Use of EVS Tools

EVS services depend on the full set of EVS tools: EVS requires editing, loading, serving, browsing, reporting and related software tools to exist in its current form. Wherever feasible, EVS has sought to use and contribute to tools created and used by others in the community, and EVS ensures that virtually all of its software is available as open source for community code contributions and reuse (the significant exception is NLM-controlled software used for maintenance of NCI Metathesaurus). All released EVS tools have direct users beyond basic EVS operations, and all development efforts are also expected to have at least some external adoption at other sites.

The sections below outline such use beyond EVS operations, without trying to duplicate more detailed coverage in the use statistics and user profile sections of this report.

- LexEVS Servers and Loaders
- NCI Terminology Browsers
- NCI Protégé
- Wikis
- Other Tools

LexEVS Servers and Loaders

LexEVS is an openly available terminology server and set of services developed with the Mayo Clinic. Extensive external use of EVS server services is documented elsewhere. This software is now being deployed at a number of other partner organizations such as MD Anderson, Stanford, Emory, Ohio State University Medical Center, Georgetown University, Washington University, and National Cancer Research Institute (NCRI)/UK CancerGrid, as well as by commercial vendors such as IBM and GE Healthcare. Source code is available on GitHub (see LexEVS GitHub repository 🔗) for community contributions and reuse.

NCI Terminology Browsers

EVS terminology browsers have been designed and developed at NCI to provide more powerful and user-friendly access than that provided by earlier propriety software. Extensive external use of EVS browsers hosted locally is documented elsewhere. Several sites adopting the LexEVS server are also adopting EVS browser software (see User Profile sections). Source code is available on GitHub (see the NCI Term Browser GitHub repository 🔗 and NCI Metathesaurus Browser GitHub repository) 🔗 for community contributions and reuse.

NCI Protégé

EVS has worked over several years with Stanford and others on Protégé and related tools. Protégé editing software has been extensively customized for editing large production biomedical terminologies and ontologies. NCI customizations have long been available for download, but these download have not been tracked. We do know that NCI Protégé is used by NanoParticle Ontology (NPO) (see Nanotechnology user profile).

Wikis

BiomedGT Semantic Media Wiki collaborative terminology development environment has been used for NCI terminology such as CTCAE and BiomedGT, as well as partner efforts such as the NanoParticle Ontology (NPO) based at Washington University, but has not won broader adoption.

LexWiki was created by the Mayo Clinic, developed further for the BiomedGT wiki, then updated and published as the open source LexWiki tool by the Mayo Clinic, through the Vocabulary Knowledge Center.

Other Tools

EVS Report Writer and **Term Suggestion** software are used extensively to support NCI work as well as external partners such as FDA, CDISC, and NCPDP. Source code is available on GitHub (see NCI Report Writer GitHub repository 🔗 and NCI Term Suggestion GitHub repository 🔗) for community contributions and reuse, but we have no reports of adoption at other sites.

NCI Value Set Editor, for creating and maintaining CTS 2 value sets and pick lists, was initially developed to support internal EVS operational requirements, and is used to help generate the value sets currently published by EVS (see NCI Term Browser). Source code is available on GitHub (see the NCI Value Set Editor GitHub repository 🔗) for community contributions and reuse.

The **NCI Mapping Tool** has now reached the stage of initial prototype deployment for internal EVS use. EVS and the MedDRA Maintenance and Support Services Organization (MSSO) 🔗 are working with the UK Medicines and Healthcare products Regulatory Agency (MHRA) 🔗 on use of the EVS Mapping Tool to develop an initial proof-of-concept mapping from SNOMED CT to MedDRA, focusing on high frequency adverse event terms to test the possibility of automated conversion of EHR data to support more proactive identification of potential signals with drugs that have gained marketing approval. Source code is available on GitHub (see the NCI Mapping Tool GitHub repository) 🔗 or community contributions and reuse.