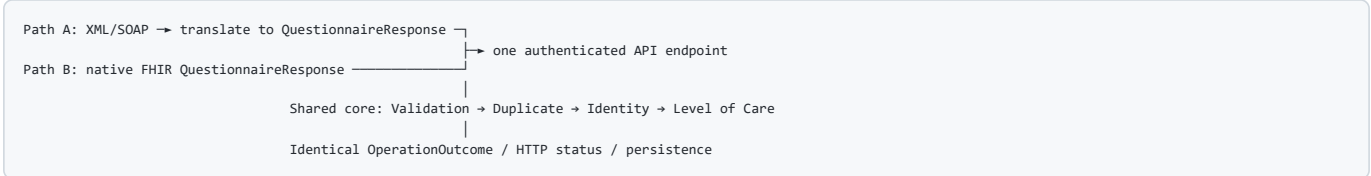
> **Note**: EPSDT IDs from the original web service are preserved in the FHIR identifier collection. Assessments are saved to the FHIR store with timestamps.

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3. Dual Intake-Path Parity

EPSDT submissions arrive on two intake paths that converge on one shared business-logic core inside the HIDEX Provider Access API:

- **Path A (legacy parity)** — A legacy XML/SOAP message is received, translated into a FHIR `QuestionnaireResponse`, and forwarded to the same authenticated API endpoint a native FHIR client calls.
- **Path B (native FHIR)** — A contracted provider submits a FHIR `QuestionnaireResponse` directly to the API.



Because both paths run the identical pipeline from the validation step onward, the intake path does not change the outcome:

- **Same validation errors** — the same set of validation issues is produced for the same payload, independent of ordering.
- **Same HTTP status code** — both paths return the same status for the same payload.
- **Same persistence and identifiers** — both paths produce the same FHIR resource identifiers and the same set of `QuestionnaireResponse` item link ids.

> **Important**: If the legacy XML message cannot be translated into a valid FHIR `QuestionnaireResponse`, the submission is rejected with a translation error and nothing partial is forwarded or persisted.

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4. Authentication and Unified Access Model

The HIDEX Provider Access API requires an OAuth2 bearer token plus an APIM subscription key on **every** EPSDT write regardless of intake path. There is no unauthenticated intake. See the **API Credentials Reference** table below for what's provisioned and where each value is used.

Step 1: Acquire OAuth2 Access Token

```
POST https://login.microsoftonline.com/{tenant-id}/oauth2/v2.0/token
Content-Type: application/x-www-form-urlencoded

grant_type=client_credentials
&client_id={your-client-id}
&client_secret={your-client-secret}
&scope={your-resource-audience}
```

> `{your-resource-audience}` is the Resource Audience value from the API Credentials Reference table below (e.g., `api://{resource/appID}/.default`).

Response:

```
{
  "token_type": "Bearer",
  "expires_in": 3600,
  "access_token": "eyJ0eXAiOiJKV1QiLCJhbGciOi..."
}
```

The access token contains claims including your `program_id` authorization.

Step 2: Using Your Credentials

Native FHIR clients (Path B) authenticate by including **both** credentials:

```
POST https://hidex-test.dmh.lacounty.gov/healthcare/QuestionnaireResponse
Authorization: Bearer {access_token}
Ocp-Apim-Subscription-Key: {your-subscription-key}
Content-Type: application/json
Accept: application/json
```

The legacy SOAP path (Path A) authenticates to the API using **the same mechanism** a native FHIR client uses.

> **Note**: Store both credentials securely (treat them like passwords).

> **Important**: Authorization also checks the OAuth2 token's ProgramID authorization. A request whose ProgramID authorization does not contain the assessment's ProgramID — or that carries no ProgramID authorization — is rejected with HTTP 403 (the same message on both intake paths) and no assessment data is persisted.

Important Notes

- **OAuth2 tokens expire after 1 hour** — implement token caching and refresh logic
- **Subscription key** targets the specific environment (TEST, QA, or PRODUCTION)
- Your token's `program_id` claim must match the program codes in your submissions
- Contact Integration Support via the CIOB Help Desk if you need to rotate your subscription key or OAuth2 client credential provisioning

API Credentials Reference

The Integration Team provisions the following credentials for API access:

Item	Type	Scope	Value
Client ID	App Registration	Shared across TEST and QA	Your OAuth2 application identifier (`client_id`)
Client Secret	App Registration	Shared across TEST and QA	Your OAuth2 application secret (`client_secret`) — store securely
Tenant ID	Azure AD	Same for both TEST and QA	The Azure AD tenant identifier (`tenant_id`)
Resource Audience	OAuth2 Scope	Same for both TEST and QA	`api://{resource/appID}/.default` — used as the `scope` parameter in the token request
Base URL	Endpoint	Environment-specific	TEST: `https://hidex-test.dmh.lacounty.gov/healthcare` QA: `https://hidex-qa.dmh.lacounty.gov/healthcare`
APIM Subscription Key	API Management	Environment-specific	Sent as the `Ocp-Apim-Subscription-Key` header on every request

> **Note**: Client ID, Client Secret, Tenant ID, and Resource Audience are shared across the TEST and QA environments. Base URL and the APIM Subscription Key are environment-specific — request separate values for TEST and QA.

