



Common Data Architecture™ for Life Sciences

CDA.LS.HCO Kernel Overview

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Overview

In the Life Sciences industry, a Healthcare Organization (HCO) is broadly defined as an entity involved in the delivery or administration of healthcare services, or in the development, testing, manufacturing, or commercialization of life science products. HCOs encompass a wide range of organizations, including hospitals, clinics, laboratories, pharmaceutical companies, research institutions, and healthcare providers' offices. These organizations play a crucial role in patient care, medical research, and the healthcare ecosystem. HCO data is essential for a variety of purposes, such as market research, healthcare delivery analysis, compliance, research and development, and commercial activities.

The HCO kernel defines a standard nomenclature and format for the storage and exchange of HCO data. It describes the most common entities, attributes, and picklist items related to healthcare organizations, collectively referred to as components. Like all kernels, the HCO kernel is intentionally concise, focusing only on the most common components. This ensures consistency and ease of integration while allowing flexibility for extension as needed to accommodate specific use cases and requirements within the industry.

Entities

The HCO kernel consists of the following entities.

Label	Name	Description
HCO	hco	Information about a Healthcare Organization (HCO), broadly defined as an entity that plays a role in the delivery and administration of healthcare services, or in the development, testing, manufacturing, or commercialization of life science products.
Address	address	Location information associated with an HCO.

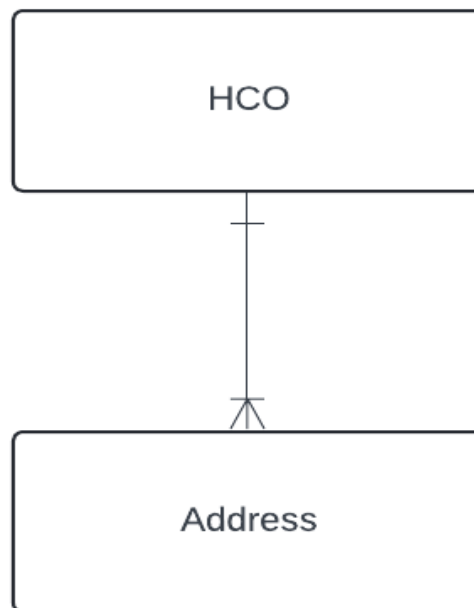
Entity Relationships

In practice, HCOs are often related to instances of other entities. For example, an HCO may be affiliated with multiple healthcare professionals (HCPs) and other HCOs.

Within the context of the HCO kernel, relationships and their cardinalities are shown in the following table.

Relationship	Cardinality	Notes
HCO to Address	1:1 to 1:N	An HCO always has one or more addresses, and no address can exist without a related HCO. If an HCO has one or more addresses, exactly one is defined as the primary address. This is the purpose of the primary attribute in the Address entity definition.

These relationships can be represented visually by the following entity relationship diagram.



HCO Attributes

The **HCO** entity consists of the following attributes.

Entity	Label	Name	Data Type
hco	Veeva ID	veevaid	Text 25
hco	Name	hco_name	Text 128

hco	HCO Type	hco_type	Picklist (Unrestricted)
hco	Website	website	Text 255
hco	Email	email	Text 128
hco	Office Phone	office_phone	Text 40
hco	Fax	fax	Text 40
hco	Country	country	Picklist (Restricted)
hco	State	state	Picklist (Restricted)
hco	City	city	Text 40
hco	Postal Code	postal_code	Text 20
hco	National Healthcare ID	nhid	Text 40
hco	Target	target	Boolean
hco	Study Site	study_site	Boolean
hco	Status	status	Picklist (Restricted)

HCO Address Attributes

The **HCO Address** entity consists of the following attributes.

Entity	Label	Name	Data Type
address	HCO	parent	Entity (HCO)
address	Primary	primary	Boolean
address	Street Address 1	street_address_1	Text 128
address	Street Address 2	street_address_2	Text 100
address	Country	country	Picklist (Restricted)
address	State	state	Picklist (Restricted)
address	City	city	Text 40
address	Postal Code	postal_code	Text 20
address	Latitude	latitude	Number 15
address	Longitude	longitude	Number 15
address	Phone	phone	Text 40
address	Fax	fax	Text 40
address	Home	home	Boolean
address	Business	business	Boolean
address	Billing	billing	Boolean
address	Shipping	shipping	Boolean

address	Sample Shipping	sample_shipping	Boolean
address	Status	status	Picklist (Restricted)

HCO Type Picklist Items

The **HCO Type** picklist consists of the following items.

Label	Name	Description
Academic Department	acdpc	Teaching, and scholarly activities related to a specific subject area.
Administration	ad	Management and coordination of various administrative, financial, operational, or strategic functions.
Animal Health	anim	Provides healthcare services and support to animals, including veterinary clinics, animal hospitals, wildlife refuges, and other institutions focused on animal health.
Association	asso	Formal group with shared interests, goals, or professions. Often aims at advancing a particular research field, advocating for specific causes, providing support to a community, or promoting professional development.
Cancer Center	canc	Provides specialized care and treatment for cancer patients, including oncology services and support programs.
Clinical Department	cldpc	Provides healthcare services either at a specific location, for specific health conditions, and/or specific patient populations, within a larger healthcare facility.
Diagnostic Services	diag	Provides diagnosis services (e.g. laboratory tests, targeted screening programs) for patients or samples to diagnose specific medical conditions or diseases.
Dialysis Center	dial	Provides specialized care for patients with kidney failure, offering treatments such as hemodialysis or peritoneal dialysis to filter and clean the blood.
Educational Institution	educ	An organization focused on teaching, including colleges, faculties, professional and vocational schools.
Group Practice	grpr	Provides care through a single HCP or a team of HCPs, often structured as a partnership or corporation offering a wider range of services and specialties.
Group Purchasing Organization	gpo	Enrolls members to aggregate demand to support the negotiation of healthcare products contracting with suppliers.
Health Authority	hlau	Government authority responsible for establishing and/or implementing health policy. Includes regulatory agencies with jurisdiction over the drugs or medical devices.
Health Network	hlnw	Legally-independent healthcare organizations and/or healthcare

