Diversity Pipeline Programs in Health Careers Education: Maryland AHEC Program (MDAHEC)

Claudia R. Baquet, MD, MPH
Maryland AHEC Program Director
MDAHEC Program

- Federal and State Funding
- Over 34 years old
- Program Office: University of Maryland Baltimore/School of Medicine
- Three Centers:
  - Western Maryland: WMDAHEC
  - Eastern Shore: ESAHEC
  - Baltimore: BAHEC
MDAHEC Mission and Programs

- **Mission**: Increase access to quality health care through educational partnerships

- **Programs**:
  - Clinical Education
  - Learning Resources
  - Continuing Education
  - **Health Careers**
ESAHEC Health Careers Program

- Service area includes the 9 counties of the Eastern Shore which are all rural and underserved, and some of the counties have high minority populations.

- Includes – career counseling, locating mentors and internships for high school students, interaction with after-school programs, health career fairs, and field trips to health care facilities as well as colleges and universities.

- One specific program is the **Mini Med School for Teens Program**.
ESAHEC Mini Med School for Teens

- Eastern Shore AHEC in cooperation with the Upper Shore Workforce Investment Board (WIB)

- Directed at rural high school students from economically disadvantaged backgrounds

- Series of 5 sessions that introduce them to career opportunities in the health care field

- Sessions include information on training requirements, job qualifications, employment opportunities and salary expectations.
Interactive Learning Opportunities at Mini Med for Teens

- Students are provided with scrub tops, name tags and binders that they are required to have at each of the sessions.
- Hands-on activities are included to enhance the student learning experience.
- Health professionals work with the students on a variety of skills including blood pressure, CPR, and first aid.
Health Career Opportunities

- Students are provided with information on health care career opportunities throughout the program.
- Health professionals give presentations providing information on their career, why they chose it, training requirements and opportunities available.
- Field trips are provided to health care facilities to give students the chance to see first hand the many opportunities available in health care.
Contact Information

Eastern Shore Area Health Education Center
814 Chesapeake Drive
PO Box 795
Cambridge, MD 21613
(410) 221-2600
Jacob Frego, Executive Director
jfrego@esahec.org

Cyndi Slacum, Health Careers Coordinator
cslacum@esahec.org
Western Maryland AHEC

Invest in Youth to Grow Your Own!

Build a sustainable health professions education pipeline.
STEM

- Links K-12 schools with community health professionals
- Experiential partner for health careers
- Helps meet schools’ STEM curriculum requirements

- Sustained:
  + Job shadowing for Anatomy and Physiology students
  + WMAHEC program participation
Youth Health Service Corps (YHSC)

- Mission is to recruit diverse high school students into health care careers.
- Program components
  - Volunteer Service
  - Service learning Projects (Wii)
  - Training Curriculum

- 35 – 40 HOSA students per year
- Tracking provided by the school system
- Sustained:
  - Job shadowing experiences, CPR training, and other volunteer opportunities for HOSA students
  - WMAHEC program participation
Exploring Careers in Health Occupations (ECHO)

- Summer Residential
- Visits to healthcare facilities and higher education institutions
- Team building activities (zipline, whitewater rafting, and rappelling)
- Job shadowing, mentoring
- Hands-on use of state-of-the-art medical equipment and surgical simulators
- College entrance advice and prep
ECHO, cont’d

- We build relationships with partner facilities
  - Single point of contact at the AHEC for all issues
  - AHEC handles all paperwork, training, and logistics

- Training
  - Universal Precautions
  - Confidentiality/HIPAA
  - CPR
MD AHEC Program Office: Vivian T. Thomas
Medical Arts Academy Academy Baltimore

- Summer Hands on and Training Program
  - NIH and UMB funded
  - 5-6 weeks
  - Faculty, Staff Mentorship
  - Courses:
    - Interviewing skills
    - Research design
    - Human subjects/research training
    - Health and Research Careers
Challenges

- Poor funding climate and budget cuts
- Recruiting minority students
- Transportation and housing costs
  - Logistics
  - Limited access to students for recruiting
  - Competition with other programs
  - Increased liability concerns
  - Tracking is expensive (not always fruitful)
Program Contact

- MD AHEC Program Office
- (410) 706-1742
- Federal resources:  www.hrsa.gov
- cbaquet@som.umaryland.edu
Health and Bioscience Cluster

Maryland’s CTE: Educating Tomorrow’s Workforce Today

Dr. Lynne Gilli
Program Manager
Career & Technology Education Instruction
Maryland State Department of Education
Division of Career & College Readiness
Email Address: lgilli@msde.state.md.us

Academy of Health Professions
## Rigor/Relevance Framework

(International Center for Leadership in Education – W. Daggett)

- **Evaluation** (6)
- **Synthesis** (5)
- **Analysis** (4)
- **Application** (3)
- **Understanding** (2)
- **Awareness** (1)

