All-Payer Claims Databases

December 10, 2010
Denise Love, National Association of Health Data Organizations

Topics

- National Overview
- Resource Center
- Experiences and Lessons Learned
- Standardization
- Claims Data Applications
National Overview

- About NAHDO
  - Established in 1986 by the Washington Business Group on Health
    - 25 states with legislative mandates to collect health care data for cost, quality, access
  - Providing advocacy and technical assistance across states to expand data systems (IP, AS, ED)
  - All Payer Claims Data support with All Payer Claims Database Council
APCDs Are About Transparency

- Which hospitals have the highest prices?
- In what geographies is public health improving?
- What percentage of my employees have had a mammogram?
- If emergency room usage in Medicaid is higher than the commercial population, what are the drivers?
- What is the average length of time people are using antidepressant medications?
- How far do people travel for services? Which services?
- Hundreds of additional questions have been asked....

Definition of APCDs

- Databases, created by state mandate, that typically include data derived from medical, eligibility, provider, pharmacy, and/or dental files from private and public payers:
  - Insurance carriers (medical, dental, TPAs, PBMs)
  - Public payers (Medicaid, Medicare)
All Payer Road Map

Engagement
- Stakeholder Identification
- Education
- Partnerships
- Advocates

Governance
- Governance Model
- Structure
- Rules for Collection and Release
- Standards Adoption

Sustainability
- Initial Funding
- Revenue Model

Technical Build
- Vendor Decision
- Maintenance
- Linkage to Other Data Sources

Analysis & Application Development
- Reporting
- Applications
- Meta Data

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Statewide Hospital Inpatient Data Programs
Prepared by NAHDO 2010

- Legislative mandate
- No collection since 2005
- Voluntary collection

Copyright 2009-2010 APCD Council, NAHDO, UNH
Sources of APCD Data

- Commercial & TPAs & PBM & Dental & Medicare Parts C & D
- Medicaid FFS & Managed Care & SCHIP
- Medicare Parts A & B
- Uninsured & TRICARE & FEHB

Typically Included Information

- Encrypted social security
- Type of product (HMO, POS, Indemnity, etc.)
- Type of contract (single person, family, etc.)
- Patient demographics (date of birth, gender, residence, relationship to subscriber)
- Diagnosis codes (including E-codes)
- Procedure codes (ICD, CPT, HCPC, CDT)
- NDC code / generic indicator
- Revenue codes
- Service dates
- Service provider (name, tax id, payer id, specialty code, city, state, zip code)
- Prescribing physician
- Plan payments
- Member payment responsibility (co-pay, coinsurance, deductible)
- Date paid
- Type of bill
- Facility type
Typically Excluded Information

- Services provided to uninsured (few exceptions)
- Denied claims
- Workers’ compensation claims
- Premium information
- Capitation fees
- Administrative fees
- Back end settlement amounts
- Referrals
  - Test results from lab work, imaging, etc.
  - Provider affiliation with group practice
  - Provider networks

Status of State Government Administered All Payer / All Provider Claims Databases

[Map showing the status of state government administered all payer/all provider claims databases]
Welcome to the APCD Council!

The APCD Council, formerly known as the Regional All-Payer Healthcare Information Council (RAPHIC), is a federation of government, private, non-profit, and education organizations focused on improving the development and deployment of state-based all-payer claims databases (APCD). The APCD Council is convened and coordinated by the Institute of Health Policy and Practice (IHP) at the University of New Hampshire (UNH) and the National Association of Health Data Organizations (NAHDO).

RAPHIC was first convened in 2006 by UNH, IHP, staffed with the goal of engaging future users of the Maine and New Hampshire APCDs in a discussion about multi-state collaboration. Soon after, states across the country joined the group. Currently, there is participation from nearly a dozen states. NAHDO was established in 1993 to promote the uniformity and availability of health care data for cost-quality and access processes. In 2007, NAHDO forged a collaboration with RAPHIC to expand APCD data initiatives beyond the northeast region and to lead fund raising for APCD products and conference support. Together, NAHDO and RAPHIC have been coordinating a multi-state effort to support state AHDO initiatives and shape state reporting systems to be capable of supporting a broad range of information needs.