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5. Endpoint Configuration

Base URLs by Environment

Environment	Base URL
TEST	`https://hidex-test.dmh.lacounty.gov/healthcare`
QA	`https://hidex-qa.dmh.lacounty.gov/healthcare`
PRODUCTION	`https://hidex.dmh.lacounty.gov/healthcare`

API Operations

Operation	Method	Path	Description
Create Assessment	POST	`/QuestionnaireResponse`	Submit a new CANS or PSC assessment
Update Assessment	PUT	`/QuestionnaireResponse/{id}`	Update an existing assessment
Read Assessment	GET	`/QuestionnaireResponse/{id}`	Retrieve a specific assessment by ID
Search Assessments	GET	`/QuestionnaireResponse?{params}`	Search assessments by patient, tag, date

Required Headers

Header	Value	Required
`Authorization`	`Bearer {access_token}`	Yes (POST/PUT)
`Ocp-Apim-Subscription-Key`	`{your-subscription-key}`	Yes
`Content-Type`	`application/json`	Yes (POST/PUT)
`Accept`	`application/json`	Yes

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6. Data Model — CANS QuestionnaireResponse

Resource Structure

Field	FHIR Path	Required	Rules
Resource Type	`resourceType`	Yes	Must be `"QuestionnaireResponse"`
ID	`id`	Yes (PUT)	Resource identifier
Status	`status`	Yes	One of: `completed`, `in-progress`, `amended`, `entered-in-error`, `stopped`
Questionnaire	`questionnaire`	Yes	`https://lacdmh.lacounty.gov/fhir/Questionnaire/cans-ip` — the retired `cans-50` predecessor is rejected on new writes (Section 9)
Subject (Client)	`subject.reference`	Yes	`Patient/{ClientID}`
Source (Practitioner)	`source.reference`	Yes	`Practitioner/{NPI}`
Author (Organization)	`author.reference`	Yes	`Organization/{ProviderNumber}`
Meta Tag	`meta.tag[0].code`	Yes	`"CANS"`
Meta Tag Display	`meta.tag[0].display`	Yes	`"CANS"`

> **Note**: `QuestionnaireResponse` for CANS/PSC carries only `subject` (Patient) and `source` (Practitioner) references. There is no `encounter` or `EpisodeOfCare` reference anywhere in the resource, and none should be added.

CANS Domain Groups

Items are organized into groups using nested `item` arrays. LinkIds below are the **real, deployed `cans-ip` scheme** — they carry the domain prefix and the form item number, not a sequential index:

Domain Group	Group linkId	Item linkIds
Behavioral/Emotional Needs	`child-behavioral-emotional-needs`	`CBQuestion01` – `CBQuestion09`
Life Domain Functioning	`life-domain-functioning`	`LDQuestion10` – `LDQuestion20`
Risk Behaviors	`risk-behaviors`	`RBQuestion21` – `RBQuestion28`
Cultural Factors	`cultural-factors`	`CFQuestion29` – `CFQuestion31`
Strengths Domain	`strengths-domain`	`SDQuestion32` – `SDQuestion40`
Caregiver Resources and Needs	`caregiver-resources-needs`	`CRQuestion41` – `CRQuestion50`, plus `b` / `c` / `d` occurrence suffixes (e.g. `CRQuestion41b`, `CRQuestion41c`, `CRQuestion41d`) for a 2nd/3rd/4th caregiver. `CRQuestion41` (occurrence A) is unsuffixed.
Trauma	`trauma`	`T1` – `T12` (two-state NO/YES, not rated 0–3)

> **Important**: `CBQuestion07` is form item **8 ("Anger Control")** and `CBQuestion08` is form item **7 ("Substance Use")** — the linkId suffix does not always match the printed form number. Likewise `RBQuestion25` is form item 26 ("Sexual Aggression") and `RBQuestion27` is form item 25 ("Runaway"). Always read the item's `text` for the form number rather than inferring it from the linkId.

Metadata Items

linkId	Field	Answer Type
`402`	AssessmentType	`valueCoding.code` — `"1"` Initial, `"2"` Reassessment, `"4"` Discharge, `"5"` Administrative Close, `"6"` Urgent
`401`	AssessmentDate	`valueDate` (YYYY-MM-DD)
`403`	AdminCloseReason	`valueCoding.code` (only for AssessmentType="5") — see the per-instrument code set in Section 8
`408`	Client has a caregiver	`valueCoding.code` — `"Y"` or `"N"`
`ActualAssignedLevelOfCare`	Clinician-assigned Level of Care	`valueCoding.code`, `"1"` – `"5"`
`ReasonForVariance`	Reason the assigned level differs from the recommended level	`valueString` — required only when `ActualAssignedLevelOfCare` differs from the engine's recommended level

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7. Data Model — PSC QuestionnaireResponse

Resource Structure

Field	FHIR Path	Required	Rules
Resource Type	`resourceType`	Yes	Must be `"QuestionnaireResponse"`
Status	`status`	Yes	One of: `completed`, `in-progress`, `amended`, `entered-in-error`, `stopped`
Questionnaire	`questionnaire`	Yes	`https://lacdmh.lacounty.gov/fhir/Questionnaire/psc-35`
Subject (Client)	`subject.reference`	Yes	`Patient/{ClientID}`
Source (Practitioner)	`source.reference`	Yes	`Practitioner/{NPI}`
Author (Organization)	`author.reference`	Yes	`Organization/{ProviderNumber}`
Meta Tag	`meta.tag[0].code`	Yes	`"PSC"`

PSC Question Items

linkId	Description	Answer
`Question01` – `Question35`	PSC screening questions 1–35	`valueCoding.code` — `"0"` Never, `"1"` Sometimes, `"2"` Often
`Question05`, `Question06`, `Question17`, `Question18`	Has Trouble with Teacher, Less Interested in School, Absent from School, School Grades Dropping	Same as above, **plus** a fourth option `"8"` Not Applicable. `8` is excluded from `TotalScore` rather than treated as a numeric value.

