

**STATE OF WEST VIRGINIA**

**PRELIMINARY PERFORMANCE REVIEW OF THE  
RURAL HEALTH ADVISORY PANEL**

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**The Advisory Panel Needs to be  
Prepared to Track Important Outcome  
Measures in Order to Determine if its Initiatives  
are Successful in Retaining Health Care Professionals  
in Rural Areas**

**The Advisory Panel has Developed  
a Well Designed Website**

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**October 2000**

**PE00-26-184**

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**October 2000**

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Antonio E. Jones, Ph.D.  
Director

October 8, 2000

The Honorable Edwin J. Bowman  
State Senate  
129 West Circle Drive  
Weirton, West Virginia 26062

The Honorable Vicki V. Douglas  
House of Delegates  
Building 1, Room E-213  
1900 Kanawha Boulevard, East  
Charleston, West Virginia 25305-0470

Dear Chairs:

Pursuant to the West Virginia Sunset Law, we are transmitting a Preliminary Performance Review of the *Rural Health Advisory Panel*, which will be presented to the Joint Committee on Government Operations on Sunday, October 8, 2000. The issues covered herein are "*The Advisory Panel Needs to be Prepared to Track Important Outcome Measures in Order to Determine if its Initiatives are Successful in Retaining Health Care Professional in Rural Areas; and The Advisory Panel has Developed a Well Designed Website.*"

We conducted an exit conference with the *Rural Health Advisory Panel* on September 26, 2000. We received the agency response on September 29, 2000.

Let me know if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "John Sylvia".

John Sylvia  
Acting Director

JS/wsc



## TABLE OF CONTENTS

Executive Summary .....	3
Background .....	7
Objective, Scope and Methodology .....	9
<b>Issue Area 1:</b> The Advisory Panel needs to be prepared to track important outcome measures in order to determine if its initiatives are successful in retaining health care professionals in rural areas .....	11
<b>Issue Area 2:</b> The Advisory Panel has Developed a Well Designed Website .....	21

## LIST OF TABLES

<b>Table 1:</b> The Advisory Panel's Thirteen Training Consortia .....	12
<b>Table 2:</b> WV Rural Health Education Partnership Growth .....	13
<b>Table 3:</b> Health Sciences Technology Academy (HSTA) Program Growth .....	15
<b>Table 4:</b> 1999 HSTA Program Graduates .....	15
<b>Table 5:</b> Retention of Medical School Graduates in West Virginia .....	17
<b>Table 6:</b> Retention of Medical School Graduates in West Virginia (1987-2000) .....	18
<b>Appendix A:</b> Transmittal Letter to Agency .....	23
<b>Appendix B:</b> Flow Chart of Educational Process .....	27
<b>Appendix C:</b> Agency Response .....	31



## Executive Summary

**Issue Area 1:           The Advisory Panel needs to be prepared to track important outcome measures in order to determine if its initiatives are successful in retaining health care professionals in rural areas.**

The Rural Health Initiative Act of 1991 declares that refocusing health sciences education will aid in the recruitment of health care professionals and their retention in the state, and improve the availability of health care services in the state, especially in rural areas. The Act also created the Rural Health Advisory Board to oversee the implementation of the rural health initiatives. The Legislature established 15 goals under the Rural Health Initiative Act.

The Legislative Auditor's review indicates that **the Advisory Panel has accomplished many of the Legislature's goals.** These goals serve as the foundation or infrastructure of a refocused health sciences educational process towards improving the state's retention rate and improving the availability of health care services in under served areas. It is expected that with much of the refocus in place, the desired outcomes will be achieved. However, the initiatives take several years before any changes can be measured. Also, it is not clear to what extent the initiatives will be successful. The Advisory Panel will soon approach a critical point in which the restructured health sciences educational process will begin to show results. However, the Advisory Panel is not in good position to measure outcomes that will indicate if the program has been successful and to what extent. Currently the Advisory Panel receives its tracking data from different agencies. These agencies are not linked and the data reported from these agencies by the advisory Panel leaves gaps in trying to follow progression of Health Care Professional Students. The time has come for the Advisory Panel to establish a consolidated tracking system. Through this in-depth tracking the Advisory Panel can help in identifying the effectiveness of its programs in retaining health care professionals, especially primary care physicians in the rural parts of the state. This is important because if the program results in little or no success, problems and solutions will have to be identified.

The advisory panel is required to issue a report to the Legislature on the recruitment and retention of medical personnel. In review of the reports from 1997 to 2000, it appears that from 1997 to 1999 there is no data on the retention of medical personnel (those completing training and starting practice in West Virginia). In the 2000 report of the Recruitment and Retention Committee, the committee displayed its retention figures in a chart containing seven disciplines. The seven disciplines on the chart of West Virginia Health Professions provided accumulative information from 1991 to 1999. This data was provided by sources outside the Advisory Panel and put together by the Panel for its report. The data on practice sites of graduates was provided by the three medical schools in West Virginia then verified by the WVRHEP site coordinators. This data is most likely a low estimate since only those practitioners who could be verified were counted. The data on financial incentive programs were provided by the Bureau for Public Health and the University Systems of West Virginia (now the West Virginia Higher Education Policy Commission). First, the

Advisory Panel is using accumulative information in its reporting. This makes it impossible to view the year-to-year trends. The committee is not tracking the number of West Virginia residency graduates entering rural practice in West Virginia to see if the State is retaining an increased number each year or if we are losing these trained individuals to other locations. The committee is not tracking the total number of physicians in rural practice to see if the program has impacted the rural areas by increasing the number of physicians each year, if the state is maintaining the same number year-in and year-out or if the number of rural physicians is decreasing each year. In a statement from the Vice chancellor for Health Sciences, it was stated that:

*This year, WVRHEP staff are working with a consultant to put in place a longitudinal tracking system that will enable us to gauge the impact of rural training and financial incentives over time. We are also developing a survey instrument to identify the factors that influence student career choices and location decisions. The purpose of the survey is to see if curriculum changes are needed and to improve recruitment and retention of graduates. Although we will not see the full impact of rural training on the location of medical school graduates for several years, we have seen an increase in the number of graduates entering residency training in West Virginia and choosing primary care fields. Both of these hold promise for retention of our graduates.*

In review, the Advisory Panel has addressed and made significant improvements in the issues put forth by the West Virginia Legislature. These improvements include surpassing legislative requirements for the number of rural training sites; requirements for students to perform rural rotations; and the creation of educational pipelines to increase the number of rural medicine students. Now that the Panel has successfully put in place the infrastructure of its program, it is time for it to establish a tracking system that can help in identifying the effectiveness of its programs in retaining health care professionals, especially primary care physicians in the rural parts of the state.

**Recommendation 1:**

*The Advisory panel should establish a tracking system that can identify how many West Virginia residency graduates are being retained in practice in rural West Virginia.*

**Recommendation 2:**

*The Advisory panel should establish a tracking system that can identify how many physicians are in practice in rural under served areas of West Virginia each year to determine if the program is impacting those areas by increasing the number of physicians or if the number is staying the same or decreasing.*



**Recommendation 3:**

*Until it has improved its own system, the Advisory panel should make use of the various health care profession licensing boards in obtaining information on healthcare professionals in practice.*

**Recommendation 4:**

*The Advisory panel should establish a baseline of numbers in the categories tracked from the medical schools to show what impact the creation of the Rural Health Act has done to improve the number of medical personnel in rural areas.*

**Issue Area 2:           The Advisory Panel has Developed a Well Designed Website.**

The Rural Health Advisory Panel has developed an in-depth website. This site provides detailed information on the background, the Panel's calendar, each Consortium and Committee under the Advisory Panel, and additional data available on the agency. The Advisory Panel has chose to place its published information on the internet as well as in hard copy. This use of the internet has vastly improved the accessibility to information on the agency by increasing the amount and speed in which this information is communicated. This has enabled the Panel to provide the most current information to its members, to other state agencies, and to the general public.



## **Background**

The Rural Health Advisory Panel was established to be the decision making body for the West Virginia Rural Health Education Partnerships (WVRHEP). The West Virginia Rural Health Education Partnerships grew from the integration of two programs, the Kellogg Community Partnerships Initiative and the West Virginia Rural Health Initiative (RHI). The partnership between the state of West Virginia and the W.K. Kellogg Foundation is cultivating an environment supportive of long range, creative strategies to address the problem of critically limited primary health care in rural and medically under served areas of the state.

In the fall of 1992 the first students begin rural placements at the Kellogg sites and in the spring of 1993 at the West Virginia Rural Health Initiative (RHI) sites. Working with the Vice Chancellor of the University System, the Office of Community and Rural Health Services laid the foundation for the collaboration and ignited the partnership spirit between these two state agencies.

By April 1994, the RHI and Kellogg Community Partnerships had developed strong ties and the community and program leaders began the process of integrating both programs into one statewide program. In the fall of 1994, the University System of WV Vice Chancellor mandated that all system supported health science students, except Dentistry, must complete a minimum of three months of clinical rotations in rural areas of the state.

On March 9, 1995, the West Virginia State Legislature passed S. B. 161 amending the Rural Health Initiative Act and providing for the official and legal integration of the Rural Health Initiative and the Kellogg Community Partnerships program. These two programs are now a statewide program consisting of 13 training consortia or networks of community based health, social, and education agencies, covering 47 of West Virginia's most under served counties. This enabling legislation called for the appointment of an integrated state advisory panel, which reports to the Vice Chancellor for Health Sciences of the University System in the development and implementation of the restructured program. The Vice Chancellor served as the project director of the Kellogg Community Partnerships and the Rural Health Initiative and now heads the integrated program. The 1995 legislation prescribed the membership and duties of the Rural Health Advisory Panel appointed by the governor, that reports to the Vice Chancellor for Health Sciences. Based upon the experiences in the Rural Health Initiative and the Kellogg programs, this panel has articulated the vision, values, mission, and goals of the restructured and integrated program. The Advisory Panel approves all policies for the organization. The functions and duties of the state panel are to establish and maintain the vision and mission of the program. The Panel oversees development and implementation of policy in governance and administration including personnel policies, operations and management, and finance. This body also reviews, through its various committees, the following standard reports at appropriate times: committee reports, network level and centralized budgets, matters of state level policy, site coordinator reports, annual review of affiliation agreements, and annual reports.



## Objective, Scope and Methodology

The objective of this preliminary performance review is to determine if the West Virginia Rural Health Advisory Panel is in compliance with *West Virginia Code Chapter 18B-16-6*. That the Advisory Panel has implemented Policy and procedure that will assist in the retention of health profession personnel in rural under served areas in West Virginia as stated in *WVC Chapter 18B-16-2* (Legislative findings and declarations) and in *WVC Chapter 18B-16-4* (Establishment of rural health initiative; goals of rural health initiative).