In response to a shift from a regionally-focused focus, RAPHIC has changed its name to the APCD Council. The APCD Council will continue to work in collaboration with states to promote uniformity and use of APCDs.
Experiences and Lessons Learned
Something for Everyone...An Evolution
- Consumers
- Employers
- Health Plans/Payers
- Providers
- Researchers (public policy, academic, etc.)
- State government (policy makers, Medicaid, public health, insurance department, etc.)
- TBD (Federal government, etc.)

Changing Landscape 2005-10
- Increased Transparency Efforts
- Employer Coalitions
- Payment Reform
  - Patient Centered Medical Home
  - Accountable Care Organizations
- Health Information Exchange (HITECH)
- Health Reform
**Implementation Starting Point**

- Location of State Authority by Statute
- Funding
- Development of Collection Rules
  - Covered Populations
  - Submission Frequency
  - Thresholds and Exclusions Examples
- Development of Release Rules
- Location of Processing
- Payer Relations
- Multi-Stakeholder Issues and Cooperation

**APCD Challenges**

- Completeness of Population Captured
- Provider as Unit of Analysis
- Retroactive Payment Adjustments
- To-be-Developed Payment Methodologies
- Consistency Amongst State Databases
- Ability to Link to Other Sources
- State Revenue Models
- Federal Engagement
- Standardization (see next section)
Lessons Learned

- Be Transparent and Document
- Transactional vs. Non-Transactional Uses
- Integration and Linkage Opportunities
- Payer Relationships
- Understanding of Data Across Payers
- Local User Consortiums
- Data Management and Data Analytic Contracting

Standardization
Areas for Standardization

- Data collection / submission
  - Aligning to HIPAA Standards
  - Efficiencies in metadata, reporting, analysis, and application development
- Data release
  - Political and state-driven

National Standards---Technical Advisory Panel

- Agency for Healthcare Research and Quality (AHRQ)
- All-Payer Claims Database Council (APCD Council)
- America’s Health Insurance Plans (AHIP)
- Individual Payers (e.g., Aetna, Cigna, Harvard Pilgrim Healthcare, Humana, United Health Care)
- Centers for Disease Control and Prevention, National Center for Health Statistics (CDC NCHS)
- Centers for Medicare and Medicaid Services (CMS)
- National Association of Health Data Organizations (NAHDO)
- National Association of Insurance Commissioners (NAIC)
- National Conference of State Legislatures (NCSL)
- National Governors Association (NGA)
- Office of the Assistant for Planning and Evaluation (ASPE)
- State Health Plan Associations - various
## Claims Data Applications

![Source: www.nhhealthcost.org](source)