PSC Metadata Items

linkId	Field	Answer Type
`AssessmentDate`	Date	`valueDate`
`ChildName`	Child's Name	`valueString`
`RespondentName`	Respondent's Name	`valueString`
`RespondentRelationship`	Relationship to Child	`valueCoding.code` — zero-padded two-character code (see Section 8)
`PractitionerReviewing`	Practitioner Reviewing	`valueString`
`AssessmentType`	Assessment Type	`valueCoding.code` — PSC accepts only `"1"` Initial, `"2"` Reassessment, `"4"` Discharge
`TotalScore`	Total Score	`valueInteger`
`CaregiverDeclined`	Caregiver declined to respond	`valueBoolean`
`CaregiverDidNotRespondToAll`	Caregiver did not respond to all required questions	`valueBoolean`

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8. Legacy-to-FHIR Field Mapping

> **Important**: Answer codes are validated against the DMH Dictionary Service, not accepted as free text. An unrecognized code — including a trauma value of `Unknown` — is **rejected**, not silently ignored. See Section 11.

CANS Identity Fields

Legacy XML Path	FHIR R4 Path	Notes
`ClientID`	`subject.reference`	Becomes `Patient/{ClientID}`
`AssessingPractitionerNPI`	`source.reference`	Becomes `Practitioner/{NPI}` — carried as the raw NPI; no NPI-to-staff-code translation occurs on this path
`ProviderNumber`	`author.reference`	Becomes `Organization/{ProviderNumber}`
`AssessmentType`	`item[linkId="402"].answer[0].valueCoding.code`	`"1"` Initial, `"2"` Reassessment, `"4"` Discharge, `"5"` Administrative Close, `"6"` Urgent
`AssessmentDate`	`item[linkId="401"].answer[0].valueDate`	Format: YYYY-MM-DD
`AdminCloseReason`	`item[linkId="403"].answer[0].valueCoding.code`	Only when AssessmentType=”5”; per-instrument code set below
`Caregiver`	`item[linkId="408"].answer[0].valueCoding.code`	`"Y"` or `"N"`
`ActualAssignedLevelOfCare`	`item[linkId="ActualAssignedLevelOfCare"].answer[0].valueCoding.code`	`"1"` – `"5"`; the clinician’s assigned level, distinct from the engine’s recommended level
`ReasonForVariance`	`item[linkId="ReasonForVariance"].answer[0].valueString`	Required only when the assigned level differs from the recommended level
`CANSID`	`id` / stamped `identifier`	Required on Update (PUT); see Section 14

CANS Domain Items

Legacy Field	FHIR R4 Path	Notes
`CBQuestion01` – `CBQuestion09`	`item[linkId="child-behavioral-emotional-needs"].item[linkId="CBQuestionNN"].answer[0].valueCoding.code`	Values `"0"` – `"3"` (`CANSQA`). `CBQuestion07` = form item 8 “Anger Control”; `CBQuestion08` = form item 7 “Substance Use”.
`LDQuestion10` – `LDQuestion20`	`item[linkId="life-domain-functioning"].item[linkId="LDQuestionNN"].answer[0].valueCoding.code`	Values `"0"` – `"3"` (`CANSQA`)
`RBQuestion21` – `RBQuestion28`	`item[linkId="risk-behaviors"].item[linkId="RBQuestionNN"].answer[0].valueCoding.code`	Values `"0"` – `"3"` (`CANSQA`). `RBQuestion25` = form item 26 “Sexual Aggression”; `RBQuestion27` = form item 25 “Runaway”.
`CFQuestion29` – `CFQuestion31`	`item[linkId="cultural-factors"].item[linkId="CFQuestionNN"].answer[0].valueCoding.code`	Values `"0"` – `"3"` (`CANSQA`)
`SDQuestion32` – `SDQuestion40`	`item[linkId="strengths-domain"].item[linkId="SDQuestionNN"].answer[0].valueCoding.code`	Values `"0"` – `"3"` , **inverted scale** (`CANSSDQA`): `0` =Centerpiece strength … `3` =No evidence
`CRQuestion41` – `CRQuestion50` (+ `b` / `c` / `d`)	`item[linkId="caregiver-resources-needs"].item[linkId="CRQuestionNN[b|c|d]"].answer[0].valueCoding.code`	Values `"0"` – `"3"` (`CANSCRQA`). Occurrence A is unsuffixed (`CRQuestion41`); B/C/D are the `b` / `c` / `d` suffixes for a 2nd/3rd/4th caregiver. `CRQuestion50` = “Safety”.
`T1` – `T12`	`item[linkId="trauma"].item[linkId="TN"].answer[0].valueCoding.code`	**Two-state**, not rated 0–3: `"N"` No, `"Y"` Yes (`CANSPTQA`). MH 735 order — see the note below.