The time period of this review covers July 1995 through July 2000. Information used to complete this report was drawn from the West Virginia Rural Health Educational Partnership's web site; Advisory Panel's May 15, 2000 meeting; interviews conducted with members of the Advisory panel; Panel's records, including annual reports, recruitment and retention report, policies and procedures, interviews of related state agencies, meeting minutes.

This review will assist the Joint Committee on Government Operations in making one of three recommendations to the Legislature for its next Regular Session:

1. the agency be terminated as scheduled;
2. the agency be continued and reestablished; or
3. the agency be continued and reestablished, but the statutes governing it be amended in specific ways to correct ineffective or discriminatory practices or procedures, burdensome rules and regulations, lack of protection of the public interest, overlapping of jurisdiction with other governmental entities, unwarranted exercise of authority either in law or in fact any other deficiencies.

Every aspect of this review complied with **Generally Accepted Government Auditing Standards**.



**Issue Area 1: The Advisory Panel Needs to be Prepared to Track Important Outcome Measures in Order to Determine if its Initiatives are Successful in Retaining Health Care Professionals in Rural Areas.**

The Rural Health Initiative Act of 1991 declares that refocusing health sciences education will aid in the recruitment of health care professionals and their retention in the state, and improve the availability of health care services in the state, especially in rural areas. The Act also created the Rural Health Advisory Board to oversee the implementation of the rural health initiatives. The Legislature established 15 goals under the Rural Health Initiative Act. Some of these goals include:

- (1) Increase placement of primary care physicians in under served areas of West Virginia;
- (2) Increase the retention rate within the state of graduates from West Virginia medical schools, nursing schools and allied health care educational programs;
- (3) Develop innovative programs which enhance student interest in rural health care opportunities;
- (4) Increase the use of under served areas of the state in the educational process;
- (5) Create medical residency rotations in hospitals and clinics in rural areas, and provide incentives to medical residents to accept the residencies at those hospitals and clinics.

The Legislative Auditor's review indicates that **the Advisory Panel has accomplished many of the Legislature's goals**. These goals serve as the foundation or infrastructure of a refocused health sciences educational process towards improving the state's retention rate and improving the availability of health care services in under served areas. It is expected that with much of the refocus in place, the desired outcomes will be achieved. However, the initiatives take several years before any changes can be measured. Also, it is not clear to what extent the initiatives will be successful. The Advisory Panel will soon approach a critical point in which the restructured health sciences educational process will begin to show results. However, the Advisory Panel is not in good position to measure outcomes that will indicate if the program has been successful and to what extent. Currently the Advisory Panel receives its tracking data from different agencies. These agencies are not linked and the data reported from these agencies by the advisory Panel leaves gaps in trying to follow progression of Health Care Professional Students. The time has come for the Advisory Panel to establish a consolidated tracking system. Through this in-depth tracking the Advisory Panel can help in identifying the effectiveness of its programs in retaining health care professionals, especially primary care physicians in the rural parts of the state. This is important because if the program results in little or no success, problems and solutions will have to be identified.

## Residency Program and Clinical Rotations

In 1992, the Advisory Panel program consisted of 12 training sites. This has been expanded to a statewide program consisting of 13 training consortia or networks covering 47 of West Virginia's most under served counties (see Table 1). At this time the 13 regional consortia consist of 255 training sites. These sites include the lead agency sites and the satellite sites and programs which train students. Also, within the state the Advisory Panel has placed Learning Resource Centers (LCRs) with computer stations and educational materials at 18 locations, ten of which are connected to statewide educational programs through MDTV (interactive telemedicine).

**Table 1**  
**The Advisory Panel's Thirteen Training Consortia**

Name of Consortium	Counties Served
Cabin Creek Health Center	Kanawha
Cabwaylingo Health Education Consortium	Cabell, Wayne, and Lincoln
Country Roads Consortium	Summers, Monroe part of Greenbrier
Eastern WV Rural Health Education Consortium	Tucker, Pendleton, Grant, Mineral, Hardy, Hampshire, Morgan, Berkley, Jefferson
Little Kanawha Area Consortium	Calhoun, Gilmer, Wirt, Pleasants, Ritchie and Tyler
Mountain Health Partners Consortium	Clay, Braxton, Lewis, Upshur, Randolph, Harrison, Barbour, Marion, Taylor and Preston
Rivers and Bridges Consortium	Raleigh and Fayette
Rural Mountain Consortium	Pocahontas and Greenbrier
Rural Ohio Valley Education Resources Consortium	Marshall and Ohio
Southern Counties Consortium	Boone, Logan, Mingo, Wyoming and McDowell
Webster-Nicholas Education Consortium	Webster and Nicholas
Western Counties Consortium	Mason and Putnam
Winding Roads Health Consortium	Jackson and Roane

The growth of the Advisory Panel's training sites has increased the demand for medical field faculty. The Advisory Panel has interpreted the term medical students to mean all health professions students. In 1992 there were 60 health care providers of all disciplines providing training to students.



In 2000 the total of all rural practitioners training students was 493. This included 259 physicians in the fields of Family Medicine, Internal Medicine, Obstetrics and Gynecology, Pediatrics, Medicine-Pediatrics and Emergency Medicine. In addition to these medical field faculty, there are currently 28 Dentists, 35 Physicians Assistants, 62 Pharmacists, 61 Nurses and Nurse Practitioners, 32 Physical Therapists, 6 Nurse Midwives, 4 Medical Technologists, 4 Social Workers and 2 Occupational Therapists who also train students. This is an important accomplishment of the goal to increase the number of health professionals in rural areas of the state.

