Echoes from the Boom:
The Impact of Population Growth on Maryland Higher Education

Association for Institutional Research
Boston, MA

June 1, 2004

MD Joint Workgroup, AIR 2004
Membership

Institutional research professionals from:
University System of Maryland (USM)
Maryland community colleges

Representatives from private institutions and the Maryland Higher Education Commission (MHEC) provided input and feedback
Our Goal

To characterize the demand for, access to, and capacity of higher education in Maryland. Specifically:

1) Examine access for transfer students

2) Describe the demand for higher education using a pipeline model

3) Estimate the impact of demand on capacity and affordability

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Regional Issues

• Regional data were examined to analyze student access and enrollment needs

• Using Geographic Information Software the state was divided into regions associated with educational institutions

• The regions were further refined to reflect students historical enrollment patterns
Access for Transfer Students

• Describe the access for transfer students

• Limited to USM institutions

• Examined Fall 2001 cohort

• Assumptions:
  - Last institution was a MD CC
  - “No Action” existed

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ACCESS: Transfer Students

• 7,808 applications (Comm. College to USM)
  - 82% accepted
  - 73% of those accepted actually enrolled
  - 8% rejected
  - 10% no action

• 636 multiple applicants; 10 rejected altogether
## Access by Discipline

**Fall 2001**

**MD Community College Transfer Student Applications**

**Intended Major**

<table>
<thead>
<tr>
<th>Intended Major</th>
<th>Applied</th>
<th>Accepted</th>
<th>Accepted</th>
<th>Rejected</th>
<th>Rejected</th>
<th>No Action</th>
<th>No Action</th>
<th>Enrolled</th>
<th>% Of Admits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business and Management</td>
<td>1,255</td>
<td>1,072</td>
<td>85.4</td>
<td>70</td>
<td>5.6</td>
<td>113</td>
<td>9.0</td>
<td>791</td>
<td>73.8</td>
</tr>
<tr>
<td>Computer and Information Sciences</td>
<td>1,000</td>
<td>851</td>
<td>85.1</td>
<td>65</td>
<td>6.5</td>
<td>84</td>
<td>8.4</td>
<td>636</td>
<td>74.7</td>
</tr>
<tr>
<td>Education</td>
<td>788</td>
<td>659</td>
<td>83.6</td>
<td>44</td>
<td>5.6</td>
<td>85</td>
<td>10.8</td>
<td>482</td>
<td>73.1</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>581</td>
<td>474</td>
<td>81.6</td>
<td>43</td>
<td>7.4</td>
<td>64</td>
<td>11.0</td>
<td>355</td>
<td>74.9</td>
</tr>
<tr>
<td>Health Professions</td>
<td>569</td>
<td>406</td>
<td>71.4</td>
<td>102</td>
<td>17.9</td>
<td>61</td>
<td>10.7</td>
<td>305</td>
<td>75.1</td>
</tr>
</tbody>
</table>

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# Regional Access

## Fall 2001

<table>
<thead>
<tr>
<th>Region</th>
<th>Applied</th>
<th>Accepted #</th>
<th>Accepted %</th>
<th>Rejected #</th>
<th>Rejected %</th>
<th>No Action #</th>
<th>No Action %</th>
<th>Enrolled #</th>
<th>% Of Admits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western MD</td>
<td>133</td>
<td>124</td>
<td>93.2</td>
<td>3</td>
<td>2.3</td>
<td>6</td>
<td>4.5</td>
<td>110</td>
<td>88.7</td>
</tr>
<tr>
<td>Hagerstown</td>
<td>136</td>
<td>118</td>
<td>86.8</td>
<td>5</td>
<td>3.7</td>
<td>13</td>
<td>9.6</td>
<td>74</td>
<td>62.7</td>
</tr>
<tr>
<td>Baltimore Metro</td>
<td>3,217</td>
<td>2,631</td>
<td>81.8</td>
<td>257</td>
<td>8.0</td>
<td>329</td>
<td>10.2</td>
<td>1,894</td>
<td>72.0</td>
</tr>
<tr>
<td>Washington Metro</td>
<td>3,194</td>
<td>2,543</td>
<td>79.6</td>
<td>315</td>
<td>9.9</td>
<td>336</td>
<td>10.5</td>
<td>1,868</td>
<td>73.5</td>
</tr>
<tr>
<td>Northeastern MD</td>
<td>368</td>
<td>317</td>
<td>86.1</td>
<td>13</td>
<td>3.5</td>
<td>38</td>
<td>10.3</td>
<td>228</td>
<td>71.9</td>
</tr>
<tr>
<td>Southern MD</td>
<td>504</td>
<td>447</td>
<td>88.7</td>
<td>24</td>
<td>4.8</td>
<td>33</td>
<td>6.5</td>
<td>318</td>
<td>71.1</td>
</tr>
<tr>
<td>Upper Eastern Shore</td>
<td>125</td>
<td>86</td>
<td>68.8</td>
<td>9</td>
<td>7.2</td>
<td>30</td>
<td>24.0</td>
<td>64</td>
<td>74.4</td>
</tr>
<tr>
<td>Lower Eastern Shore</td>
<td>131</td>
<td>115</td>
<td>87.8</td>
<td>9</td>
<td>6.9</td>
<td>7</td>
<td>5.3</td>
<td>102</td>
<td>88.7</td>
</tr>
<tr>
<td>All Institutions</td>
<td>7,808</td>
<td>6,381</td>
<td>81.7</td>
<td>635</td>
<td>8.1</td>
<td>792</td>
<td>10.1</td>
<td>4,658</td>
<td>73.0</td>
</tr>
</tbody>
</table>