> **Note**: The Trauma list is `T1` Sexual Abuse, `T2` Physical Abuse, `T3` Emotional Abuse, `T4` Neglect, `T5` Medical Trauma, `T6` Witness to Family Violence, `T7` Witness to Community/School Violence, `T8` Natural or Manmade Disaster, `T9` War/Terrorism Affected, `T10` Victim/Witness to Criminal Activity, `T11` Disruption in Caregiving/Attachment Losses, `T12` Parental Criminal Behaviors. There is no “Other Trauma” item — the previous 13th, unnumbered item is `T7` . An inbound code other than `"N"` / `"Y"` (including the legacy `Unknown`) does not resolve in the `CANSPTQA` dictionary type and is **rejected**.

PSC Fields

Legacy XML Path	FHIR R4 Path	Notes
`Question1` – `Question35`	`item[linkId="QuestionNN"].answer[0].valueCoding.code`	Values `"0"`, `"1"`, `"2"` (`PSCQA`)
`Question5`, `Question6`, `Question17`, `Question18`	`item[linkId="QuestionNN"].answer[0].valueCoding.code`	Same three values, **plus** `"8"` Not Applicable (`PSCSchool`) — these four items only
`RespondentName`	`item[linkId="RespondentName"].answer[0].valueString`	Caregiver/respondent name
`RespondentRelationship`	`item[linkId="RespondentRelationship"].answer[0].valueCoding.code`	Zero-padded two-character relationship code (`RespondentRelationship` dictionary type)
`CaregiverDeclined`	`item[linkId="CaregiverDeclined"].answer[0].valueBoolean`	`true` bypasses blank-count
`PSCID`	`id` / stamped `identifier`	Required on Update (PUT); see Section 14

Administrative Close Reason — per-instrument code sets

The two instruments use **different** code sets. A code valid for one is not necessarily valid for the other:

#	Display text	Code	Valid for CANS	Valid for PSC
1	Client not available/assess only	`1`	yes	yes
2	Client/caregiver declined to participate	`2`	yes	no
3	Client/caregiver declined to complete	`3`	no	yes
4	Other	`4`	yes	yes
5	After repeated attempts, no response from provider	`PORTAL-NORESPONSE`	no	no
6	Client aged out	`PORTAL-AGEDOUT`	no	no

> **Important**: Codes `PORTAL-NORESPONSE` and `PORTAL-AGEDOUT` are portal-only and cannot be sent over the SOAP wire — the legacy XSD constrains the SOAP Administrative Close reason to a single numeric character (`[124]` for CANS, `[134]` for PSC). They are documented here for completeness; a SOAP-originated submission cannot produce them.

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9. New and Optional WSDL Fields — Backward Compatibility

> **Important**: This section describes the SOAP/WSDL **wire contract**, which is genuinely unchanged and genuinely additive. It does not describe the FHIR **CANS instrument identity** on the other side of that wire — see CANS Instrument Identity: Versioned, Not Extended immediately below, which describes a hard cutover that this section's guarantees do not cover.

New EPSDT attributes surfaced during this migration are introduced **additively and as optional fields** so that existing legacy XML clients keep working unchanged.

Backward compatibility guarantees

These guarantees hold for the SOAP/WSDL layer specifically — they are the promise most Trading Partners depend on, and this migration does not touch them:

- **Additive only at the XML layer.** Every new XML element is declared optional (`minOccurs="0"`). No existing element is removed, renamed, made required, or reordered.
- **Legacy clients are unaffected.** A legacy XML message that omits any new optional element still produces a valid, processable FHIR `QuestionnaireResponse`.
- **Required/optional is enforced in the backend, not the WSDL.** Whether a field is required for a given assessment type and operation is decided by the shared validation core (keyed by assessment type `eq5` / `neq5` and operation), surfaced as a validation error — never as an XSD `minOccurs="1"`.
- **Validation parity, not schema parity.** A legacy XML message and a native FHIR message carrying the same data receive the same required/optional treatment and the same set of validation errors.

CANS Instrument Identity: Versioned, Not Extended

The WSDL/XML wire contract above is unchanged. What changes is which FHIR `Questionnaire` your SOAP-originated CANS submission is translated into on the FHIR side of the proxy:

- The `cans-50` FHIR questionnaire (`https://lacdmh.lacounty.gov/fhir/Questionnaire/cans-50`) is **retired for new writes, with no transition window.** There is no dual-acceptance period during which both `cans-50` and its replacement are accepted.
- The replacement is `cans-ip` (`https://lacdmh.lacounty.gov/fhir/Questionnaire/cans-ip`). After this migration ships, CANS submissions translate to `cans-ip`.
- Stored `cans-50` responses remain readable — retirement is writes-only. No historical `QuestionnaireResponse` is rewritten, renumbered, or migrated.

