

## **Immunizations/\_\_\_Vaccinations<sup>1</sup>** (Version: 5/26/2010)

**Definition:** Vaccination is the administration of a preparation intended for active immunological prophylaxis.

**Introduction:** Although SNOMED lists seems to imply that Vaccination and immunization are synonyms, this is not technically true. (e.g., Immunization of a puppy for distemper requires a series of vaccinations, starting with Distemper-Measles). Vaccination has, in veterinary medicine, also come to mean administration of either vaccines or bacterins. The solution proposed here would also cover administration of antibodies. To avoid confusion and provide a consistent approach, we recommend the use of a SNOMED concept - "Administration of substance to produce immunity, either active or passive (procedure)" to which concepts representing the antigens or antibodies may be appended. However, you can use the pre-coordinated concepts that are children of veterinary immunization procedure if one currently exists for the concept you required. If not, use the approach outlined above.

Example:

- Administration of substance to produce immunity, either active or passive (procedure) 127785005
  - *Group\**
    - Method (attribute) 260686004
      - Administration – action (qualifier value) 129445006
    - Direct Substance (attribute) 363701004
      - Melanoma vaccine (substance ) 428026004

*\*See SNOMED CT User Guide 2010 for further instruction in using Role Groups*

### **Root Concept (Disorders):**

- Administration of substance to produce immunity, either active or passive (procedure) 127785005
  - Veterinary immunization procedure (procedure) 85749001\*  
(\*This concept is a child of immunization 127785005)

### **Comments:**

1. A pre-coordinated ‘veterinary immunizations’ concept may be used if the concept required currently exists in SNOMED (see example 1).
2. Use ‘substances’ as a value of the ‘Direct substance’ attribute when possible, and products only when substances are not available. As of the January 2005 SNOMED CT release, note that substances are used as chemical constituents of drugs, food, allergens, toxicities, etc. Products are used for provider order entry, prescribing, formulary management, etc.

3. Much work needs to be done on the hierarchy parented by Veterinary proprietary drug AND/OR biological (substance) 102272007 as these agents have not been properly classified as devices, medicinal, insecticides, etc. (see example 3)

**Examples:**

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**Case 1: Vaccination for Distemper-Measles**

Immunization for measles/distemper (procedure) 3121007

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**Case 2: Vaccination for DA2PLP**

Administration of substance to produce immunity, either active or passive (procedure) 127785005

- *Group*
  - Method (attribute) 260686004
    - Administration – action (qualifier value) 129445006
  - Direct Substance (attribute) 363701004
    - Canine distemper - adenovirus type 2 - parainfluenza - parvovirus vaccine - leptospira bacterin (product) 19150007

(Product is used here because no substance concept is available)

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**Case 3: Vaccination with BOVISHIELD 4 \***

Administration of substance to produce immunity, either active or passive (procedure) 127785005

- *Group*
  - Method (attribute) 260686004
    - Administration – action (qualifier value) 129445006
  - Direct Substance (attribute) 363701004
    - Bovine rhinotracheitis-virus diarrhea-parainfluenza3-respiratorysyncytial virus vaccine-leptospira canicola-grippotyphosa-hardjo-icterohemorrhagiae-pomona bacterin (product) 4975008

(Product is used because no substance concept is available)

\*Chemical constituent concept [product] is preferred over trade name of Bovishield 4 because ingredients in Trade products change. Also the data can be retrieved from the ingredient information available when using product or substance concepts which would not be possible using the Trade name concept.

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**Case 4:** Equine 5 way combination vaccine (e.g. Prestige 5 way)

Administration of substance to produce immunity, either active or passive (procedure)  
*127785005*

- o Group
  - Method (attribute) *260686004*
    - o Administration – action (qualifier value) *129445006*
  - Direct Substance (attribute) *363701004*
    - o Equine rhinopneumonitis - influenza vaccine - tetanus toxoid (product) *1144004*
- o Group
  - Method (attribute) *260686004*
    - o Administration – action (qualifier value) *129445006*
  - Direct Substance (attribute) *363701004*
    - o Encephalomyelitis vaccine (product) *31494003*

(Product is used here because no substance concept is available)

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**Case 5:** West Nile Virus Vaccine

Administration of substance to produce immunity, either active or passive (procedure)  
*127785005*

- o Group
  - Method (attribute) *260686004*
    - o Administration – action (qualifier value) *129445006*
  - Direct Substance (attribute) *363701004*
    - o West Nile virus vaccine (substance) *398775003*

<sup>1</sup>Written by the VMDB Taskforce on Development of SNOMED Guidelines. The committee wishes to recognize contributions provided by Dr. Jeff Wilcke and Dr. Penny Livesay.