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Enrollment Projections

- Official state projections

- Demand model examines the flow of students at the state level
  - 3 streams
  - varied assumptions

- Two sets of projections form a range

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ELEMENTS OF THE PIPELINE

H.S. Seniors 96% → H.S. Graduates 45% → Maryland Higher Ed.

Out of State Higher Ed. 20%

Public Four Year 33%

Private Four Year 5%

Community College 62%

Not Directly to Higher Ed.

Delayed Entreesnts

Adult Learners

Transfer to Public 4-yr 27%

Approximate percentage based on NCES 2000 IPEDS Fall Enrollment Survey

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## Projected Demand from Entering Undergraduates

<table>
<thead>
<tr>
<th>Entering Category</th>
<th>Actual Fall 2001</th>
<th>Projected 2005-06</th>
<th>Projected 2010-11</th>
<th>Difference Actual - FY06 Number</th>
<th>Difference Actual - FY06 Percent</th>
<th>Difference Actual - FY11 Number</th>
<th>Difference Actual - FY11 Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entering Community Colleges (First-time)</td>
<td>26,686</td>
<td>32,363</td>
<td>36,280</td>
<td>5,677</td>
<td>18%</td>
<td>9,594</td>
<td>36%</td>
</tr>
<tr>
<td>Entering Public Four Years</td>
<td>20,443</td>
<td>21,065</td>
<td>23,839</td>
<td>622</td>
<td>3%</td>
<td>3,396</td>
<td>17%</td>
</tr>
<tr>
<td>Total</td>
<td>47,129</td>
<td>53,428</td>
<td>60,119</td>
<td>6,299</td>
<td>12%</td>
<td>12,990</td>
<td>28%</td>
</tr>
</tbody>
</table>

Note: Actuals represent fall 2001 first-time students and transfer students who were enrolled in public four-years during fall 2001 after enrolling in a community college in fall 2000. Fall numbers may under-represent total fiscal year entrants.
## Current and Projected Undergraduate Enrollment

<table>
<thead>
<tr>
<th></th>
<th>Fall 2001 Actual</th>
<th>Fall 2005 Projected</th>
<th>Projected Difference</th>
<th>% Change</th>
<th>Fall 2010 Projected</th>
<th>Difference</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Community Colleges</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MHEC</td>
<td>109,411</td>
<td>123,093</td>
<td>13,682</td>
<td>13%</td>
<td>132,361</td>
<td>22,950</td>
<td>21%</td>
</tr>
<tr>
<td>Wkgp</td>
<td></td>
<td>125,973</td>
<td>16,562</td>
<td>15%</td>
<td>146,769</td>
<td>37,358</td>
<td>34%</td>
</tr>
<tr>
<td><strong>Public Four Years</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MHEC</td>
<td>95,251</td>
<td>105,423</td>
<td>10,172</td>
<td>11%</td>
<td>117,624</td>
<td>22,373</td>
<td>23%</td>
</tr>
<tr>
<td>Wkgp</td>
<td></td>
<td>106,189</td>
<td>10,938</td>
<td>11%</td>
<td>121,204</td>
<td>25,953</td>
<td>27%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>204,662</td>
<td>228,516</td>
<td>23,854</td>
<td>12%</td>
<td>249,985</td>
<td>45,323</td>
<td>22%</td>
</tr>
<tr>
<td>MHEC</td>
<td></td>
<td>232,163</td>
<td>27,501</td>
<td>13%</td>
<td>267,973</td>
<td>63,311</td>
<td>31%</td>
</tr>
</tbody>
</table>