### Detailed estimates for Arthroscopic Knee Surgery (outpatient)

**Procedure:** Arthroscopic Knee Surgery (outpatient)

**Insurance Plan:** Anthem-HMO, Within 50 miles of 03301, Deductible and Coinsurance Amount: $50.00 / 10%

<table>
<thead>
<tr>
<th>Lead Provider Name</th>
<th>Estimate of What You Will Pay</th>
<th>Estimate of What Insurance Will Pay</th>
<th>Estimate of Combined Payments</th>
<th>Precision of the Cost Estimate</th>
<th>Typical Patient Complexity</th>
<th>Contact Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salem Surgery Center</td>
<td>$360</td>
<td>$2822</td>
<td>$180</td>
<td>HIGH</td>
<td>VERY LOW</td>
<td>603.898.3610</td>
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<tr>
<td>Concord Hospital</td>
<td>$383</td>
<td>$3006</td>
<td>$3389</td>
<td>MEDIUM</td>
<td>MEDIUM</td>
<td>603.228.7145</td>
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<tr>
<td>Dartmouth Hitchcock South</td>
<td>$390</td>
<td>$3120</td>
<td>$2533</td>
<td>LOW</td>
<td>MEDIUM</td>
<td>603.305.9500</td>
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<tr>
<td>Lebanon Regional General Hospital</td>
<td>$469</td>
<td>$3776</td>
<td>$4245</td>
<td>LOW</td>
<td>MEDIUM</td>
<td>603.527.7171</td>
</tr>
<tr>
<td>Mary Hitchcock Memorial Hospital</td>
<td>$509</td>
<td>$4135</td>
<td>$4644</td>
<td>HIGH</td>
<td>MEDIUM</td>
<td>603.650.0000</td>
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<tr>
<td>Southern NH Medical Center</td>
<td>$522</td>
<td>$4254</td>
<td>$4776</td>
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<td>MEDIUM</td>
<td>603.577.2000</td>
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<td>Wentworth-Douglass Hospital</td>
<td>$524</td>
<td>$4266</td>
<td>$4750</td>
<td>MEDIUM</td>
<td>HIGH</td>
<td>603.742.3222</td>
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<tr>
<td>Portsmouth Regional Hospital - HCA Affil</td>
<td>$548</td>
<td>$4483</td>
<td>$5031</td>
<td>MEDIUM</td>
<td>MEDIUM</td>
<td>603.436.5110</td>
</tr>
<tr>
<td>Portsmouth Ambulatory Surgery Center</td>
<td>$596</td>
<td>$4918</td>
<td>$5514</td>
<td>HIGH</td>
<td>MEDIUM</td>
<td>603.433.0841</td>
</tr>
<tr>
<td>St. Joseph Hospital</td>
<td>$619</td>
<td>$5129</td>
<td>$5748</td>
<td>HIGH</td>
<td>MEDIUM</td>
<td>603.882.3000</td>
</tr>
<tr>
<td>Freme Memorial Hospital</td>
<td>$570</td>
<td>$5557</td>
<td>$6257</td>
<td>MEDIUM</td>
<td>MEDIUM</td>
<td>603.924.7191</td>
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<tr>
<td>Moseley Medical Community Hospital</td>
<td>$701</td>
<td>$5867</td>
<td>$6568</td>
<td>LOW</td>
<td>HIGH</td>
<td>603.778.7311</td>
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<tr>
<td>Dover Community Hospital</td>
<td>$731</td>
<td>$6131</td>
<td>$6862</td>
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<td>MEDIUM</td>
<td>603.527.7171</td>
</tr>
<tr>
<td>Franklin Regional Hospital</td>
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<td>$6898</td>
<td>$7714</td>
<td>MEDIUM</td>
<td>MEDIUM</td>
<td>603.527.7171</td>
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<tr>
<td>New London Hospital</td>
<td>$826</td>
<td>$6988</td>
<td>$7814</td>
<td>MEDIUM</td>
<td>VERY LOW</td>
<td>603.526.2911</td>
</tr>
</tbody>
</table>
NH Hospital Acute Care Pricing Comparison

2006 Combined Inpatient and Outpatient Cost Index By NH Hospital

Source NH Insurance Department, 2008

Source: http://hcqcc.hcf.state.ma.us/Default.aspx
### Payment Rate Benchmarking

<table>
<thead>
<tr>
<th>Procedure Code</th>
<th>Health Plan 1</th>
<th>Health Plan 2</th>
<th>Health Plan 3</th>
<th>NH Medicaid</th>
</tr>
</thead>
<tbody>
<tr>
<td>99203 Office/Outpatient Visit New Patient, 30min</td>
<td>$124</td>
<td>$115</td>
<td>$130</td>
<td>$42</td>
</tr>
<tr>
<td>99212 Office/Outpatient Visit Established Patient, 10min</td>
<td>$51</td>
<td>$48</td>
<td>$52</td>
<td>$30</td>
</tr>
<tr>
<td>99391 Preventive Medicine Visit Established Patient Age &lt;1</td>
<td>$111</td>
<td>$102</td>
<td>$107</td>
<td>$61</td>
</tr>
<tr>
<td>90806 Individual psychotherapy in office/outpatient, 45-50min</td>
<td>$72</td>
<td>$71</td>
<td>$71</td>
<td>$61</td>
</tr>
</tbody>
</table>

SOURCE: NH DHHS

### Prevalence of Adult Coronary Artery Disease by Age, NH Medicaid (non-Dual) and NH CHIS Commercial Members, 2005

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Medicaid-only</th>
<th>CHIS Commercial</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Ages</td>
<td>4% 2% 0% 0% 2% 1% 7% 2% 3% 3% 0% 5%</td>
<td>0% 0% 0% 0% 1% 2% 3% 4% 0% 0% 0% 0%</td>
</tr>
<tr>
<td>19-20</td>
<td>0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%</td>
<td>0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%</td>
</tr>
<tr>
<td>21-24</td>
<td>0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%</td>
<td>0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%</td>
</tr>
<tr>
<td>25-34</td>
<td>0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%</td>
<td>0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%</td>
</tr>
<tr>
<td>35-44</td>
<td>0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%</td>
<td>0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%</td>
</tr>
<tr>
<td>45-49</td>
<td>0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%</td>
<td>0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%</td>
</tr>
<tr>
<td>50-54</td>
<td>0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%</td>
<td>0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%</td>
</tr>
<tr>
<td>55-59</td>
<td>0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%</td>
<td>0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%</td>
</tr>
<tr>
<td>60-64</td>
<td>0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%</td>
<td>0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%</td>
</tr>
</tbody>
</table>

