Quality Assurance & Data Quality

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What is Quality Improvement

- An analytical process
- Supported by routine measurement of the critical processes.
- Organized around a Committee that includes a cross-section of consumers.
- Core Assumption: If an organization focuses on improving critical processes the outcomes will also improve.
With Regard to HMIS

The Quality Improvement Program is built around

- Routine User Meetings that occur at multiple levels of the Implementation.
- Routine measurement of data quality and outcomes related to mission critical processes.
User Meetings

Opportunity for Benchmarking between participants:

- Review core processes and related measures.
  - Identify issues and share solutions.
  - Identify those issues where additional help is needed.
- Support transparency.
- Share successes.
- Reports: Review aggregated data.
Types of User Meetings

- Agency User Meetings - quarterly.
- Agency Administrator / CoC User Meetings – monthly.
- System Administrator User Meetings – quarterly.
- Specialty Provider Meetings:
  - Domestic Violence
  - Runaway Youth
  - Housing Specialists
  - Mental Health
Meeting Minutes

- A copy is sent to database administrators to monitor user meeting compliance with the MSHMIS contract.
- A structured agenda is provided and minimum attendance requirements are defined (minimum – all those with user licenses + leadership).
- Formalize communication to database administrators.
- Provides routine consumer satisfaction input.
- Can incorporate process and outcome measures. For example MSHMIS requires coverage rates reports generated at the agency level.
Each User Meeting includes a review of core processes:

- **HMIS core processes**
  - Coverage – are all the clients being entered.
  - Data Quality – null data fields, # of data corrections, interview issues and definition questions.
  - Training needs
  - Privacy and Security
  - Reports: review Agency aggregated data.
Additional HUB related processes

- System Access / Licenses
- System Performance
- Routine Support / Help Desk
- Contract Compliance (Provider and Vendor)
Data Sources:

- Consumer input from structured minutes
  - Qualitative and Quantitative
- Measures that result from routine queries within the database.
- Short term measures to assess problem resolution.
Improvement Cycle

- Assess variation /one time variation due to unique conditions or sustained issue.
- Prioritize problem solving.
- Define a plan for change.
- Test the success of your changes.
### Some MSHMIS Measures

<table>
<thead>
<tr>
<th>Process</th>
<th>Measure (control chart / sentinel event)</th>
</tr>
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</table>
| **Coverage** | Agency -% of planned entry completed -monthly  
CoC-% of housing chart covered – annual.  
State -% of CoCs contributing - annual. |
| **Training** | # of individuals trained.  
Follow-up Satisfaction Surveys (Minutes).  
# of records identified in data integrity reports. |
| **Privacy** | Grievances or breaches.  
Privacy Issues identified on Minutes.  
% of clients entered as anonymous.  
% or providers with “Profile” closed. |
## Some HUB Measures

<table>
<thead>
<tr>
<th>Process</th>
<th>Measure (control chart / sentinel event)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance</td>
<td>Avg System response time on “saves” and “report generation” sampling weekly at different times.</td>
</tr>
<tr>
<td></td>
<td># of system bugs reported to QI at Vendor.</td>
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<tr>
<td>Help Desk</td>
<td>% of help desk inquiries answered during call, within 1 day, within 3 days, &amp; within 1 week.</td>
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<tr>
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<td>% of unresolved or follow-up Help Desk requests.</td>
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<td></td>
<td>Consumer Satisfaction – minutes.</td>
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<tr>
<td>Access</td>
<td>Audit of agency training log forms against users in the System</td>
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<tr>
<td></td>
<td># of license/user variations.</td>
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</tbody>
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Data Quality

- Data must pass “Fitness for Use” Tests
  - Completeness
    - Information is entered on all consumers.
    - Information on the consumer is complete.
  - Accuracy
    - Data reflects reality.
    - Data is entered correctly.
    - Data has face validity – reflects what we know.
  - Consistency
    - Performance information is consistent across time.
Common Errors

Systematic Errors/ Issues with Training:
- Entering “no” when you mean “yes.”
- Definition drift.
- Entering text without using drop down.
- Failing to enter information on some consumers.

