Simplifying the Complex
Phonetic Orthographic Computer Analysis (POCA) System

Presented by

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Outline

- Overall System Design
- The Medical Repository
- System Demonstration
System Objectives

- **Accessibility**
  - Web-based
  - Varying levels of permission for varied tasks
  - Ease of use

- **Efficient Use of Expert Time**
  - Decrease paper production
  - Increase analysis time while decreasing search time

- **Scientifically-Based Analysis**
  - Reliability of Algorithms (Recall)
  - Predictive Validity of Algorithms (Precision)
System History

- Pilot System Development Funded by the U.S. Food and Drug Administration (FDA)

- Development Team
  - Project Performance Corporation
  - Bonnie Dorr, University of Maryland
  - Greg Kondrak, University of Alberta

- Pilot System will be Tested by FDA
**Safety Evaluation Process – Before**

**Before Computer Analysis:**

- Paper document distributed to Safety Evaluators
- Searches run by Safety Evaluators
  - Safety Evaluators complete Name Evaluation Worksheet
  - Consolidate Watch Lists
  - Expert Panel Discussion
  - Finalize Consolidated Watch List
- Safety Evaluator In-Depth Evaluation
- Prescription Study
- Recommendation

- Paper worksheet
- Manual combination of paper results
- Manual searches
  - Requires Multiple Search Engines
  - Paper notes to record results
Safety Evaluation Process – Computer Assisted

With Computer Analysis:

Electronic entries of consults available to authorized Safety Evaluators → Searches Run by Safety Evaluators → Safety Evaluators Complete Name Evaluation Worksheet → Consolidate Watch Lists → Expert Panel Discussion → Finalize Consolidated Watch List → Safety Evaluator In-Depth Evaluation → Prescription Study → Recommendation

One screen accesses all search engines and data sources
Electronic documentation

Electronic worksheet (watch list)
One click combination of watch lists

Electronic worksheet (watch list)
Oracle Database

Features
  • Populated with FDA Corporate Database
    ➢ Approved and Unapproved Proprietary Names
    ➢ Additional Factors (drug strengths, dosing intervals, dosage forms and routes of administration)
  • Ability to Import and Manually Update the Repository

Next Steps
  • Biologics
  • Supplements and Herbals
  • Medical Terminology
System Demonstration

- Login / Security
- Search Capabilities
  - Phonetic
  - Orthographic
  - Other Factors
- Workflow
  - Saved Searches
  - Watch List
- System Administration