

HEALTH PERSONNEL SHORTAGE INCENTIVE GRANT PROGRAM
FY 2011 Awards: \$411,532.98
Grant Final Reports November 2012

Authorized by the Annotated Code of Maryland, Education Article, Title 18, §803.

Program Description

The purpose of the Health Personnel Shortage Incentive Grant (HPSIG) is to increase the number of graduates eligible for licensure, certification, or registration in designated health shortage occupations. The Department of Health and Mental Hygiene (DHMH) annually provides a list of health occupation shortage fields to the Commission, which in turn reviews applicant institution documents to determine which academic programs produce graduates that fit the statutory description. DHMH listed the following shortage occupations for FY11:

Anesthesiologist	Cardiovascular Technician
Cardiovascular Technologist	Dental Hygienist
Home Health Aide	Internist, General
Licensed Practical Nurse	Licensed Vocational Nurse
Medical and Clinical Laboratory Technician	Medical and Clinical Laboratory Technologist
Medical Transcriptionist	Mental Health Social Worker
Nuclear Medicine Technologist	Obstetricians and Gynecologist
Occupational Therapist Aide	Occupational Therapist Assistant
Occupational Therapist	Pediatrician, General
Pharmacist	Pharmacy Technician
Physical Therapist Aide	Physical Therapist Assistant
Physical Therapist	Physician Assistant
Podiatrist	Psychiatrist
Rehabilitation Counselor	Substance Abuse Social Worker
Surgeon	Surgical Technologist

Funding for the HPSIG Program comes from fees collected by the Maryland Board of Physicians Fund. Fourteen percent of the fees collected by the Board are distributed to the Maryland Higher Education Commission to be divided equally between the HPSIG Program and the Janet L. Hoffman Loan Assistance Repayment Program. From the HPSIG portion of the funds, grants are made to institutions offering educational programs leading to licensure, certification, or registration in a health occupation that has a statewide labor shortage as designated by DHMH. Program funds are to be used to expand or enhance health occupations programs currently experiencing a shortage in order to increase the number of graduates prepared to work in those occupations. Appropriations are determined at the beginning of each fiscal year in accordance with the State's annual legislative budgeting process. Actual funds are issued to MHEC at the end of the fiscal year in which the appropriation is made therefore creating a one-

year lag between the appropriation and the actual award of funds. Actual funds collected may or may not be equal to the appropriation which is an estimate.

Institution Annual Reporting

Institutions receiving funds from the HPSIG program submit annual reports describing how funds were spent for program expansion or enhancement. Reports for FY 2011 awards were received in November 2012. The institutions' reports indicate that HPSIG funds supported the following types of activities and expenditures:

- Instructional support and reference materials, e.g. eBooks, DVDs, software, videos, textbooks, CDs, tutors for students, certification examination reviews, ATI series
- Laboratory equipment and supplies, e.g. x-ray units (Trunnion assembly kit, intra oral x-ray units), blood pressure monitors, pulse oximeters, otoscopes, birthing bed, pediatric exam table, scanning equipment, infant scale, digital sphygmomanometer, air compressors for ventilators, pharmacy scales, chemotherapy pharmacy kit, Pro fitter Physio kit, bosu ball, IV equipment, laboratory WBC counters and Eppendorf filter tips, laboratory tables, unit dose medication carts, stethoscopes.
- Training aids, e.g. life support mannequins, Pneumothorax trainer manikin, simulation kits (ear exam, pregnancy model, SimNewB, child crisis simulator, , adult simulators for blood pressure and electrocardiographic, electrical simulation unit, ice/compression unit), puncture task trainers, anatomy charts, three-dimensional models (skull, spine, foot, eye, skin), child's crib set-up ,simulation scenarios, portable simulation head wall units with oxygen meters, privacy simscreens, beds, trays, Lafayette Manual Muscle Test System, , automatic external defibrillators, laryngoscopes, laparoscopic tower, endoscopes, enteral feeding pumps, pocket guides.
- Faculty professional development, e.g. conference, seminar and workshop registration, specialized training in CPR, Resuscitation Academy attendance, Test Blueprinting, certification exams, professional organizations and journal subscriptions.
- Electronic equipment, e.g. printers, camcorders, laptops, laptop charging stations, student response system with hand held clickers
- Fiscal support for additional lecturers and faculty
- Retention initiatives for adjunct and full time faculty
- Replacement and upgrading of Physical Therapy instructional equipment: hydro-collator machines, anodyne unit, combination ultrasound and electrical stimulation units, iontophoresis machines, Thermotex infrared heating units, Transcutaneous Electrical Nerve Simulation units and Neuro-Muscular Electrical Stimulation units
- Purchasing various adaptive equipment and assistive devices to teach students to assist patients with return to functional activities of daily living in the home
- Accreditation preparation with on-site workshops and follow-up consultations
- Software training, i.e.: Perception V5, SNAP mobile student surveys

- Temporary staff support for advising, standardized patients, program assistants
- Cadaver laboratory experiences, surgical instructional materials , e.g.: Mayo Hager needle holders, dressing forceps, tuning forks, sutures, blades

Institutions have reported that the flexibility allowed by the HPSIG is a welcome change from other funding sources as it allows them to combine funds with other programs to make larger purchases, and fill gaps that otherwise might remain unfilled, thereby aiding them in increasing educational capacity in the designated health workforce shortage areas.