This is a version change to the FHIR instrument identity, not an additive field on the existing one, and it is the one place in this migration where the "nothing breaks unannounced" framing above does not apply as-is. Because the SOAP wire contract itself does not change, your existing XML client code requires no changes — the cutover is handled entirely by the FHIR proxy and the SOAP proxy translation layer together, provided both are deployed in the same coordinated release. See Section 15. Error Handling for the rejection behavior if a submission is somehow evaluated against the retired instrument.

Two Consumer-Visible Behavior Changes

Two aspects of the CANS response differ from the prior release. Neither is a defect in your integration:

- **Level 1 description.** When the calculated Level of Care is Level 1, the description returned to your SOAP client now reads `"Level 1 - Prevention"` instead of the earlier wording. The level number itself is unaffected — this is a label change only.
- **Recommended Level of Care may change for the same clinical inputs.** A routing correction in how certain Strengths Domain answers are evaluated for SOAP-originated CANS means a small number of assessments may now receive a different recommended Level of Care than the same inputs would have produced previously. If you are comparing before/after Level of Care results as part of your migration testing, treat any observed difference as an intended **correction**, not a regression to investigate.

Newly surfaced optional fields

Field	Domain	WSDL declaration	Notes
`T7` (Witness to Community/School Violence)	Trauma	`minOccurs="0"` (optional)	Previously unnumbered/dropped trauma item now carried end-to-end under its correct MH 735 position, `T7`. Whether it is required for a standard (`neq5`) CANS assessment is decided by the backend rule set.
`CRQuestion41b` – `CRQuestion50b`	Caregiver Resources and Needs	`minOccurs="0"` (optional)	Caregiver "b" variants (2nd caregiver)
`CRQuestion41c` – `CRQuestion50c`	Caregiver Resources and Needs	`minOccurs="0"` (optional)	Caregiver "c" variants (3rd caregiver)
`CRQuestion41d` – `CRQuestion50d`	Caregiver Resources and Needs	`minOccurs="0"` (optional)	Caregiver "d" variants (4th caregiver)
`ActualAssignedLevelOfCare` , `ReasonForVariance`	Metadata	`minOccurs="0"` (optional)	Clinician-assigned Level of Care and the required-when-differing variance narrative (Section 6)
PSC `8` Not Applicable on `Question05` / `Question06` / `Question17` / `Question18`	PSC	n/a — SOAP wire declares these `PSCSchoolDictionaryType` (`pattern [0128]`)	Fourth answer option; excluded from `TotalScore`

> **Note**: When `Caregiver="Y"` , the backend requires the full caregiver attribute set — the CRQuestion41–CRQuestion50 main items, their b/c/d variants, caregiver identity items, and contributor metadata. When `Caregiver` is not `"Y"` , those caregiver variant, identity, and contributor items are omitted.

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10. Submission Examples

CANS Standard Assessment (POST)

```
POST /fhir/QuestionnaireResponse
Authorization: Bearer {access_token}
Ocp-Apim-Subscription-Key: {your-subscription-key}
Content-Type: application/json
```

```
{
  "resourceType": "QuestionnaireResponse",
  "id": "cans-assessment-001",
  "status": "completed",
  "questionnaire": "https://lacdmh.lacounty.gov/fhir/Questionnaire/cans-ip",
  "subject": { "reference": "Patient/3462959" },
  "source": { "reference": "Practitioner/1234567890" },
  "author": { "reference": "Organization/ORG001" },
  "meta": { "tag": [{ "code": "CANS", "display": "CANS" }] },
  "item": [
    { "linkId": "401", "text": "Assessment Date", "answer": [{ "valueDate": "2025-06-15" }] },
    { "linkId": "402", "text": "Assessment Type", "answer": [{ "valueCoding": { "code": "1" } }] },
    { "linkId": "408", "text": "Client has a caregiver", "answer": [{ "valueCoding": { "code": "N" } }] },
    {
      "linkId": "child-behavioral-emotional-needs",
      "text": "Behavioral/Emotional Needs Domain",
      "item": [
        { "linkId": "CBQuestion01", "answer": [{ "valueCoding": { "code": "1" } }] },
        { "linkId": "CBQuestion02", "answer": [{ "valueCoding": { "code": "0" } }] },
        { "linkId": "CBQuestion03", "answer": [{ "valueCoding": { "code": "2" } }] }
      ]
    },
    {
      "linkId": "life-domain-functioning",
      "text": "Life Domain Functioning",
      "item": [
        { "linkId": "LDQuestion10", "answer": [{ "valueCoding": { "code": "1" } }] }
      ]
    },
    {
      "linkId": "risk-behaviors",
      "text": "Risk Behaviors",
      "item": [
        { "linkId": "RBQuestion21", "answer": [{ "valueCoding": { "code": "0" } }] }
      ]
    },
    {
      "linkId": "cultural-factors",
      "text": "Cultural Factors Domain",
      "item": [
        { "linkId": "CFQuestion29", "answer": [{ "valueCoding": { "code": "0" } }] }
      ]
    },
    {
      "linkId": "strengths-domain",
      "text": "Strengths Domain",
      "item": [
        { "linkId": "SDQuestion32", "answer": [{ "valueCoding": { "code": "0" } }] }
      ]
    },
    {
      "linkId": "caregiver-resources-needs",
      "text": "Caregiver Resources and Needs",
      "item": [
        { "linkId": "CRQuestion41", "answer": [{ "valueCoding": { "code": "0" } }] }
      ]
    },
    {
      "linkId": "trauma",
      "text": "Potentially Traumatic/Adverse Childhood Experiences",
      "item": [
        { "linkId": "T1", "answer": [{ "valueCoding": { "code": "N" } }] },
        { "linkId": "T7", "answer": [{ "valueCoding": { "code": "N" } }] }
      ]
    }
  ]
}
```


> **Note**: `T1` and `T7` above use the `CANSPTQA` codes `"N"` / `"Y"`, not the `"0"`–`"3"` scale used by the rating domains. This is the single most common integration mistake — Trauma is two-state.

