New Directions for TB Program Evaluation in Virginia

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VDH, Division of Disease Prevention
TB Control
Why

- Increased CDC emphasis on accountability, quality assurance and program evaluation
  - Program evaluation activities initiated in 2005
    - Review of contact investigation resources with Maryland and DC
    - Review of cases with no contacts
    - Review of infected contacts who did start treatment
Virginia View of a TB Control Program

Clinical Services
- Medical evaluation and follow-up
- Social services
- Patient education
- DOT
- HIV testing and counseling
- Data collection

Epidemiology and Surveillance
- Outbreak investigation
- Program evaluation & planning
- Data analysis
- Consultation on difficult cases
- Data for national surveillance report
- Training

Case Management
- Coordination of medical care
- Contact investigation
- DOT
- Follow-up/treatment of contacts
- QA, QI for case management

Federal TB Control Program
- Guidelines
- National surveillance
- Technical assistance
- Funding

State TB Control Program
- State statutes, regulations, policies, guidelines
- Information for public
- Funding

Non-TB medical services
- Inpatient care
- Home evaluation
- Housing
- Isolation, detention
- Follow-up/treatment of contacts

Targeted testing/LTBI treatment
- Interpreter/translator services

Laboratory
- X-ray
- Pharmacy

State surveillance
- National surveillance
- Funding

Technical assistance
- Training
NTIP – The Driving Force

- CDC’s National TB Indicators Project
  - Program performance measurement
- 15 indicators
- Each state required to submit 5-year plan detailing planned progress towards meeting national objective
Objective 1 – Completion of Treatment

- For patients with newly diagnosed TB for whom 12 months or less of treatment is indicated, increase the proportion of patients who complete treatment within 12 months to 93.0%
  - Five year average 2003-2007 – 84.5%
  - *2007 – 78.4%

<table>
<thead>
<tr>
<th>Objective 1</th>
<th>2010</th>
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<td>89%</td>
<td>91%</td>
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* - most recent data available
Objective 2 – TB Case Rates

- **Target 1** – decrease the TB case rate for U.S.-born person to less than 0.7 cases per 100,000
  - 2004-2008 – average 1.5/100,000
  - 2008 – 1.2/100,000

<table>
<thead>
<tr>
<th>Year</th>
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<tr>
<td>2014</td>
<td>0.7</td>
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Objective 2 – TB Case Rates

- Target 2 – decrease the TB case rate for foreign-born persons to less than 14.0 cases per 100,000
  - Five year average – 29.6/100,000
  - 2008 – 27/100,000

<table>
<thead>
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Objective 2 – TB Case Rates

- Target 3 – decrease the TB case rate for U.S.-born non-Hispanic blacks to less than 1.3 cases per 100,000
  - Five year average – 4/100,000
  - 2008 – 2.5/100,000

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<thead>
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</table>
Objective 2 – TB Case Rates

- Target 4 – decrease the TB case rate for children younger than 5 years of age to less than 0.4 cases per 100,000
  - Five year average – 2.3/100,000
  - 2008 – 1.0/100,000

<table>
<thead>
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Objective 3 – Contact Investigation

- **Target 1** – increase the proportion of TB patients with positive acid-fast bacillus (AFB) sputum smear results who have contacts elicited to 100.0%
  - 2002-2006 – 92.6%
  - *2006 – 87.9%

<table>
<thead>
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* - most recent data available
Objective 3 – Contact Investigation

- **Target 2** – increase the proportion of contacts to sputum AFB smear-positive TB patients who are evaluated for infection and disease to 93.0%
  - 2002-2006 – 92.1%
  - *2006 – 90.5%
  - Met or exceeded target 3 of 5 years – 2002-2004-2005

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<th>2010</th>
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<td>92.5</td>
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<td>93</td>
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</table>

* - most recent data available
Objective 3 – Contact Investigation

- Target 3 – increase the proportion of contacts to sputum AFB smear-positive TB patients with newly diagnosed latent TB infection (LTBI) who start treatment to 88%
  - 2002-2006 – 64.9%
  - *2006 – 60.5%

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<thead>
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* - most recent data available
Objective 3 – Contact Investigation

- Target 4 – for contacts to sputum AFB smear-positive TB patients who have started treatment for the newly diagnosed LTBI, increase the proportion who complete treatment to 79.0%
  - 2002-2006 - 67.7%
  - *2006 – 61.6%