SOURCE: NH DHHS

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Prevalence of Asthma by Age, NH Medicaid (non-Dual) and NH Commercial Members, 2005

SOURCE: NH DHHS

Figure 2. Emergency Department Visit Rates by Age: Medicaid Compared to NH Commercial Members, 2005. Note: age 65 and older not shown, no comparative commercial population

SOURCE: NH DHHS
Change in Distribution of Costs by Insurance Type: Concord

<table>
<thead>
<tr>
<th>Year</th>
<th>PPO</th>
<th>POS</th>
<th>HMO</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>72%</td>
<td>9%</td>
<td>19%</td>
</tr>
<tr>
<td>2006</td>
<td>72%</td>
<td>10%</td>
<td>18%</td>
</tr>
<tr>
<td>2007</td>
<td>59%</td>
<td>19%</td>
<td>21%</td>
</tr>
</tbody>
</table>

SOURCE: UNH
Summary Metrics

COMPANY ABC and NH Benchmark

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>NH BENCHMARK 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Members</td>
<td>8,736</td>
<td>8,680</td>
<td>8,647</td>
<td>8,786</td>
<td>114,457</td>
</tr>
<tr>
<td>Average Age (Yrs)</td>
<td>36.3</td>
<td>36.7</td>
<td>37.6</td>
<td>37.7</td>
<td>39.2</td>
</tr>
<tr>
<td>Percent Female (%)</td>
<td>53.4</td>
<td>53.2</td>
<td>52.8%</td>
<td>52.7%</td>
<td>53.0%</td>
</tr>
</tbody>
</table>

Total Pharmacy Payments

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>NH BENCHMARK 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Plan Payments (Millions)</td>
<td>$25.8</td>
<td>$30.4</td>
<td>$29.9</td>
<td>$33.7</td>
<td>$481.2</td>
</tr>
<tr>
<td>Plan Paid PMPM</td>
<td>$49</td>
<td>$57</td>
<td>$63</td>
<td>$69</td>
<td>NA</td>
</tr>
<tr>
<td>Plan PMPM Trend from Previous Year</td>
<td>NA</td>
<td>19%</td>
<td>-1%</td>
<td>11</td>
<td>16%</td>
</tr>
<tr>
<td>Member Paid PMPM</td>
<td>$9</td>
<td>$9</td>
<td>$8</td>
<td>$9</td>
<td>$8</td>
</tr>
</tbody>
</table>

Prevalence of Selected Conditions

COMPANY ABC (2005–2008)

- Back
- Depression
- Diabetes
- Asthma
- Coronary Heart Disease
- Smoking Related
- Breast Cancer
- Colorectal Cancer

SOURCE: NHPGH

Pharmacy data for some New Hampshire employers currently is under review.

SOURCE: NHPGH
ETGs for Joint Degeneration—Spine
Maine Commercial Claims (2006–2007); Full Episodes Outliers Removed
Preference Sensitive Care

<table>
<thead>
<tr>
<th>JOINT DEGENERATION—SPINE</th>
<th>WITH SURGERY</th>
<th>WITHOUT SURGERY</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETG-Subclass</td>
<td>721-08</td>
<td>722-08</td>
</tr>
<tr>
<td>Number of Episodes</td>
<td>802</td>
<td>15,830</td>
</tr>
<tr>
<td>% with MRI</td>
<td>84%</td>
<td>26%</td>
</tr>
<tr>
<td>% with CT-Scan</td>
<td>12%</td>
<td>2%</td>
</tr>
<tr>
<td>% with Standard Musculoskeletal Imaging</td>
<td>82%</td>
<td>36%</td>
</tr>
<tr>
<td>% with Chiropractor</td>
<td>20%</td>
<td>50%</td>
</tr>
<tr>
<td>% with Osteopathic Manipulation</td>
<td>12%</td>
<td>10%</td>
</tr>
<tr>
<td>% with Physical Medicine or Rehab</td>
<td>61%</td>
<td>54%</td>
</tr>
<tr>
<td>Avg. Payment per Episode</td>
<td>$18,888*</td>
<td>$1,605</td>
</tr>
</tbody>
</table>

* The average payment for 272 episodes with spinal fusion was $28,250 compared with $12,653 for 530 episodes with other types of spinal surgery such as laminectomy or discectomy.

