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Topics

☐ Definitions and perspective
☐ Current status
  ■ State health department WDQS
  ■ WDQS evaluation
☐ Necessary next steps
Definitions and perspectives
Definition—WDQS

A Web-based Data Query System (WDQS) provides user access on the World Wide Web through a dynamic interface to data pertaining to population health and the determinants of population health held on a WDQS Web server. Characteristics of a WDQS include:

- User formulation of queries (we refer to this characteristic as making the interface dynamic) within a prescribed set of functionalities (that is, those functionalities available in the WDQS)
- Accessibility through a standard World Wide Web browser
- Production of numeric tabulations in response to a user’s query
- Generation of statistical computations (such as adjusted rates, confidence limits)
Definition--evaluation

*Evaluation* refers to any aspect of the needs analysis, testing, or assessment of a WDQS.
Dimensions of evaluation

When: Stage of WDQS development
(before, during, or after development)

What: Target of the assessment, testing, or evaluation (user, community, or organizational impact; WDQS performance)

How and who: Method(s) used to evaluate WDQS (survey, focus group, expert review; internal or external evaluator)
Why evaluate?

WDQS and quality reporting sites (QRS) do not justify themselves

- **General**
  - Are explicit and implicit goals of WDQS and QRS being met?
  - Can goals be met more efficiently and more economically through other means?

- **Business cases and needs analysis**
  - Can initial development expenditures be justified?

- **Testing**
  - Are accurate data and statistics produced?

- **Impact evaluations**
  - How are WDQS and QRS being used by their intended users?
  - Are users satisfied and are their needs being met?
  - How are WDQS and QRS affecting community policies, priorities, and resource allocations?
  - How are WDQS and QRS affecting health department management and staff, costs, and data?
Current status
WDQS major functionalities

- Query design
- Geographic levels
- Statistics
- Tables
- Graphs
- Maps and interactive GIS
- Benchmark and time trend data
- Custom grouping of data
- Documentation for individual custom queries
- On-line meta-data and help tools
- Export to file
Types of data sets in well-established WDQS

- Administrative
- Chronic disease
- Communicable disease
- Environmental
- Health care resources
- Infant and child
- Injury
- Population counts, estimates, and projections
- Population-based surveys
- Programmatic
- Vital events
- Linked analytic files
Review of state WDQS, 2005

Number of states with WDQS
- 27 states with one or more WDQS
  - 19 with one WDQS
  - 8 with more than one
- 25 state WDQS used Web browser

WDQS data sets
- Median of 5 data sets per WDQS
- Two WDQS had more than 15 data sets
- Most commonly available: deaths, births, cancer incidence, hospital discharges, population counts

Number of states providing each of 48 WDQS functionalities by level of functionality, United States, 2005

Number of states (n=27) | Basic (n=26) | Enhanced (n=20) | Innovative (n=2)

Functionalities of state WDQS

26 *basic* specific functionalities:
17 provided by at least half of 27 WDQS
4 provided by 5 or fewer WDQS

20 *enhanced* specific functionalities:
6 provided by more than half of 27 WDQS
8 provided by 5 or fewer WDQS

2 *innovative* specific functionalities:
1 provided by 11 WDQS
1 provided by 4 WDQS
Monitoring number of users, 2007

- Sixteen (59%) WDQS “count” the number of users
- Method used to count
  - IP address 10
  - Log-in 5
  - Registration 3
  - Survey 2
  - Other 3
Monitoring types of uses, 2007

- Types of uses “counted”
  - Data sets: 15
  - Indicators: 4
  - Pre-tabulated reports: 7
  - Statistics: 6
  - Type of output: 6

- Method used to count
  - Hits on specific pages: 7
  - Hits on entry page: 5
  - Survey: 3
  - Log-in: 2
  - Registration: 1
  - Other: 4
Assessment, Testing & Evaluation, 2007

- Nineteen (70%) states *formally or informally* assessed user or agency needs prior to development of their WDQS
- Twenty-four (89%) states *formally or informally* tested their WDQS during development
- Eight (30%) states have *formally or informally* evaluated their WDQS since its release to determine whether it is meeting user needs
- Two of 4 states that planned an evaluation during WDQS development have conducted one
Assessment, Testing & Evaluation, 2007

- Evaluation methods included
  - user-based surveys (7)
  - advisory committees (5)
  - reviewing use logs (4)
  - focus groups (3)
  - various informal methods (7)
Key points–WDQS evaluation, 2007

- About 60% of WDQS managers are able to monitor the users and uses of their WDQS.
- A third of managers keep a “log” of WDQS-related complaints or suggestions.
- BUT, not all of these managers review or use their monitoring data or logs to improve their WDQS.
Key points–WDQS evaluation, 2007

- Many states conducted some type of formal or informal needs assessment prior to developing their WDQS.
- Far more states test their WDQS for data errors than evaluate whether it is meeting its users’ needs.
- Several states periodically modify their WDQS based on informal—but regular—user feedback.
Key points–WDQS evaluation, 2007

- Few states plan to evaluate their WDQS within the next year
- Even fewer have a budget for evaluation
- Nevertheless, a third of WDQS managers plan to replace their current WDQS
Needed next steps

Organized collaborations among states:

☐ Testing evaluation instruments and Web-based resource repository

☐ Planning and coordinating evaluation pilots

☐ Developing an evaluation handbook
Needed next steps

Activities for individual states:

- Monitoring
  - Use
  - Uses
  - Users

- Evaluating
  - Usability
  - User satisfaction
  - User needs
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