CANS Admin Close (POST)


```
{
  "resourceType": "QuestionnaireResponse",
  "id": "cans-adminclose-001",
  "status": "completed",
  "questionnaire": "https://lacdmh.lacounty.gov/fhir/Questionnaire/cans-ip",
  "subject": { "reference": "Patient/3462959" },
  "source": { "reference": "Practitioner/1234567890" },
  "author": { "reference": "Organization/ORG001" },
  "meta": { "tag": [{ "code": "CANS", "display": "CANS" }] },
  "item": [
    { "linkId": "401", "text": "Assessment Date", "answer": [{ "valueDate": "2025-06-20" }] },
    { "linkId": "402", "text": "Assessment Type", "answer": [{ "valueCoding": { "code": "5" } }] },
    { "linkId": "403", "text": "Administrative Close Reason", "answer": [{ "valueCoding": { "code": "2" } }] }
  ]
}
```

CANS Assigned Level of Care with a Variance (POST)

```
{
  "resourceType": "QuestionnaireResponse",
  "id": "cans-assessment-002",
  "status": "completed",
  "questionnaire": "https://lacdmh.lacounty.gov/fhir/Questionnaire/cans-ip",
  "subject": { "reference": "Patient/3462959" },
  "source": { "reference": "Practitioner/1234567890" },
  "author": { "reference": "Organization/ORG001" },
  "meta": { "tag": [{ "code": "CANS", "display": "CANS" }] },
  "item": [
    { "linkId": "401", "text": "Assessment Date", "answer": [{ "valueDate": "2025-06-15" }] },
    { "linkId": "402", "text": "Assessment Type", "answer": [{ "valueCoding": { "code": "1" } }] },
    { "linkId": "408", "text": "Client has a caregiver", "answer": [{ "valueCoding": { "code": "N" } }] },
    { "linkId": "ActualAssignedLevelOfCare", "text": "Actual Assigned Level of Care", "answer": [{ "valueCoding": { "code": "3" } }] },
    { "linkId": "ReasonForVariance", "text": "Reason for Variance", "answer": [{ "valueString": "Clinical judgment supports outpatient level given family support in place."
  ]
}
```

> **Note**: `ReasonForVariance` is required only when `ActualAssignedLevelOfCare` differs from the engine's recommended level. It is validated by the backend rule set, not by the FHIR schema.

PSC Standard Assessment (POST)

```
{
  "resourceType": "QuestionnaireResponse",
  "id": "psc-assessment-001",
  "status": "completed",
  "questionnaire": "https://lacdmh.lacounty.gov/fhir/Questionnaire/psc-35",
  "subject": { "reference": "Patient/10" },
  "source": { "reference": "Practitioner/9876543210" },
  "author": { "reference": "Organization/ORG002" },
  "meta": { "tag": [{ "code": "PSC", "display": "PSC" }] },
  "item": [
    { "linkId": "AssessmentDate", "text": "Date", "answer": [{ "valueDate": "2025-06-15" }] },
    { "linkId": "AssessmentType", "text": "Assessment Type", "answer": [{ "valueCoding": { "code": "1" } }] },
    { "linkId": "Question01", "answer": [{ "valueCoding": { "code": "0" } }] },
    { "linkId": "Question02", "answer": [{ "valueCoding": { "code": "1" } }] },
    { "linkId": "Question03", "answer": [{ "valueCoding": { "code": "0" } }] },
    { "linkId": "Question04", "answer": [{ "valueCoding": { "code": "2" } }] },
    { "linkId": "Question05", "answer": [{ "valueCoding": { "code": "8" } }] }
  ]
}
```

> **Note**: The PSC example above is abbreviated and shows `Question05` answered `8` Not Applicable to illustrate the N/A option — a complete submission requires all 35 questions (`Question01` – `Question35`). Only `Question05`, `Question06`, `Question17` and `Question18` accept `8`; the other 31 items accept only `0` / `1` / `2`. `Question05` answered `8` is **excluded** from `TotalScore`.