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## PROJECTIONS: Regional

<table>
<thead>
<tr>
<th>Region</th>
<th>Actual Fall 2001</th>
<th>Projected FY 2011</th>
<th>Difference Actual Fall 2001 to Proj. FY 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New CC</td>
<td>Transfer</td>
<td>New 4 Yr</td>
</tr>
<tr>
<td>Baltimore Metro</td>
<td>11,208</td>
<td>2,916</td>
<td>3,778</td>
</tr>
<tr>
<td>Lower Eastern Shore</td>
<td>736</td>
<td>210</td>
<td>604</td>
</tr>
<tr>
<td>Frederick/Hagerstown *</td>
<td>2,315</td>
<td>359</td>
<td>437</td>
</tr>
<tr>
<td>Northeast Maryland</td>
<td>1,762</td>
<td>386</td>
<td>442</td>
</tr>
<tr>
<td>Southern Maryland</td>
<td>1,416</td>
<td>550</td>
<td>428</td>
</tr>
<tr>
<td>Upper Eastern Shore</td>
<td>504</td>
<td>143</td>
<td>217</td>
</tr>
<tr>
<td>Washington County *</td>
<td>834</td>
<td>111</td>
<td>113</td>
</tr>
<tr>
<td>Washington Metro *</td>
<td>8,823</td>
<td>2,773</td>
<td>3,869</td>
</tr>
<tr>
<td>Western Maryland</td>
<td>1,403</td>
<td>168</td>
<td>213</td>
</tr>
</tbody>
</table>

Actuals for new students are Fall 2001 new freshmen.
Actuals for transfer students are AY transfers (i.e., those students enrolled in a community college in fall 2000 and enrolled in a public four year in fall 2001).

* Note: The Frederick/Hagerstown Region includes Frederick and Washington counties, both of which are part of other regions. Frederick is also included in the Washington Metro region, and Washington county is its own region.

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Accommodating Capacity

• Defined by facilities and funding

• Space: Net Assignable Square Feet

• Funding: Operating Budget
  - tuition and fees
  - local funds
  - state appropriations

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Facilities

• Current deficit at 2.6 million NASF
• Expected to grow to 3.3 million NASF
• Assumptions:
  – CIP is fully funded
  – Minimum enrollment growth
Funding

• Three points in time
  – Base Year, FY06, FY11

• Units of analysis
  – Total budget need
    • Base Year: $2.2 billion
  – $/FTE
    • Base Year: $11,853

• Two models
  – Base
  – Target

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Funding Estimates

• **Base**
  – Additional $1.3 billion in FY11
  – Increase of $3,451 in $/FTES

• **Target**
  – Additional $3.1 billion in FY11
  – Increase of $10,658 in $/FTES
Affordability

• Uses funding models
  – Proportion state, tuition, local
• If state funding remains flat to FY 11, tuition revenue will increase
  • Base Model 60% - 70%
  • Target Model 150% - 200%
    – % State funding drops considerably

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Summary and Conclusions
Transfer Student Access

• Transfer students have greater access than anecdotal evidence suggested

• Students in critical workforce areas are generally accepted to 4 year schools

• Recommendations
  ✓ Encourage students to apply to multiple institutions
  ✓ Explore reasons why students are not enrolling
  ✓ Examine application process
  ✓ Examine access in terms of credits transferred
  ✓ Continue to monitor transfer process

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Enrollment Growth

• Public institutions will need to absorb up to 63,000 new students in Fall 2010

• Baltimore and Washington regions expect to see the highest numbers of growth

• Recommendations
  ✓ Increase throughput
  ✓ New models

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Impact on Affordability

• Tuition could double or triple by FY 11 with increases up to 12% annually

• Dependent on state and local funding

• Recommendations
  ✓ Conduct a thorough review of affordability
  ✓ Increase state support of financial aid

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Wrapping it up …

Political Framework and Implications

Joint process of segments

Monitor and evaluate

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