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>1</th>
<th>2 Apply in Discipline</th>
<th>3 Apply Across Disciplines</th>
<th>4 Apply to Predictable Situation</th>
<th>5 Apply to Unpredictable Situations</th>
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<td>Consumer Math</td>
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- High Rigor
- Low Context
- Arithmetic
- AP Math
- Low Rigor
- High Context
- AP Math
- PLTW & New CTE
- Consumer Math
Health and Biosciences
**Health & Biosciences Pathway Programs**

**Academy of Health Professions**
- Therapeutic/diagnostic focus
- Aligned to careers in Allied Health
- Clinical experiences & industry certifications
- Local curriculum enhanced by lessons, activities & case studies developed by Stevenson’s faculty
- 2 required courses with multiple options to be a CTE Completer
- Migration of local health occupations programs to AoHP
- Transcripted credit from SU - TBD

**PLTW Biomedical Sciences**
- Research, Laboratory & Medical focus
- Explores a variety of Health & Biomedical careers
- Curriculum developed by PLTW
- Assessments developed by PLTW
- Transcripted college credit through Stevenson University (SU)
- 4 required PLTW courses
Health Professions Programs

• Offered in all 24 local school systems
  – Enrollment totaled 5,548 in 2011 (983 in BMS, 229 AHP)
  – 4,336 in all other programs of study

• Allied Health CTE programs of study include:
  – *Biomedical Sciences (BMS - Project Lead The Way)
  – *Academy of Health Professions (AHP)
  – Biotechnology
  – Certified Nursing Assistant
  – Dental Assistant
  – Medical Assistant
  – Pharmacy Technician
  – Surgical Technician

*State CTE Program of Study
• *Foundations of Medicine & Health Science
• *Structure & Functions of the Human Body
• Medical Specialty Course
  – Certified Nurse Assistant
  – Pharmacy Technician
  – Dental Assisting
  – Other
• Clinical Internship
• Allied Health Internship
• Allied Health College Level Course

*Developed in partnership with Stevenson University.
All AHP programs must offer these two courses.
• PLTW Biomedical Sciences Statewide implementation
  – 16 Local School Systems
  – 31 schools
  – 7 College Certified Schools
    • Carroll County CTE Center, Perryville High School (Cecil County), LaPlata High School (Charles County), Frederick County CTE Center, Bel Air High School (Harford County), Wheaton High School (Montgomery County) and Washington County Technical High School
  – 7 College Certification visits planned for 2011-2012
  – 19 Maryland PLTW BMS students have received the transcripted credit from Stevenson University
### Local School Systems with Biomedical Sciences Programs

<table>
<thead>
<tr>
<th>Anne Arundel</th>
<th>Frederick</th>
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<tbody>
<tr>
<td>Baltimore City</td>
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<td>Caroline</td>
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<td>Cecil</td>
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<td>Charles</td>
<td>Worcester</td>
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The 2011 state legislature included $900,000 in the state budget for MSDE to expand and enhance PLTW Biomedical Sciences programs.
PLTW Biomedical Sciences Course Sequence

- Principles of the Biomedical Sciences
- Human Body Systems
- Medical Interventions
- Biomedical Innovations

*Students must take all four courses to be CTE completers & to be eligible for the transcripted credit from Stevenson University*

http://www.stevenson.edu/pltw/collegecredit.asp
Functions of the Program Advisory Committee

- Assist with program design & evaluation
- Provide advice to keep programs in step with economic & workforce demands
- Review curriculum & course offerings
- Recommend facility & equipment needs
- Expand value added options for students
- Provide work-based learning experiences
- Develop articulation agreements
Role of Stevenson University as the Cluster Affiliate

- Develop the lessons, activities & case studies to support the two AHP required courses
- Develop the AHP website - http://www.marylandahp.org
- Conduct professional development & lead a professional learning community
- Offer transcripted college credit for program completers
- Participate in the PLTW college certification process
SkillsUSA and AHP

- Prepare a Professional portfolio aligned to the SkillsUSA portfolio requirements
- Incorporate the SkillsUSA Professional Development Program (PDP)
- Participate in SkillsUSA contests aligned to AHP program content
- Note: May 5, 2012 - SkillsUSA Health Science contests will be hosted by Stevenson University
Program Snapshot

- Project Lead The Way (PLTW) is a national not-for-profit educational organization. Its mission is to create dynamic partnerships with schools to produce an increasing and more diverse group of students to be successful in science, engineering and biotechnology programs at the four and two year college level.

- Maryland, in partnership with PLTW and six (6) other states including Connecticut, Indiana, Missouri, Ohio, Oklahoma, and South Carolina, initiated the development of the PLTW Biomedical Sciences program.

- High schools participating in the Biomedical Sciences program partner with institutions of higher education and business/industry.

- Students in the high school program enroll in challenging courses in Principles of the Biomedical Sciences, Human Body Systems, Medical Interventions and Biomedical Innovations.

- Sixteen school systems in Maryland offer the Biomedical Sciences program: They are: Anne Arundel County, Baltimore City, Baltimore County, Calvert County, Caroline County, Carroll County, Cecil County, Charles County, Frederick County, Harford County, Montgomery County, Prince George’s County, Queen Anne’s County, Talbot County, Washington County, and Worcester County.