Random Errors/ Sloppy Entry/Workflow
- Date Errors (DOB is 4/15/52, entered 4/15/04)
- Transposing numbers
- Spelling errors (Lauren vs Loren)
- Accidentally selecting the wrong response from a drop down.
Factors that influence quality

- Trust – Consumer honesty is based on establishing rapport and the quality and content of the interview process.
  - Staff to System – Staff will elect not to enter information if they don’t trust.
  - Consumer to Staff – Consumers won’t tell the truth if they don’t trust.
Factors that influence quality

Prioritized Process in the Organization?
- Are staff given the time to participate in training and to complete entry?
- Is the environment arranged to support entry?
- Is the process owner within the agency respected.
- **Is the data used?**
Ensuring quality on Front End

- Standardized collection instruments.
- Creating an environment conducive to data collection and entry.
- Event triggers for data collection and entry – clearly defined work flow.
- Guidance for special populations.
- **Must run reports monthly!**
Ensuring Quality on Back End

- HMIS staff monthly reviews reports for completeness, accuracy and consistency.
- Clear protocols for correcting data.
  - Agency signs off on reports monthly.
  - Errors systematically result in corrective action.
  - Procedures for correcting are defined.
- Software has error checking functions (out of range, missing values, incongruous data).
- Staff look at data reliability and validity issues prior to publishing reports. Know which questions result in data that simply is not stable. Do findings make sense? Must be knowledgeable about local services to recognize these errors.

Using the data.
Measures on quality

Queries:
- Null DOB and gender fields.
- Rate of infants under the age of 1.
- Gender by family relationship.
- Homeless by “extent of homelessness.”
- Hud Assessment by entries & exits.
- Age by family relationship.
- Number of users, CoCs, and records on the live site.
- Null exit dates related to short term services.
- Ambiguous data in reports.
Community Shelter Board (CSB)

The Community Shelter Board was created in 1986 to respond to the growing needs of homelessness in Franklin County.

Mission:
The Community Shelter Board, by coordinating community-based efforts, fostering collaboration, and funding services, assists families and individuals in Central Ohio to resolve their housing crisis.

13 Partner Agencies

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Columbus/Franklin County HMIS

- Managed by CSB
- Started in 1989
- 150,000+ records
- Converted ServicePoint 10/2001
- Current: 12 partner agencies, 28 HMIS programs, 126 users
- Expand to 21 agencies/67 programs by 1/1/06 = 100% CoC coverage
Cols/Franklin County HMIS
Program Types & Data Elements

- Prevention
- Emergency Shelter
- Resource Specialists:
  - Outreach
  - Housing/Resource Center
  - Direct Housing
- Direct Client Assistance ($)
- Permanent Supportive Housing
- 33 required data elements, varies by program type
QA Process

- Data Quality Standards
- Training & Communications
- Monitoring & Compliance
- Improvement
Data Quality Standards

- Establish standards
- Establish accountability
- Cols/FC: standards incorporated into CSB contracts/HMIS agreements
- Compliance tied to funding
Data Quality Standards

**Timeliness**
- All required data elements by 4th working day of month

**Completeness**
- 95% of all clients served;
- 95% of all clients for each required data elements (<5% not reported/null)

**Accuracy**
- Congruent with program type, population served, capacity, etc.
- Matches agency client record (e.g. exit dates match, name spelled correctly)

**Consistency**
- Consistent with past program performance/outcomes
Training & Communication

Training

- Semi-annual
  - New User
  - Experienced Users
  - Site Administrators
- Policies and procedures
- Data entry guide
- Data definitions
- Required data elements
- Data quality assurance
- Testing
- Individual technical assistance
- Training/TA evaluation

Communication

- Monthly site administrator meetings
- SP message board
Monitoring & Compliance

- **Agency level:** responsible for assuring/assessing data quality
- **System level:**
  - Program data report produced after 4th working day
  - Reviewed for data quality
  - Monthly Data Quality Report
  - Data Quality Compliance Report
    - Quarterly
    - Semi-Annual
    - Agency compliance in 10 working days
    - Reports re-run for non-compliant programs
  - Annual program review and certification process
Quality Improvement

- Seek out and use front-line feedback
- Refine data quality measures
- Adjust data collection processes
- Provide further TA/Training
Key Lessons Learned

- Agency buy-in
- Establish reasonable standards
- Identify required elements and clear definitions (keep it simple)
- Ensure data entry requirements are achievable
- Ensure agencies are ready to implement, monitor and be accountable
- Have a plan/tools for testing & ensuring compliance
- Have plan for initial & on-going training and technical assistance
- Implement concurrent with overall HMIS implementation
Q & A

Panelists will answer questions from the audience on **Quality Assurance and Data Quality**