SYADEM

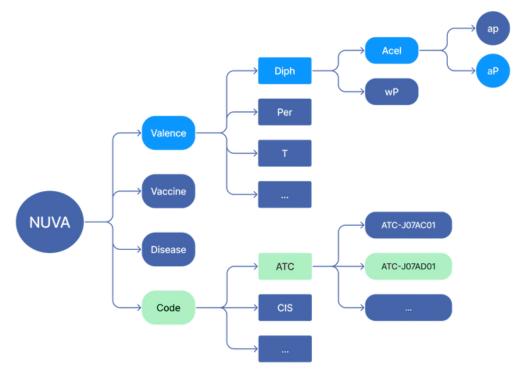
UNIFIED NOMENCLATURE OF VACCINES (NUVA)

A global standard for the interoperability of vaccination data

OVERVIEW

The Unified Vaccine Nomenclature (NUVA) is an international, multilingual, and structured terminology designed to represent all vaccines—whether commercial, historical, generic, or country-specific. It enables reliable interpretation of vaccination histories, facilitates vaccine equivalence management, and ensures semantic interoperability between health information systems. NUVA is also available as a community extension to SNOMED CT.

At the heart of **NUVA** lies the valence model, a powerful concept allowing the standardised, brand-agnostic representation of immune protection. A valence is the smallest functional immunological unit of a vaccine, tied to a specific infectious agent or subgroup (e.g., serotype or strain).



PURPOSE AND VALUE

- Deliver a universal vaccine terminology across time and regions
- ➤ Enable unambiguous decoding of vaccine labels (paper or digital)
- > Ensure semantic alignment between national and international systems
- Support clinical decision-making, surveillance, and traceability
- > Serve as a reference standard for governments, providers, researchers, and industry

CORE COMPONENTS OF NUVA

CATALOGUE

- Commercial and generic vaccine names
- Multilingual entries covering active, inactive, country-specific or historical vaccines

STRUCTURING

- Decomposition of vaccines into valences
- Linkage to diseases, valences and international/national codifications
- Extended NUVA according to AMM dates, commercialisations and laboratories

PIVOT TERMINOLOGY

- Intermediary layer for mapping across national coding systems (CIS/CIP, CVX...) and international (ATC, SNOMED CT...)
- Enables seamless integration into electronic health records (EHRs), digital vaccine records (DVRs), immunisation registries, and VADES engines

THE CONCEPT OF VALENCE IN NUVA

A valence represents the immunological core of a vaccine, which is necessary and sufficient to assess protection against a specific pathogen or subspecies, determine the need for a future dose, identify equivalent or substitutable vaccines, and calculate dose rank when combination vaccines are used.

USE CASES

- Harmonisation of vaccination records across borders or systems
- Interoperability with Immunisation Information Systems (IIS)
- Automatic enrichment of Digital Vaccination Records (DVRs)
- Valence-driven interpretation in Vaccine Decision Support Systems (VADES)
- Dashboards, coverage calculations, and logistical auditing
- Search of vaccines by valency or target disease

GOVERNANCE AND EVOLUTION

Managed by the International Vaccine Codes Initiative (IVCI)

Regular updates validated by scientific and technical committees

Open contribution framework for national authorities, expert societies, and industry partners



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