---

11. Validation Rules

CANS Standard (AssessmentType ≠ "5")

- All identity fields required: ClientID, ProviderNumber, ProgramID, NPI, AssessmentType, AssessmentDate
- All domain items required: CBQuestion01–09, LDQuestion10–20, RBQuestion21–28, CFQuestion29–31, SDQuestion32–40, T1–T12
- If Caregiver="Y": all CRQuestion41–50 fields including b/c/d variants required
- AdminCloseReason must NOT be populated
- Every rating-domain answer code and every Trauma answer code must resolve against the DMH Dictionary Service (`CANSQA`, `CANSSDQA`, `CANSCRQA`, `CANSPTQA`) — an unrecognized code, including a Trauma value other than `N` / `Y`, is rejected
- `ReasonForVariance` is required only when `ActualAssignedLevelOfCare` differs from the calculated recommended Level of Care

CANS Admin Close (AssessmentType = "5")

- Only allowed fields: CANSID, AssessmentType, AssessmentDate, AdminCloseReason, NPI, ProviderNumber, ClientID, ProgramID
- Required: AssessmentType, AssessmentDate, AdminCloseReason, NPI, ProviderNumber, ClientID, ProgramID
- Any other populated field will be rejected

CANS / PSC Update (PUT)

- CANS Update requires the key field `CANSID`; PSC Update requires `PSCID`.
- Required/optional enforcement is keyed by assessment type and operation in the shared validation core.

PSC Standard (AssessmentType ≠ "5")

- All identity fields required: ClientID, ProviderNumber, ProgramID, NPI, AssessmentType, AssessmentDate, RespondentName, RespondentRelationship
- Maximum 3 blank answers allowed among `Question01` – `Question35`
- Exemption: if `CaregiverDeclined` or `CaregiverDidNotRespondToAll` is `true`, blank-count check is bypassed
- PSC's `AssessmentType` accepts only `"1"` Initial, `"2"` Reassessment, `"4"` Discharge — the CANS-only `"5"` / `"6"` values are rejected on the PSC form
- `Question05`, `Question06`, `Question17`, `Question18` additionally accept `"8"` Not Applicable, excluded from `TotalScore`

PSC Admin Close (AssessmentType = "5")

- Same allowed-only pattern as CANS admin close
- AdminCloseReason required

> **Important**: The API returns ALL validation errors in a single response, not just the first failure. Fix all reported issues before resubmitting. The same payload produces the same set of errors regardless of intake path.

---

12. Level of Care Calculation (CANS)

For standard CANS assessments (AssessmentType ≠ "5"), the API calculates a Level of Care (1–5) based on domain scores and returns it as an extension on the response.

Level	Description	Criteria
5 (Highest)	Level 5 – Residential Treatment	High CB scores + high RB scores + SD threshold met
4	Level 4 – Intensive Treatment	High CB scores + (high LD or high RB) + caregiver need or no viable caregiver
3	Level 3 – Outpatient	High CB scores + (high LD or RB ≥ 2)
2	Level 2 – Early Intervention	Any CB ≥ 2 or any RB ≥ 1
1 (Default)	**Level 1 – Prevention**	No higher-level conditions met

> **Note**: The Level 1 description changed from the previous wording to `"Level 1 - Prevention"` as part of this release. The level number itself is unchanged — this is a label change only. The persisted rule identifier behind Level 1 (`Level_of_Care_Rule` / `matchedRuleName`) is unaffected by this rename.

The LOC result is appended as an extension in the response body (`recommendedLevel`, `recommendedLevelDescription`, `matchedRuleName`). Admin close assessments skip LOC calculation.

> **Note**: The Strengths Domain items feeding Level 5's threshold check are `SDQuestion32` (Family Strengths), `SDQuestion34` (Educational Setting), and `SDQuestion38` (Community Life). A recommended Level of Care computed for the same clinical inputs may differ from a prior submission if the previous submission routed a Strengths answer to the wrong item — treat such a difference as a correction, not a regression.

> **Note**: If the Level of Care calculation fails, the API returns the same HTTP success status it would have returned on success, but the response body omits the Level of Care extension. The assessment is still persisted.

---

13. Duplicate Detection

On POST (create) operations only:

- The API checks for existing submissions matching: subject (ClientID) + author (ProviderNumber) + meta tag (CANS/PSC) + assessment date
- If a duplicate is found: HTTP 409 Conflict with OperationOutcome
- PUT (update) operations skip duplicate detection

---

14. Identity Stamping

The HIDEX Provider Access API persists each accepted assessment to the FHIR store with an EPSDT ID assigned and included in the identifier collection along with a timestamp.

Identifier Stamping Convention

Assessment	Identifier system	Identifier value
CANS	`https://lacdmh.lacounty.gov/epsdt/cans`	EPSDT ID
PSC	`https://lacdmh.lacounty.gov/epsdt/psc`	EPSDT ID

- Exactly one identifier is set for the assessment's system; identifiers belonging to other systems are preserved unchanged.
- Stamping is idempotent — re-stamping with the same id and kind yields exactly one identifier for that system.

Example of the stamped identifier on a CANS response:

```
{
  "resourceType": "QuestionnaireResponse",
  "identifier": {
    "system": "https://lacdmh.lacounty.gov/epsdt/cans",
    "value": "1048576"
  }
}
```

> **Note**: This is the same identifier system + value convention used by the legacy SOAP path.