Grantees are also asked to report to the Commission how many graduates passed the relevant national licensure or certification examination and whether they remain working in Maryland. Most program graduates successfully complete licensure. While percentages vary by program and school, exam pass rates generally average 88% or better. The percentage of graduates who remain in Maryland to work varies but consistently runs high, generally 85% or better, especially for programs in community and public colleges. Some graduates may defer the certification or licensure exam and/or leave the field, but the reports do not capture this information. Institutions report that in some programs in which graduates can be hired without a degree, students complete all program requirements and pass the examination but do not file the paperwork for graduation. Institutions are working to address this issue and encourage students to take the degree, even if they already have employment.

Award Formula

Grant awards are calculated based on an increase in the number of program graduates over the number of graduates in a base year. For each graduate in excess of a base number of program graduates in a designated health shortage occupation field, institutions are awarded up to \$1,500. If sufficient funds are not available in any fiscal year to fully fund all awards—which is nearly always the case—the grant allocation is prorated. Any unspent funds are returned and re-awarded.

Although the raw number of graduates over programs' base year number of graduates has been increasing, program-based awards are not necessarily increasing because the prorated amount of funding received per graduate has been declining until 2010 which had a significant increase per graduate but also a significant decrease in the number of eligible graduates. There are several contributing factors for this:

- In FY 2002, a change in statute changed the methodology used to determine the base number, which has caused the number of eligible graduates to increase. The change allows schools to use the number of graduates in any year beginning with academic year 1990-1991 as the base number instead of setting the number of graduates in academic year 1990-1991 or a program's first year as its base year.
- The occupational shortage list changes over time as do the academic programs that support the occupational shortage areas. The FY 2011 shortage areas represent a significant change as healthcare needs begin shifting to address the

needs of “baby boomers” age. For example, Home Health Aide appears on the list for the first time. Postsecondary institutions have recently begun to build capacity in supporting academic programs.

- The Nurse Support I and Nurse Support II Grant Programs funded by the HSCRC appear to be having positive impact on nursing workforce shortages such that using the standard (simplified) HPSIG projection, nursing shortages appear to be declining in the short-term.
- Current economic trends have impacted workforce shortage areas by discouraging early retirements, thereby temporarily decreasing workforce demand in certain healthcare and other fields.
- Some of the certified shortage areas are broad and incorporate several types of academic programs. For example, “Mental health counselor” is very general and has the potential to increase the eligible number of graduates dramatically because it includes family life educators, substance abuse counselors, psychologists, psychiatrists, and others.
- Funds available for HPSIG fluctuate from year to year. In selected years when the per student award is small, institutions may become discouraged and choose to spend limited time and resources in pursuing more “lucrative” grant programs.

Refer to the table below to see award amounts per graduate and number of eligible graduates for funds collected FY 2003 – 2010.

Fiscal Year Funds Collected	Total Amount of Funds Disbursed	Prorated Award Per Graduate	% of Full Funding (% of \$1,500)	# of Graduates above Base Year #
FY 2011	\$411,532	\$752.35	50.0	547
FY 2010 ¹	\$507,422	\$218.62	14.6	2,322
FY 2008	\$499,099	\$211.84	14.1	2,356
FY 2007	\$410,510	\$174.32	12.0	2,355
FY 2006	\$391,877	\$186.96	12.4	2,096
FY 2005	\$407,804	\$278.75	18.6	1,463
FY 2004	\$406,872	\$419.46	28.0	970
FY 2003	\$560,849	\$773.58	51.2	725

Notes:

1. Effective FY 2009, funds were actually received at the end of the fiscal year and thereby awarded in the subsequent fiscal year (2010). Funds collected in FY 2010 were disbursed in FY 2011. Final institutional reports were collected November 2012 and results are reported here.
2. The HPSIG is a non-reverting special fund by statute. Returned funds from the prior awarding year are added to the current year awarding.

**Summary of FY 2011 Awards: Health Personnel Shortage Incentive Grant
Program based on Academic Year 2008-2009 Graduates**

Institution	# Programs Producing Eligible Graduates	Eligible Graduates (# grads over base yr #)	Funding
Allegany College of Maryland	8	89	66,958.75
Anne Arundel Community College	5	61	45,893.07
Baltimore City Community College	2	16	12,037.53
Cecil Community College	1	18	13,542.22
Chesapeake College	1	4	3,009.38
Washington Adventist College (formerly Columbia Union)	2	38	28,589.14
Community College of Baltimore County	6	37	27,836.78
Frederick Community College	3	27	20,313.33
Hagerstown Community College	1	5	3,761.73
Harford Community College	2	8	6,018.76
Howard Community College	1	6	4,514.07
Loyola College in Maryland	1	28	21,065.67
Montgomery College	2	26	19,560.98
Prince George's Community College	2	13	9,780.49
Towson University	3	144	108,337.75
Wor-Wic Community College	1	27	20,313.33
Total	41	547	\$ 411,532.98

Not all programs linked to the shortage list produce "eligible graduates." Institutions may fail to apply for funds for that reason or because program funding levels dropped from prior year or for other reasons (missed deadline etc).