Through the building of its infrastructure, the Advisory Panel is showing increases in training sites, field faculty and community contact in rural West Virginia (see Table 2).

**Table 2**  
**WV Rural Health Education Partnership Growth**

	1996	1997	1998	1999
Student rotations	1,573	1,713	1,989	1,596
Student rotations WVRHEP sites	1,166	1,123	1,558	1,232
Weeks of training at rural sites in the state	6,295	7,347	8,429	7,304
Training sites	163	187	211	255
Field faculty	344	422	455	493
Community services provided to West Virginians	23,611	59,039	100,564	156,628

### **Policies and Procedures for Educational Curriculum**

The Advisory Panel began the change in the educational process by establishing policy and procedures to reflect rural health requirements. Some of these policies and procedures included:

- (1) Minimum requirements for student rural rotations and requirements for school-based orientations which mandates three-month rotations and contents of orientation for students by school;
- (2) Interdisciplinary training sessions which outlines conditions and requirements for training at sites;
- (3) Minimal requirements of WVRHEP student status;
- (4) Definition of field faculty which defines the requirements for holding faculty position;

- (5) Definition of primary care rotations which defines what is primary care rotation and method for site and schools to approve others; and
- (6) The formation of student advisory committee which establishes student advisory function to review and develop policy, having role in orientation, health fair planning, and defining community service.

These changes help direct the medical schools to incorporate rural health in the training process. Also, the Advisory Panel made significant changes in the health profession programs. This ensured that the curriculum during these rotations includes discipline-specific clinical training, interdisciplinary case management, community service and/or community-based research. These policies and procedures developed by the Advisory Panel have impacted the development and improvement of curriculum in the medical schools of West Virginia.

### **Creating an Educational Pipeline**

In building the rural health program, it became evident that efforts were needed to develop support programs to bring more students into rural health. The Advisory Panel directed the development of programs to build a full educational pipeline for rural medicine. This pipeline will funnel students into the state's medical programs. Through this, the Advisory Panel hopes to increase the number of rural medicine students in the population of medical students in the state.

In building the pipeline, the Advisory Panel has guided the development of the Health Sciences Scholarship Program. This program started in January 1996. The scholarship requires a two-year service obligation to an under served rural area upon completion of the student's residency training. Although a very strong program, the Advisory Panel will see slow results from this pipeline due to the length of training (see Appendix B). To date, there have been 96 scholarships awarded with 60 to Physicians, 19 to Nurse Practitioners and 17 to Physician Assistants.

Another program developed to fill the educational pipeline is the Health Sciences and Technology Academy (HSTA) program. This program reaches out to the students of the secondary schools of the state. Students in this program progress through four years of summer training with their local school teachers and campus-based faculty. They develop networking skills, communication skills and the ability to pull together resources and a feeling of ownership in providing solutions to community problems. From the programs first year in 1994 to the present, the HSTA program has shown continuous growth in students and participating counties of the state (see Table 3). Ninety-five (95) percent of those students who successfully completed the HSTA program as of 1999 are in college and 90% are attending West Virginia colleges and universities (see Table 4). In 1997, the Legislature gave state supported schools the authority to grant full tuition and fee waivers to successful HSTA students.

**Table 3**  
**Health Sciences Technology Academy (HSTA) Program Growth**

	1994	1999
Students (9th-12th grade)	44	500 (+)
Teachers	9	53
Counties involved	2	22

**Table 4**  
**1999 HSTA Program Graduates**

<b>61 seniors completed HSTA program this year</b>	<b>1999</b>
College-going rate percent (%)	95.1%
Dropout rate percent (%)	1.6%
Average Grade Point Average	above 3.0
Average ACT score for HSTA Graduates	22
Average ACT score for West Virginia	20.1
Average ACT score for the United States	21

These programs will continue to feed new students into the Rural Health Program and help the Advisory Panel achieve its goal of increasing the number of rural medicine students in the population of medical students in the state.

### **Tracking of Health Care Professionals**

The state identifies under served areas through the use of the Health Professional Shortage Area (HPSA) designation process. This is a federal process for identifying areas with a shortage of primary care professionals. In West Virginia, 41 of the 55 counties are designated as partial or whole-county HPSAs.

The West Virginia Rural Health Advisory Panel has stated in its mission statement:

*The mission of the West Virginia Rural Health Education Partnerships is to achieve greater retention of West Virginia trained health science graduates in under served rural West Virginia communities by creating partnerships of community, higher education, health care providers, and governmental bodies.*

The Advisory Panel is required to issue a report to the Legislature on the recruitment and retention of medical personnel. The West Virginia Code §18B-16-6 states in part:

*... The report shall address the success of the state's primary care physician and other health care related provider recruitment and retention efforts.*

This report is issued to the Legislative Oversight Commission on Education Accountability and the Legislative Oversight Commission on Health and Human Resources Accountability. The first independent report was produced in 2000. Prior to this, the report was part of the annual report of West Virginia Rural Health Educational Partnership.

In review of the reports from 1997 to 2000, it appears that from 1997 to 1999 there are no data on the retention of medical personnel (those completing training and starting practice in West Virginia). The reports contained informational charts on the following:

- (1) WVRHEP Community Service Contacts;
- (2) WVRHEP Training Consortia Infrastructure;
- (3) Student Rotations by County;
- (4) Student Rotations by School / Discipline; and
- (5) WVRHEP Student Rotations and Student Weeks.