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<td>70</td>
<td>71</td>
<td>72</td>
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</table>

* - most recent data available
Objective 4- Laboratory Reporting

- Two targets aimed at improved laboratory performance
- Target 2 – increase the proportion of culture-positive TB cases with initial drug-susceptibility results reported to 100%
  - 2004-2008 – 91.6%
  - 2008 – 84.1%

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<td>96</td>
<td>98</td>
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Objective 5- Treatment Initiation

- Increase the proportion of TB patients with positive AFB sputum-smear results who initiate treatment within 7 days of specimen collection to n%
  - No current data available
  - Begin data collection in 2009
  - Current status and targets to follow
Objective 6 – Sputum Culture Conversion

- Increase the proportion of TB patients with positive sputum culture results who have documented conversion to sputum culture-negative within 60 days of treatment initiation to 61.5%
  - 2004-2008 – 46.9%
  - 2008 – 27.8%

<table>
<thead>
<tr>
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<td>55%</td>
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<tr>
<td>2014</td>
<td>60%</td>
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Objective 7 – Data Reporting

- Three targets to improve completeness of data reporting
- Target 1 – increase the completeness of each core Report of Verified Case of Tuberculosis (RVCT) data item reported to CDC, as described in the TB Cooperative Agreement announcement, to 99.2%
  - 2007 – 98.3% completeness
  - 2008 – 17 of 21 variables exceeded 2015 target

<table>
<thead>
<tr>
<th>Objective 7</th>
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Objective 8 – Recommended Initial Therapy

- Increase the proportion of patients who are started on the recommended initial 4-drug regimen when suspected of having TB disease to 93.4%:
  - 2004-2008 – 90%
  - 2008 – 90.9%
  - Health departments – 91.8%
  - Private providers – 72.7%

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<tr>
<th>Objective 8</th>
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<tr>
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<td>91.7%</td>
<td>92%</td>
<td>92.5%</td>
<td>93%</td>
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Objective 9 – Universal genotyping

- Increase the proportion of culture-confirmed TB cases with genotyping result reported to 94.0%.
  - 2005-2008 – 73.2%
  - 2008 – 68.7%

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<thead>
<tr>
<th>Objective 9</th>
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<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>94%</td>
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Objective 10 – Known HIV Status

- Increase the proportion of TB cases with positive or negative HIV test result reported to 88.7%
  - 2004-2008 – 75.1%
  - 2008 – 75.7%
  - Met prior objective targeting selected age range

<table>
<thead>
<tr>
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<td>79.3%</td>
<td>81.3%</td>
<td>83%</td>
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Objective 11 – Evaluation of Immigrants and Refugees

- Four targets
  - No current data available
  - Begin data collection in 2009
  - Current status and targets to follow
- Two aimed at improving evaluation of immigrants and refugees within certain timeframes
- Two focus on improving treatment for LTBI by infected immigrants and refugees
Objective 12 – Sputum Culture Reported

- Increase the proportion of TB cases with a pleural or respiratory site of disease in patients ages 12 years or older that have a sputum-culture result reported to 95.7%
  - 2004-2008 – 87.7%
  - 2008 – 82.6%

<table>
<thead>
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<td>90%</td>
<td>91%</td>
<td>92%</td>
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</table>
Objective 13 – Program Evaluation

- Increase the percent of cooperative agreement recipients that have an evaluation focal point.

  - Virginia has a designated Evaluation Focal Point
Objective 14 – Human Resource Development Plan

- Increase the percent of cooperative agreement recipients who submit a program-specific human resource development plan (HRD), as outlined in the TB Cooperative Agreement announcement, to 100.0%
  - Virginia submitted annual HRD plans
Objective 15 – Training Focal Point

- Increase the percent of cooperative agreement recipients that have a TB training focal point.

- Virginia has a designated TB Training Focal Point
The Next Steps

- 5 year program evaluation plan required for federal cooperative agreement
- Focus on key NTIP performance indicators:
  - Completion of treatment
  - Recommended 4-drug initial therapy
  - Sputum culture conversion within 60 days
  - Sputum collected on all pleural/respiratory disease sites
  - Known drug susceptibility results
  - Known HIV results
The Next Steps

- Case reviews – ongoing & continuing
- Cohort reviews – coming in 2010
- District program evaluations
  - Every three year process beginning in mid-2010