Terminology Services for the NAHLN

Past, Present, & Future

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What are Terminology Services?

- Standard terminology use has been mandated (SNOMED CT, HL7, LOINC)
- Many problems with successful implementation:
  - Veterinary coverage is incomplete
  - Size and complexity is overwhelming
  - Very few with expertise
  - Training takes time and money
  - Few tools to make it easier
What are Terminology Services?

- Terminology Services attempt to resolve the problems:

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<td>“Pared down” terminologies/lists; Assist labs in connecting local terms to NAHLN lists; Short courses</td>
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<td>Availability of tools</td>
<td>Web access to terminology, developed VTSL tools to maintain NAHLN lists and extend content</td>
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What’s been accomplished

Problem: Veterinary Content

• Veterinary adaptation of SNOMED CT
  – VTSL extension to SNOMED CT
    • SNOMED sanctioned
    • Integrated with SNOMED CT
  – 658 concepts and 1556 descriptions added via lab request/submission
  – Content creation will be ongoing
    • New labs
    • New diseases
    • New tests
What’s been accomplished

Problem: Size & Complexity

• NAHLN list creation
  – Shortened lists (subsets) for each message field
  – Relationships maintained for browsing
  – Web interface relates message fields to lists
  – Expanded synonyms and search functions
What’s been accomplished

Problem: Availability of Expertise

• Centralized expertise
  – Expertise in terminology, informatics, & veterinary medicine is hard to find
    • Only 6 +/- veterinarians have expertise
    • 3 of these are VTSL
    • Veterinary Schools are not training informaticists
    • Few veterinarians are showing interest
  – Must harness the experts we have
What’s been accomplished

• Centralized expertise
  – Discussion forums:
    – Terminology discussion
    – Implementation issues
    – CCB discussions
  • Monitored by experts
  • At least 8 (non-pilot) labs assisted via forums
  – Phone, email, & web consultation:
  • 4 labs assisted via phone, email or web conference
What’s been accomplished

Problem: Training time & expense

• Lab Personnel Training
  – Labs don’t need high level terminology expertise
    • Need to understand their own terms
    • Need to know where to go for help (VTSL)
  – Short Courses:
    • VTSL participated in 4 short courses
    • 25+ labs participated in at least 1 course
  – Web conference training:
    • Available for any lab who needs one-on-one training.
    • Only 1 lab to date has participated
What’s been accomplished

Problem: Availability of Tools

• Tools
  – Web access to data:
    • http://terminology.vetmed.vt.edu/nahln/main.htm
    • Message schema linked to terminology
    • Searchable terminology subsets
    • Downloadable terminology subsets
    • Discussion forums and access to NAHLN documentation
  – Tools for maintenance:
    • VTSL has tools for
      – Extension creation and maintenance.
      – Subset creation and maintenance.
Current Activities

• Commonly used animal groupings (taxonomy)

• Ongoing activities:
  – Concept submission review
  – Content development
  – Processing semi-annual SNOMED CT updates (Jan & July)
  – Consultation with labs
Future needs

• Lab personnel need add’l training
  – Processing Updates

• Support for search & data analysis
  – Statistical Data Analysis Module
  – Requires clear understanding of SNOMED structure to harness full potential
  – Queries can be powerful, but are complicated
  – Terminology change history must be used to prevent data loss
Future needs

• Current terminology synchronization is inadequate
  – Terminologies synchronized between NAHLN production server, laboratories, and VTSL (NAHLN terminology website)
  – Current process takes days to weeks
  – Need automation to speed synchronization

• Methods repository
  – Terminology services website lists approved methods
  – Synchronization needed.
Ongoing Needs

• Concept submission review
• Content development
• SNOMED CT updates (Jan & July)
• Consultation with labs
• Participation in training sessions
• Revision of website in response to lab comments
Budget Concerns

• Medical terminology receives long-term, stable support (considered central resource)
  – Multiple millions per year (NLM & others)
  – VTSL leverages this central resource for NAHLN

• Veterinary terminology receives NO long-term, stable support
  – Full functionality will not be achieved with nominal year-to-year funding
    • Can not cover overhead
    • Can not maintain well-trained staff
Budget Concerns

• NAHLN leads in the application of standard terminology in Public Health Networks

• Other stakeholders will recognize the benefits of a single veterinary terminology
  – WDIN, NBIS, CDC, FDA, etc

• VTSL’s goal is to become a shared national resource
Budget Concerns

• VTSL funding is at a critical stage
  – Previous funding for NAHLN Terminology Services has been bare minimum from CSREES grants, year to year basis
  – VTSL had other funding for other projects
    • Allowed for maintenance of support staff
  – Other projects are or have ended.
  – No longer have funding to maintain support staff.
  – VTSL is ½ of all trained veterinary terminologists
    (other ½ are otherwise employed)