In the 2000 report of the Recruitment and Retention Committee, the committee displayed its retention figures in a chart containing seven disciplines. The seven disciplines on the chart of West Virginia Health Professions provided accumulative information from 1991 to 1999. This data was provided by sources outside the Advisory Panel and put together by the Panel for its report. The data on practice sites of graduates was provided by the three medical schools in West Virginia then verified by the WVRHEP site coordinators. This data is most likely a low estimate since only those practitioners who could be verified were counted. The data on financial incentive programs were provided by the Bureau for Public Health and the University Systems of West Virginia (now the West Virginia Higher Education Policy Commission). First, the Advisory Panel is using accumulative information in its reporting. This makes it impossible to view the year-to-year trends. The committee is not tracking the number of West Virginia residency graduates entering rural practice in West Virginia to see if the State is retaining an increased number each year or if we are losing these trained individuals to other locations. The committee is not tracking the total number of physicians in rural practice to see if the program has impacted the rural areas by increasing the number of physicians each year, if the state is maintaining the same number year-in and year-out or if the number of rural physicians is decreasing each year. The committee did not establish a baseline of numbers from the time prior to the creation of the rural health program on the numbers of West Virginia medical school graduates, West Virginia residency graduates, West Virginia residency graduates entering practice in rural West Virginia, and Physicians in practice in rural West Virginia. This information does not appear to exist for any of the graduation year group.

In a handout chart to the Legislature on retention of medical school graduates in West Virginia, the panel's chart contained five questions with information to be provided in two columns 1987 to 1992 and 1989 to 1994, on each medical school and a total of all three (see table 5). This data was collected from the Higher Education Report Card produced by the medical schools in the state. Report Cards

were gathered for each year that the Advisory Panel would use in their Chart. This Report Card contains information pertaining to the medical schools and what they required to report out. In review of this handout, the following information to answer these questions could not be found:

- (1) How many were West Virginia residency trained graduates?
- (2) Of those practicing in West Virginia, how many came from West Virginia residency programs?

The information that was provided was not clear about who it covered and why there was an overlap in years. It was explained that the chart shows retention by year for the most recent six-year cohort of medical school graduates who have completed residency training. The first column, graduates from 1987 to 1992, shows retention for reporting year 1997. This was the first year the Advisory panel began this reporting format. This was established as the baseline year. The next column shows retention in reporting year 1999. The Advisory Panel along with a committee from the medical schools and the Central Administration Research Staff of the Department of Higher Education chose this process of reporting as it believed it would take a "moving snapshot" every year of the most recent six-year cohort of medical school graduates. They chose a six-year cohort as a better indicator of trends because numbers can fluctuate widely when based on individual graduating classes. It was stated that there is an overlap of years because physicians can relocate their practices at any time, and the advisory Panel is tracking retention every year.

**Table 5**  
**Retention of Medical School Graduates in West Virginia**

<b>Total WV Medical School Graduates</b>	<b>1987-1992</b>	<b>1989-1994</b>	<b>% change</b>
No. of Graduates	960	963	.3 %
No. of Graduates with completed Residency Training	880	924	5.0 %
No. Practicing in WV, All Specialties	317	360	13.6 %
No. Practicing in WV, Primary Care	168	206	22.5 %
No. Practicing in WV, in Non-Urban Areas of WV	89	90	1.1 %

The Advisory Panel was then asked to provide a Retention of Medical School Graduates Report broken down for each year from 1987 to 2000 (see Table 6). A question was added to the table on the number entering West Virginia Residency Programs.

**Table 6**  
**Retention of Medical School Graduates in West Virginia (1987-2000)**

<b>Total WV Medical School Graduates</b>	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
No. of Graduates	163	166	148	163	165	152	158	177	185	180	191	202	187	NA
No. Entering WV Residency Programs	61	52	65	61	63	60	69	93	80	78	88	94	80	NA
No. of Graduates Who Have Completed Residency Training Programs *	157	164	145	162	160	149	151	157	**	NA	NA	NA	NA	NA
No. Practicing in WV, all Specialties	44	65	54	64	55	57	68	62	**	NA	NA	NA	NA	NA
No. Practicing in WV, Primary Care	19	39	29	31	28	32	40	46	**	NA	NA	NA	NA	NA
No. Practicing in Non-Urban Areas of WV	13	18	13	20	11	14	18	14	**	NA	NA	NA	NA	NA

\* Number who have completed residency training, both in and out of state.

\*\* The 1995 data are incomplete because some graduates have not finished residency training.

The agency was asked to explain the numbers reported in Table 5 and Table 6. In reviewing these two tables, the following questions were asked:

- (1) How many were in rural practice before the program started?
- (2) How many of the number of graduates with completed residency training were trained in West Virginia?
- (3) How many came from training outside of West Virginia programs that are now practicing in West Virginia?

In response to these questions, the agency provided a statement from the Program Coordinator of the West Virginia Higher Education Policy Commission which stated that:

*WVRHEP does not have a tracking system that tracks individual students through their medical education, rural rotations, residency training, and practice sites. Consequently, it was a complicated process to produce the data requested. The data came from different sources and reporting years in the Report Card. The schools report on number of graduates and number entering WV residency programs, while the*

*alumni association reports on the location and specialties of physicians practicing in West Virginia. These data sources are not linked to the WVRHEP student tracking system. The WVRHEP tracking system, TRACKER, currently tracks students and rural rotations according to the executive director of WVRHEP.*

In a statement from the Associate Vice President for Rural Health / Executive director of WVRHEP, it was stated that:

*This report was very difficult to generate because we do not have a good method to track individuals once in practice by their practice address and then verify if this practice address is located in an underserved area. To verify these locations we contacted our WVRHEP site coordinators and/or by calling the individual provider. Adding a tracking and reporting feature to our TRACKER system that would somehow link to licensure data for practice addresses would be wonderful and so very helpful. This would enable us to give much more meaningful reports to both our consortia and policy makers.*

In a statement from the Vice chancellor for Health Sciences, it was stated that:

*This year, WVRHEP staff are working with a consultant to put in place a longitudinal tracking system that will enable us to gauge the impact of rural training and financial incentives over time. We are also developing a survey instrument to identify the factors that influence student career choices and location decisions. The purpose of the survey is to see if curriculum changes are needed and to improve recruitment and retention of graduates. Although we will not see the full impact of rural training on the location of medical school graduates for several years, we have seen an increase in the number of graduates entering residency training in West Virginia and choosing primary care fields. Both of these hold promise for retention of our graduates.*

Contact with the West Virginia Board of Medicine revealed that it produced information on the number of physicians in West Virginia and where they practice through license renewal. This information could be obtained from the West Virginia University Office of Health Services Research in Morgantown. The information is broken down by county, specialty, and specialty in county.

The Legislative Auditor also contacted the Office of Research and Statistics of the State Budget and Control Board of South Carolina and found that they have what is called the Licensed Health Professions Database. This system uses information from licensing boards to track health professionals and analyze the impact of state's education programs on the retention of such individuals throughout the state. Therefore, establishing a successful tracking system is an accomplishable task.

## **Conclusion**

In review of the educational curriculum and training process, the Advisory Panel has addressed and made significant improvements in the issues put forth by the West Virginia Legislature. These improvements include surpassing legislative requirements for the number of rural training sites; requirements for students to perform rural rotations; and the creation of educational pipelines to increase the number of rural of rural medicine students. Now that the Panel has successfully put in place the infrastructure of its program, it is time for it to establish a tracking system that can help in identifying the effectiveness of its programs in retaining health care professionals, especially primary care physicians in the rural parts of the state.

### **Recommendation 1:**

*The Advisory panel should establish a tracking system that can identify how many West Virginia residency graduates are being retained in practice in rural West Virginia.*

### **Recommendation 2:**

*The Advisory panel should establish a tracking system that can identify how many physicians are in practice in rural under served areas of West Virginia each year to determine if the program is impacting those areas by increasing the number of physicians or if the number is staying the same or decreasing.*

### **Recommendation 3:**

*Until it has improved its own system, the Advisory panel should make use of the various health care profession licensing boards in obtaining information on healthcare professionals in practice.*

### **Recommendation 4:**

*The Advisory panel should establish a baseline of numbers in the categories tracked. This will show what impact the creation of the Rural Health Act has had on improving the number of medical personnel in rural areas.*



## **Issue Area 2: The Advisory Panel has Developed a Well Designed Website.**

The Rural Health Advisory Panel has developed an in-depth website. This site provide information about the Panel, the actions taken by the Panel and the results of those actions. This site has enabled the Panel to provide accessibility to its members, to other state agencies and to the general public. Providing accessibility to information on the agency through the means of the internet has increased the amount and speed in which this information is communicated.

The website can be reached at the address of <http://www.wvrhep.org>. This site contains most of the information published by the Rural Health Advisory Panel. The website is user friendly and easy to navigate. Information within the website includes:

- A background section that contains the history of the agency.
- A calendar section that shows what the agency had scheduled in previous events and what it has scheduled as its future events.
- A clinical section that contains outside medical resource links.
- A consortia section that lists the 13 consortiums with each having a link to its own information. At the consortium link there is information that is broken down into Contacts, Consortium Members, Community & Area, Facilities & Directions, Field Professors, Housing and the Program.
- A committees section that lists the 12 "West Virginia Rural Health Education Partnerships" committees. Each committee has a link to its own information. One of these links is to the Advisory Panel. Here, as well as the other committees links, information is broken down into List of members, Minutes of previous meetings and Agenda of next meeting.
- A directory section that is a search mechanism to help locate an individual on staff or on one of the subcommittees. This section requires a User name and Password.
- A e-mail list section that contains electronic mail discussion with archives of Advisory Panel and Teaching Clinicians.
- An interdisciplinary session resources section that contains a list of links to areas of researched topics for classroom instruction for medical personnel.
- A software section that is a directory of software available to the agency.
- A policy tracking section that contains a list of subsections covering all policies developed by the Advisory Panel.

- A research projects & publications section that contains a list of subsections covering research projects and a newsletter.
- A useful resources & links section that contains a list of subsections to sites of information.
- A student evaluation of rural field experience section that contains a questionnaire to be filled out by the medical student to give input to help improve the program.
- A scholarships section that contains a list of subsections to sites of different scholarships available to medical students in West Virginia.
- A participating schools & programs section that lists the three medical schools and with subsections under each school which site different programs available to medical students in West Virginia.
- A rural rotation tracking section that shows how the agency is tracking its students. This section requires a password to enter.
- A Rural Net section that contains a list of subsections to sites of different rural health links available in West Virginia.

## **Conclusion**

In review of the Rural Health Advisory Panel's website, the Advisory Panel has vastly improved the accessibility of information. This site has enabled the Panel to provide accessibility to its members, to other state agencies and to the general public.

