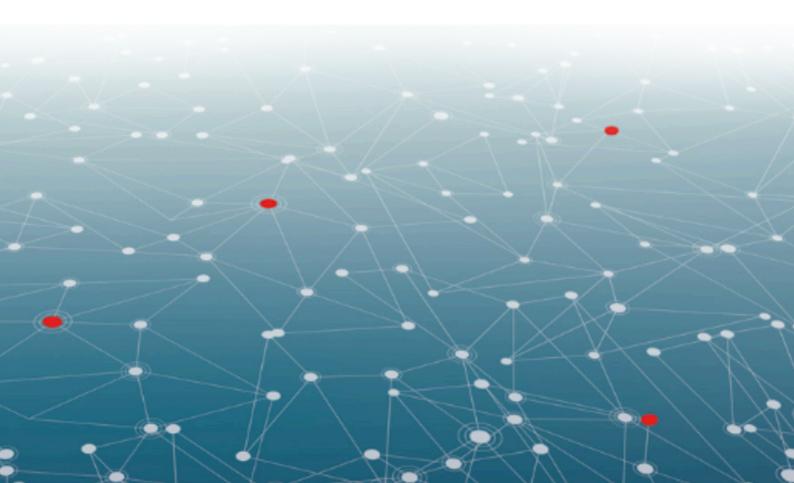# semedy.

Solutions for your
healthcare organization.

HEALTHCARE DELIVERY

SOLUTIONS

What are the Semedy solutions?

Our knowledge management software is designed for a number of the challenges facing the healthcare system. To better help you understand its wide range of benefits, we have designed a predetermined set of solutions for varying scenarios, or solutions. The solutions are designed for efficiency and scalability that provide significant competitive advantages. Each solution is available through our Clinical Knowlegde Management System (CKMS).

Who are the Healthcare Delivery solutions for?

This set of solutions provided through the CKMS software are suitable for healthcare institutions, academic medical centers, hospitals and other care delivery organizations. Any professional in this sector who is looking for an integrated knowledge management solution will benefit from learning more about Semedy's Healthcare Delivery solutions.

Where can I see how the solutions work?

Our team at Semedy will be providing live demonstrations of each solution during Virtual HIMSS20. If you are interested in seeing a solution in action, please sign up here:

<div align="center">

himss20.semedy.com/solutions

</div>

Where can I find more information?

For more information on the Semedy knowledge management software, please visit semedy.com.

For inquiries, please contact himss20@semedy.com

LABORATORY CATALOG

The laboratory catalog solution leverages state of the art models that represent various laboratory dictionaries within a single repository, thereby providing the ability to:

- Manage provenance, versioning, and relevant metadata for each lab asset
- Browse lab assets to identify interdependencies
- Detect and prevent lab content issues and sudden changes in utilization
- Utilize preconfigured or custom queries to identify inconsistent and invalid content
- Map lab assets to reference terminologies to enhance reporting and interoperability
- Validate the clinical relevance and appropriateness of expensive lab tests

The CKMS platform enables preconfigured and flexible models, extract/transform/load (ETL) pipelines, extensible metadata schemas, convenient authoring templates, and configurable views that support efficient dictionary management. Content updates can be achieved using CKMS as the "source of truth" or by using scheduled source content exports.

IMPLEMENTATION

Semedy's CDS solution includes preconfigured and extensible models, extract/transform/load (ETL) pipelines for input and/or export, convenient authoring templates, configurable views, queries, and reports. Source content is loaded and periodically refreshed using our ETL framework. With periodic refreshes from source repositories, or updates of target downstream clinical information systems, CKMS becomes the central repository for read-only or read-write CDS-related content activities.

DEMONSTRATION

The demonstration includes how CDS can be represented as narrative, structured, or executable specifications; how CDS can be searched, queried, and validated using the platform's built-in semantic reasoner; and how CDS-related interdependencies can be proactively monitored to detect, correct, and prevent content-related malfunctions.

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ORDER SETS

Semedy's order set solution is designed to efficiently and effectively manage order sets and their relationships with orders (e.g. lab tests, medications, diagnostic tests, procedures) in an integrated central repository. This solution helps improve the quality of your order sets and overcome maintenance challenges with key features and benefits:

- Standardized content model with comprehensive metadata, supporting the entire governance process from authoring to review, approval, and implementation
- Categorization and tagging to simplify searching and browsing of order sets and individual orders, while also facilitating reuse and promoting clinical protocol standardization
- Version control to track the evolution of an order set and its individual orders
- Semantically enabled queries to help identify incorrect orders (e.g. asthma order set recommending a colonoscopy procedure), and invalid or outdated orders (e.g. diabetes order set linked to an inactive glucose laboratory orderable)

IMPLEMENTATION

Starts with retrieving your organization's order set catalog and orders dictionary, and mapping these to preconfigured models in CKMS. Models can be easily extended to meet organizational needs. Order sets and orders can be periodically updated using CKMS' ETL framework. CKMS becomes the central repository for all order set management activities.