---

15. Error Handling

HTTP Status Codes

Code	Meaning	When
200	Success	GET, successful PUT
201	Created	Successful POST
400	Bad Request	Validation failure, or update missing the FHIR resource id
401	Unauthorized	Missing/invalid/malformed subscription key
403	Forbidden	ProgramID authorization does not contain the assessment's ProgramID, or no ProgramID authorization
409	Conflict	Duplicate submission detected
500	Server Error	Unexpected internal error

Error-outcome contract

Condition	Status	OperationOutcome
Validation failure	400	One `error` issue per failed rule
Update missing resource id	400	One issue, code `required`, diagnostic indicating a resource id is required
Duplicate submission	409	One `error` issue, code `duplicate`
Authorization (ProgramID) failure	403	Same message on both intake paths; nothing persisted

OperationOutcome Example (400 Validation Error)

```
{
  "resourceType": "OperationOutcome",
  "issue": [
    {
      "severity": "error",
      "code": "required",
      "diagnostics": "The required attribute 'AssessmentDate' is missing."
    },
    {
      "severity": "error",
      "code": "required",
      "diagnostics": "The required attribute 'CBQuestion01' is missing."
    }
  ]
}
```

Troubleshooting

Error	Cause	Fix
"Field 'resourceType' is missing or invalid"	Missing or wrong resourceType	Set `"resourceType": "QuestionnaireResponse"`
"Field 'status' is missing or invalid"	Missing or invalid status	Use: `completed`, `in-progress`, `amended`
"Questionnaire URL is required"	Missing questionnaire field	Add correct questionnaire URL
"Subject reference is required"	Missing subject	Add `"subject": { "reference": "Patient/{id}" }`
"AdminCloseReason is not required"	AdminCloseReason on non-admin-close	Remove AdminCloseReason or set AssessmentType="5"
"A resource id is required for the update"	PUT without the FHIR resource id	Include the resource id in the URL and body
403 Forbidden	ProgramID claim mismatch	Confirm your App Registration is authorized for the assessment's ProgramID
409 Conflict	Duplicate assessment	Use PUT to update, or change assessment date

16. Testing and Certification

Sandbox URLs

Environment	URL
TEST	`https://hidex-test.dmh.lacounty.gov/healthcare`

Test Patient IDs

Use the following patient IDs for sandbox testing:

- Patient/3462959 (CANS test patient)
- Patient/10 (PSC test patient)

Validation Checklist

- Obtain OAuth2 client credentials and API subscription key from DMH
- Successfully acquire an OAuth2 access token
- Token refresh logic handles expiry correctly (tokens expire after 1 hour)
- Include both Authorization and Ocp-Apim-Subscription-Key headers on all requests
- POST a valid CANS standard assessment → 201 Created
- POST a valid CANS admin close → 201 Created
- POST a valid PSC standard assessment → 201 Created
- POST a valid PSC admin close → 201 Created
- PUT to update an existing assessment (with CANSID/PSCID) → 200 OK
- GET a submitted assessment by ID → 200 with resource
- Verify validation rejection (missing field) → 400 with OperationOutcome
- Verify duplicate detection → 409 on repeated POST
- Verify ProgramID authorization rejection → 403
- Confirm the response identifier carries the EPSDT id (CANS/PSC system)
- Confirm LOC extension present on CANS response
- Confirm legacy XML messages that omit new optional fields still succeed
- Confirm `T7` (Witness to Community/School Violence) round-trips when supplied
- Confirm a Trauma answer other than `N` / `Y` (e.g. legacy `Unknown`) is rejected
- Confirm PSC `Question05` / `06` / `17` / `18` accept `8` Not Applicable and it is excluded from `TotalScore`
- Confirm a submission against the retired `cans-50` questionnaire URL is rejected with an `OperationOutcome` naming `cans-ip` as the replacement

---

17. Quick Reference

Questionnaire URLs

Assessment	URL	Status
CANS-IP	`https://lacdmh.lacounty.gov/fhir/Questionnaire/cans-ip`	Active — use this for all new writes
CANS-50	`https://lacdmh.lacounty.gov/fhir/Questionnaire/cans-50`	**Retired for new writes.** Historical responses remain readable.
PSC-35	`https://lacdmh.lacounty.gov/fhir/Questionnaire/psc-35`	Active

Identifier Systems

Assessment	Identifier System	Value
CANS	`https://lacdmh.lacounty.gov/epsdt/cans`	EPSDT ID
PSC	`https://lacdmh.lacounty.gov/epsdt/psc`	EPSDT ID

Meta Tags

Assessment	code	display
CANS	`CANS`	`CANS`
PSC	`PSC`	`PSC`

CANS Answer Values — Needs domains (`CANSQA`: Behavioral/Emotional Needs, Life Domain, Risk Behaviors, Cultural Factors)

Code	Meaning
`0`	No evidence of need
`1`	History or suspicion; monitor
`2`	Interferes with functioning; action needed
`3`	Disabling, dangerous; immediate or intensive action needed

CANS Answer Values — Strengths Domain (`CANSSDQA`, inverted scale)

Code	Meaning
`0`	Centerpiece strength
`1`	Useful strength
`2`	Identified strength
`3`	No evidence

CANS Answer Values — Caregiver Resources and Needs (`CANSCRQA`)

Same 0–3 shape as the Needs domains above, resolved through the `CANSCRQA` dictionary type.

CANS Answer Values — Trauma (`CANSPTQA`, two-state)

Code	Meaning
`N`	NO — no evidence
`Y`	YES — interferes with functioning; action needed

PSC Answer Values (`PSCQA`)

Code	Meaning
`0`	Never
`1`	Sometimes
`2`	Often
`8`	Not Applicable — `Question05`, `Question06`, `Question17`, `Question18` only (`PSCSchool`); excluded from `TotalScore`

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