**APPENDIX A**  
**Transmittal Letter to Agency**



**WEST VIRGINIA LEGISLATURE**  
*Performance Evaluation and Research Division*

Building 1, Room W-314  
1900 Kanawha Boulevard, East  
Charleston, West Virginia 25305-0610  
(304) 347-4890  
(304) 347-4939 FAX



Antonio E. Jones, Ph.D.  
Director

September 22, 2000

Hilda R. Heady, Director  
Associate Vice President for Rural Health  
Robert C. Byrd Health Sciences Center  
West Virginia University  
1159 HSN P.O. Box 9003  
Morgantown, WV 26506-3005

Dear Ms. Heady:

Enclosed is a draft of the preliminary performance review of the West Virginia Rural Health Advisory Panel of the West Virginia Rural Health Educational Partnerships. We would appreciate your response by Friday, September 29, 2000 so that it can be included in the final report which is scheduled to be presented Sunday, October 8, 2000 at the Snowshoe Resort for the Interim meeting of the Joint Committee on Government Operations.

If you have any questions please contact me.

Sincerely,

A handwritten signature in cursive script that reads "Brian Armentrout".

Brian Armentrout  
Research Manager

cc: Alicia Tyler, Program Coordinator  
West Virginia Higher Education Policy Commission

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*Joint Committee on Government and Finance*

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**APPENDIX B**

**Flow Chart of Educational Process**





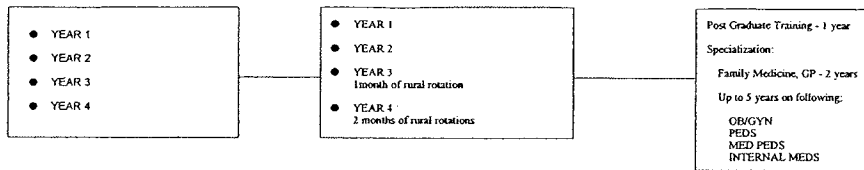
# MEDICAL DOCTOR (MD)

WVU

UNDERGRADUATE

MEDICAL SCHOOL

RESIDENCY

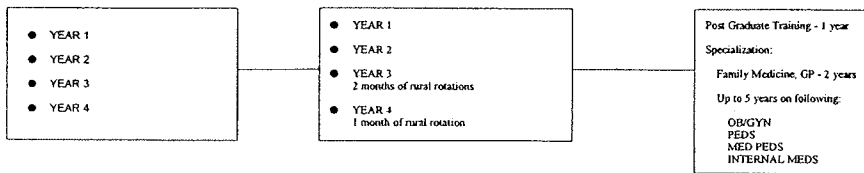


# MARSHALL

UNDERGRADUATE

MEDICAL SCHOOL

RESIDENCY

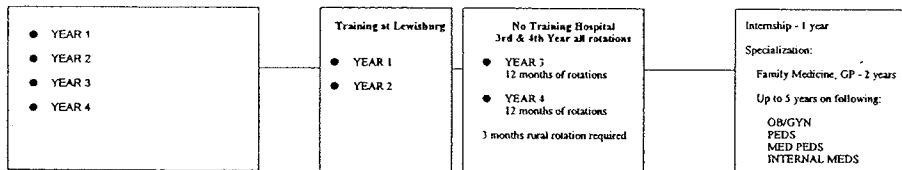


# DOCTOR OF OSTEOPATHIC MEDICINE (DO)

UNDERGRADUATE

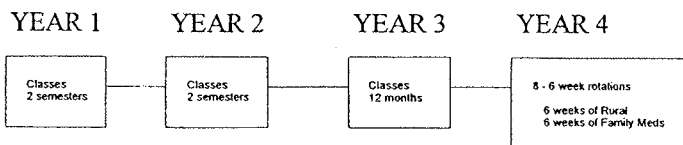
MEDICAL SCHOOL

RESIDENCY



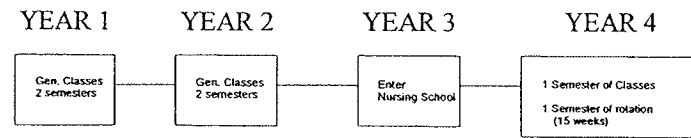
# PHYSICIAN ASSISTANT

4 YEAR PROGRAM



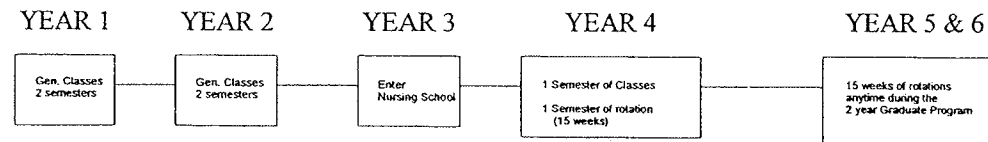
# NURSING

4 YEAR PROGRAM



# NURSE PRACTITIONER

2 YEAR GRAD PROGRAM



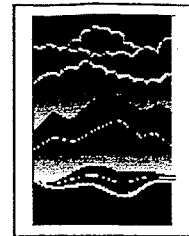


**APPENDIX C**  
**Agency Response**



West Virginia Rural Health Education Partnerships:  
*The Vision for Rural Health Education in West Virginia*

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September 28, 2000

Brian Armentrout, Research Manager  
West Virginia Legislature  
Performance Evaluation and Research Division  
Building One, Room W-314  
1900 Kanawha Boulevard, East  
Charleston, West Virginia 25305-0610

RECEIVED

SEP 29 2000

RESEARCH AND PERFORMANCE  
EVALUATION DIVISION

Dear Mr. Armentrout:

Thank you for your letter of September 22 and the draft of your report concerning the reauthorization of the Rural Health Initiative Act. We also thank you for the exit interview on September 26 and the very thorough, thoughtful, and comprehensive job you and your staff have done to assess our program and make recommendations to us for improvement. We especially appreciate your noting our success in establishing our extensive infrastructure, educational pipeline, and the quality of our website and student rotation tracking system.