DEMONSTRATION

Showcases core features of CKMS and specific models and queries created to represent and manage order sets, including the ability to:

- Find and select order sets that should be updated due to a market shortage of a muscle relaxant medication (e.g. methocarbamol)
- Review the revision history of an order set for postoperative pain management
- Find and update order sets with incorrect pre-checked orders
- Find and select order sets with orders that are no longer in active use (e.g. laboratory tests, medications)

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VACCINES

Semedy Vaccines Solution streamlines vaccine content review and update processes via content integration from reference and local sources. Automated services retrieve the most current content from public websites, ensuring that the integrated repository always has accurate and up-to-date vaccine information, including recommendations from the Advisory Committee on Immunization Practices (ACIP). The Vaccines solution offers:

- Versioning and detailed auditing to track the evolution of individual assets
- Templates to consolidate relevant vaccine information from multiple sources into a single view
- Authoring capabilities for content engineers to create or update vaccines proactively
- Notification function to better communicate and coordinate between clinicians and analysts
- Advanced queries to efficiently:
  - Identify dependencies
  - Detect duplicate or similar content to consolidate
  - Determine impact of downstream changes and proactively prevent potential errors
  - Assist with the implementation of Clinical Decision Support (CDS) rules
  - Increase the accuracy and consistency of immunization evaluation and forecasting

IMPLEMENTATION

Starts with installing the CKMS platform, and extract/transform/load (ETL) pipeline to periodically import new vaccine content from various sources, creating a comprehensive vaccines repository. Semedy's vaccine models can be extended to allow semantic connections to local and reference terminologies such as NCI thesaurus, RxNorm, LOINC, and SNOMED CT. Presentation templates and queries can be customized to fulfill local needs.

DEMONSTRATION

The demonstration of the vaccine solution includes scenarios to identify all active live vaccines to be leveraged in a CDS using simple search and advanced query; integrating new CVX content using ETL along with auto-notification to alert subscribers of any changes; as well as creating and modifying content in CKMS with revision history.

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DATA COLLECTION FORMS

Semedy's Data Collection Solution, available through the Clinical Knowledge Management System (CKMS) platform, was designed using real-world examples from leading healthcare institutions. The solution leverages standards-based models to represent various data collection assets (e.g. forms, questionnaires, data elements, value sets, etc.) within a single repository, thereby providing the ability to:

- Manage provenance, versioning, and relevant metadata for each data collection asset
- Browse data elements, value sets, and forms to verify downstream dependencies
- Detect similar or redundant forms and data elements to facilitate standardization
- Prevent untoward consequences of changes across assets
- Map assets to reference terminologies to enhance reporting and interoperability
- Promote adoption of information models to support standardized data collection

The CKMS platform enables preconfigured and flexible models, extract/transform/load (ETL) pipelines, extensible metadata schemas, convenient authoring templates, and configurable views that support efficient asset management. Content updates can be achieved using CKMS as the "source of truth" or by using scheduled source content exports.

IMPLEMENTATION

Starts with retrieving your organization's data collection assets from relevant sources and mapping them to preconfigured models within CKMS. Sources can be periodically refreshed using our ETL framework. Content within CKMS becomes the central repository for content standardization activities. Alternatively, data collection content can be managed within the CKMS environment with a periodic refresh from the source systems.

DEMONSTRATION

Showcases core features of CKMS using specific models, queries, and validation rules created to represent and manage clinical documentation assets. The demonstration incorporates the capability to:

- Search forms and concepts using keywords and more complex search strings and filters, and visualize using custom presentation templates
- Authoring of forms, value sets, concepts, and concept mappings
- Use reference terminologies to index forms, data elements, and value sets, and to identify specific properties and leverage mappings across asset types
- Find and confirm links and groupings (e.g. cause of death reason types) using queries
- Utilize validation rules to identify inactive data elements and value set members
- Import reference content from external sources (e.g. caDSR, NCI Thesaurus, UMLS)

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CONTACT US

Interested in learning more about Semedy?
Please contact us at **himss20@semedy.com**

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