SOURCE: ONPOINT HEALTH DATA

ETGs for Benign Conditions of the Uterus
Maine Commercial Claims (2006–2007); Full Episodes Outliers Removed
Preference Sensitive Care

<table>
<thead>
<tr>
<th>BENIGN CONDITIONS OF THE UTERUS</th>
<th>HYSTERECTOMY</th>
<th>OTHER SURGICAL PROCEDURES</th>
<th>OTHER SURGICAL PROCEDURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETG-Subclass</td>
<td>646</td>
<td>646</td>
<td>647</td>
</tr>
<tr>
<td>Number of Episodes</td>
<td>938</td>
<td>2,183</td>
<td>7,369</td>
</tr>
<tr>
<td>% with CT-Scan</td>
<td>11%</td>
<td>15%</td>
<td>9%</td>
</tr>
<tr>
<td>% with Ultrasound</td>
<td>57%</td>
<td>67%</td>
<td>45%</td>
</tr>
<tr>
<td>% with Hysteroscopy</td>
<td>7%</td>
<td>48%</td>
<td>9%</td>
</tr>
<tr>
<td>% with Colposcopy</td>
<td>1%</td>
<td>2%</td>
<td>17%</td>
</tr>
<tr>
<td>% with Endometrial biopsy</td>
<td>20%</td>
<td>13%</td>
<td>9%</td>
</tr>
<tr>
<td>Average Payment per Episode</td>
<td>$11,074</td>
<td>$7,994</td>
<td>$1,273</td>
</tr>
</tbody>
</table>

The average episode payment for members with abdominal hysterectomy was $11,221, and the average payment for members with vaginal hysterectomy was $10,390. Of members with a hysterectomy, 66% had abdominal and 34% had vaginal hysterectomy. Other surgical procedures included hysteroscopy ablation, laparoscopic removal of lesions, myomectomy, and removal of ovarian cysts.

SOURCE: ONPOINT HEALTH DATA
Total IP Adverse Drug Events Discharge, Rate, Total Paid, and Average Paid, 2006-2007 for Maine and New Hampshire

<table>
<thead>
<tr>
<th></th>
<th>Maine IP Discharges</th>
<th>Rate / 1,000 Discharges</th>
<th>Total Paid</th>
<th>Average Paid</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>747</td>
<td>26.7</td>
<td>$11,864,264</td>
<td>$15,883</td>
</tr>
<tr>
<td>2007</td>
<td>770</td>
<td>34.5</td>
<td>$13,705,995</td>
<td>$17,800</td>
</tr>
<tr>
<td>Total</td>
<td>1,517</td>
<td>30.1</td>
<td>$25,570,259</td>
<td>$16,856</td>
</tr>
<tr>
<td>% Increase</td>
<td>3%</td>
<td>29%</td>
<td>16%</td>
<td>12%</td>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>New Hampshire IP Discharges</th>
<th>Rate / 1,000 Discharges</th>
<th>Total Paid</th>
<th>Average Paid</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>459</td>
<td>22.3</td>
<td>$5,712,414</td>
<td>$12,445</td>
</tr>
<tr>
<td>2007</td>
<td>504</td>
<td>25.1</td>
<td>$6,719,104</td>
<td>$13,332</td>
</tr>
<tr>
<td>Total</td>
<td>963</td>
<td>23.7</td>
<td>$12,431,518</td>
<td>$12,909</td>
</tr>
<tr>
<td>% Increase</td>
<td>10%</td>
<td>12%</td>
<td>18%</td>
<td>7%</td>
</tr>
</tbody>
</table>

SOURCE: UNH & HEALTHINFONET

Tri-State Variation in Health Services
Advanced Imaging – MRIs

Keene (90.8)
Greenville (46.2)
Middlebury (53.3)
Rutland (73.8)

Source: State of Vermont
Contact Information

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801.532.2262

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Patrick Miller (APCD Council)  patrick.miller@unh.edu
603.536.4265

www.APCDCouncil.org
www.nahdo.org

for more resources in assisting states to move forward