- Stevenson University serves as the state’s PLTW Biomedical Sciences Affiliate University providing training to PLTW teachers and guidance counselors.

- As a result of the 2011 legislative session, the Maryland State Department of Education received $900,000 in state funding to expand and enhance PLTW Biomedical Sciences programs in Maryland’s local public school systems.
School Sites in Maryland

Anne Arundel County
Glen Burnie

Baltimore City
Bluford Drew Jemison STEM Academy
Dunbar High School
Friendship Academy of Science and Technology
Maryland Academy of Technology and Health Sciences
Vivien T. Thomas Medical Arts Academy (2012)
Western High School

Baltimore County
Overlea High School
Landsdowne High School
New Town High School (2012)
Woodlawn High School

Calvert County
Calvert High School
Huntingtown High School (2012)
Northern High School (2012)
Patuxent High School (2012)

Caroline County
Colonel Richardson High School (2012)

Carroll County
★ CTE Center

Cecil County
★ Perryville High School

Charles County
★ LaPlata High School
Paul E. Lackey High School
Westlake High School

Frederick County
★ CTE Center

Harford County
★ Bel Air High School

Montgomery County
★ Wheaton High School

Prince George’s County
Bladensburg High School (2012)
Henry Wise High School (2012)

Queen Anne’s County
Kent Island High School (2012)

Talbot County
Easton High School
St. Michaels Middle/High School

Washington County
★ Washington County Technical High School

Worcester County
CTE Center

★ = Fully College Certified
Bridging Potential and Pressing Need

Baltimore Alliance for Careers in Healthcare
A presentation to attendees at the
Maryland Health Workforce: Promoting Diversity and Strengthening the Pipeline Conference

Ronald M. Hearn
Executive Director, Baltimore Alliance for Careers in Healthcare
Educational Attainment of Baltimore City Residents

- Less than 9th grade: 9%
- 9th to 12th grade, no diploma: 22%
- High school graduate (includes equivalency): 28%
- Some college, no degree: 18%
- Associate degree: 4%
- Bachelor’s degree: 10%
- Graduate or professional degree: 9%

Healthcare Sector
Employment Distribution
by Workforce Area
2005

- Baltimore City: 22.9%
- Baltimore County: 17.8%
- Montgomery: 16.6%
- Prince George's: 7.7%
- Frederick: 2.8%
- Western Maryland: 5.8%
- Southern Maryland: 3.3%
- Mid-Maryland: 5.7%
- Anne Arundel: 6.5%
- Upper Shore: 2.5%
- Lower Shore: 3.4%
- Susquehanna: 4.4%
- Southern Maryland: 3.3%
- Upper Shore: 2.5%
THE SUMMER MATH ACADEMY
• Accuplacer testing of 10th grade CTE students enrolled in allied health programs (Pharmacy Technician, Surgical Technician, Nursing Assistant).
• Customized bridge program for students whose skills are in need of remediation.

THE BACH FELLOWS SUMMER INTERNS
• Summer-internship program for CTE allied health students who have completed the 11th grade.
• 6 participating hospitals.
• Funded by healthcare, government, education and philanthropic partners.
Healthcare Education and Training Pipeline

**ASSESSMENT & IDP DEVELOPMENT**
- Academic Assessment (ACCUPLACER)
- Career Interest/Aptitude Assessment (Activity Vector Analysis (AVA))
- Coaches use assessment results to develop Individual Development Plans for coachees.

**PRE-ALLIED HEALTH BRIDGE (BASIC SKILLS REMEDIATION)**
- Developmental courses in Math, Reading and English
- Courses offered on- or off-site, depending on demand.

**ACADEMIC SUCCESS SKILLS (READING COMPREHENSION & COMPUTER LITERACY)**
- College orientation classes (designed to improve reading comprehension and study skills) offered on- or off-site depending on demand.
- Computer literacy skills offered on-line.

**HEALTHCARE TRAINING ON-RAMP (PREREQUISITE COURSES)**
- Prerequisite courses common to a variety of allied health degree & certificate programs.
- Courses include:
  - General Education Courses (offered on – or off-site depending on demand).
  - Science courses (Offered off-site).

**CREDIT PIPELINE**
- Developmental courses in Math, Reading and English
- Courses offered on- or off-site, depending on demand.

**NON-CREDIT PIPELINE**
- Offerings at grade 6 to 9 level, based on TABE results
- Courses offered as requested and on-site.

**HEALTHCARE TRAINING ON-RAMP (PREREQUISITE COURSES)**
- Prerequisite courses common to a variety of short-term, non-credit training programs.
- Courses include:
  - Medical Terminology (30 hrs)
  - Anatomy & Physiology (30 hrs)
  - Math for Healthcare (20 hrs)
  - Courses are offered on- or off-site, depending on demand

*Proposed program focus for BACH over next 12-24 months.
*Proposed future program focus for BACH.

Baltimore Alliance for Careers in Healthcare, Inc., 2009