		professionals forming a network. Including Accountable Care Organizations and Physician Networks.
Health System	hlsy	Owns and operates a network of hospitals and other healthcare organizations that provide a broad spectrum of coordinated healthcare. Includes integrated delivery networks (IDNs).
Hospital	ho	Healthcare services to patients that offer inpatient treatment.
Imaging Center	imag	Provides imaging services, including X-rays, MRIs, CT scans, and ultrasounds, to assist in the diagnosis and monitoring of medical conditions.
Infusion Center	infu	Administers intravenous medications, fluids, or nutrients to patients with chronic illnesses, infections, or nutritional deficiencies, typically on an outpatient basis.
Manufacturer	mn	Develops and manufactures life sciences products such as pharmaceuticals, biopharmaceuticals, medical devices, or other related technology such as software.
Nursing Home	nuho	Provides specialized care and accommodations to individuals with chronic illnesses, severe disabilities, or those nearing the end of their lives, focusing on maintaining quality of life, managing symptoms, and ensuring comfort and dignity. Includes Hospices.
Outpatient Center	outp	Provides healthcare services within hospitals or health system to patients without requiring an overnight stay.
Patient Support	psup	Provides services, resources, and educational opportunities aimed at assisting patients, their caregivers, and families in managing medical conditions, improving their well-being, or enhancing their understanding of healthcare processes without performing medical treatment. Includes patient education.
Payer	py	Finances or reimburses the cost of health services, typically including insurance companies, and government programs. Manages healthcare plans, processes claims, and negotiates with providers to control healthcare costs.
Pharmacy	pc	Dispenses prescription, over-the-counter medications, medical devices, or other healthcare products. Offers medication counseling, drug therapy monitoring, or medication management programs. Includes hospital pharmacies and specialty pharmacies.
Pharmacy Benefit Manager	pcbm	Manages prescription drug benefits, serving as intermediaries between health payers, pharmacies, and manufacturers. They negotiate discounts and rebates, design drug benefit plans, and maintain formularies to determine covered drugs.
Prison	pris	Institutional corrections facilities for convicted felons. Includes Jails.
Rehabilitation Center	rehb	Provides services for the rehabilitation of patients with various neurological, orthopedic, psychiatric, or other medical conditions typically following the stabilization of their acute medical issues.

Research Organization	rorg	Conducts systematic investigations, studies, and experiments aimed at expanding knowledge, and advancing scientific understanding.
Special Treatment Center	spec	Offers targeted and specialized medical care for specific conditions or patient groups in an outpatient setting outside hospitals, such as burn units, birthing centers, or fertility clinics.
Supplier	sp	Procures, stores and delivers medical supplies, or biological materials within or outside of a healthcare facility. Includes Distribution Services.
Vaccination Center	vacc	Provides immunization services to prevent infectious diseases, offering vaccinations for children, adults, and travelers in a clinical or community setting.
Other	othr	A healthcare organization that does not fit into one of the above categories.

HCO Primary Country Picklist Items

See *Country Picklist Items* below.

HCO Primary State Picklist Items

See *State Picklist Items* below.

HCO Status Items

The **HCO Status** picklist consists of the following items.

Label	Name	Description
Active	act	Active healthcare organization.
Inactive	iact	Inactive healthcare organization.

HCO Address Country Picklist Items

See *Country Picklist Items* below.

HCO Address State Picklist Items

See *State Picklist Items* below.

HCO Address Status Picklist Items

The HCO Address **Status** picklist consists of the following items.

Label	Name	Description
Active	act	Currently in use as an address.
Inactive	iact	Not currently in use as an address.

Country Picklist Items

The HCO **Primary Country** picklist attribute and the HCO Address **Country** picklist attribute consist of picklist items based on [ISO 3166-1 standard country codes and names](#). For the full list of items, see the Country Items worksheet in the HCO Kernel spreadsheet.

State Picklist Items

The HCO **Primary State** picklist attribute and the HCO Address **State** picklist attribute consists of picklist items based on [ISO 3166-2](#) codes for identifying the principal subdivisions (e.g., provinces or states) of all countries coded in [ISO 3166-1](#). For the full list of items, see the State Items worksheet in the HCO Kernel spreadsheet.

Internationalization

Translated labels are provided for the following languages in a separate translation file (See the CDA.LS.HCO Kernel Translations file):

1. German
2. French (France)
3. Spanish (Spain)
4. Italian (Italy)
5. Chinese (Simplified)
6. Japanese
7. Korean
8. Portuguese (Brazil)

It is up to application developers and data providers to choose how to handle support for different languages and locales.

Change Management

CDA kernels are treated as a Data API, with a specific support and deprecation policy similar to developer APIs:

- The names of components will not change after they are published.
- Component labels and descriptions may change to provide clarity or correct errors.
- New components may be added in any new version.
- Components can be deprecated annually at the start of a calendar year, initiating a 3-year notice period. After this period, deprecated components will be removed.

Change History

As new versions of the HCO kernel are released, a summary of changes is included here.

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