Our responses to your specific findings and recommendations as discussed in our meeting on September 26, are listed below following the headings in your draft report.

**Recommendation 1. The Advisory panel should establish a tracking system that can identify how many West Virginia residency graduates are being retained in practice in rural West Virginia.**

As we pointed out in our exit conference, in 1997 we established an extensive tracking and reporting process on retention of our medical school graduates which includes data on our primary care residency programs. (The reporting process is described under Recommendation 4.) The focus is primary care, because these are the providers most needed in our rural areas. The reports show that the retention rate for graduates who complete training in West Virginia is 8 to 9 times the rate for graduates who complete training out of state. We agree that more information is needed on graduates of our residency programs. This year, we will expand our reporting to include both in- and out-of-state medical school graduates who complete primary care residencies in West Virginia.

This information is especially important as the state is poised to expand rural residency training through a current interagency initiative. With passage of H.B. 205 during the recent special session of the Legislature, the higher education system may now transfer \$1.397 million in existing state dollars into a special Medicaid account in order to draw down 3:1 federal matching funds for graduate medical education. These funds can be used to support existing residency programs in our teaching hospitals and to expand residency training in rural areas through our WVRHEP training infrastructure. We are working closely with the medical schools and the DHHR Office of Medical Services to develop the specifics of this plan, which requires federal approval.

**Recommendation 2. The Advisory Panel should establish a tracking system that can identify how many physicians are in practice in rural underserved areas of West Virginia each year to determine if the program is impacting those areas by increasing the number of physicians or if the number is staying the same or decreasing.**

As described below (Recommendation 4), we developed a reporting process in 1997 to measure the program's impact on location of our medical school graduates in rural West Virginia. However, WVRHEP staff and the Advisory Panel believe that more focused efforts are needed to fully evaluate the program and to answer questions important to state policymakers. The Finance Committee of the Advisory Panel approved a small amount of Special Project funds on May 15, 2000, to improve our long-range program evaluation, research, and tracking of recruitment and retention data. This funding will also support the integration of this evaluation in an electronic format off the website. This evaluation is designed to demonstrate the effects of a rural-based curriculum that emphasizes interdisciplinary education and community service. Specific aims of this project are to: 1) evaluate whether attitudes present in medical students who are entering the clinical phase of their studies are predictive of their career plans; 2) evaluate the effect of WVRHEP on medical student attitudes and career plans; and 3) evaluate the effect of WVRHEP on recruitment to rural practice in West Virginia through the implementation of a tracking system that can provide this information. More funding is needed to fully support this effort.

Ultimately, this research will contribute to our understanding of factors influencing the career choices of health care trainees and how changes in curriculum can improve medical curriculum and meet the needs of West Virginia. We will also solicit suggestions from students on how to improve the rural training experience and draw on findings from other evaluation data currently in use. The benefits of this proposed evaluation include the opportunity to (a) gather data useful for modification/improvement of the WVRHEP curriculum, (b) demonstrate the effectiveness of the WVRHEP curriculum, (c) expand the present WVRHEP tracking system (TRACKER©) to include information on medical student career choices and eventually incorporate information on career choices of other health disciplines, and (d) share curricular innovations and modifications with other states facing similar problems in the recruitment and retention of health professionals in rural areas.

**Recommendation 3: Until it has improved its own system, the Advisory panel should make use of the various health care profession licensing boards in obtaining information on healthcare professionals in practice.**

Our reporting system is based upon the most accurate, up-to-date sources currently available, the alumni association databases. We have considered using medical licensing board data in the past; however, this data only gives the county of practice and not the practice address or location. As a consequence, we cannot determine through this database the exact location of the practice. Also, on the license renewal form physicians are asked for their preferred mailing address, and there is no way to determine if this is a home or practice address. To identify practice locations using this database would require extensive labor and data entry. An ideal system would be one in which all licensure data for all health professionals included a

Mr. Armentrout  
September 29, 2000  
Page Three

requirement for practice location address each year. Establishing a common renewal date in support of such a database would also greatly improve the ability of WVRHEP and the Bureau for Public Health to track the impact of all the state's recruitment and retention strategies. A system similar to the South Carolina data system, which was recently demonstrated for health policymakers in West Virginia, would meet many of these objectives and greatly benefit our state.

Last year, as you know, we completed the first collaborative report covering data from all the recruitment and retention strategies in the state. We listed only those physicians and other health professionals who were in practice in any rural area that is eligible for WVRHEP student rotations. We verified practice locations of these individuals through our local site coordinators or by calling these professionals' offices directly. We also did not report on the counties that are not in WVRHEP: Brooke, Doddridge, Hancock, Monongalia, Mercer and Wood. Obtaining practice addresses through licensure data would be a much more reliable and accurate method. We are very willing to work with the licensing boards and the Bureau for Public Health to develop strategies to achieve these results.

**Recommendation 4. The Advisory panel should establish a baseline of numbers in the categories tracked from the medical schools to show what impact the creation of the Rural Health Act has done to improve the number of medical personnel in rural areas.**

As we discussed, in 1997, a committee of the medical schools, WVRHEP, and higher education research staff met to improve the reporting on retention of our medical schools graduates. The original format in the 1992 Higher Education Report Card showed retention of graduates in the aggregate for a 10-year cohort, but many of the graduates had not completed residency training. No data were presented by county or by individual graduating year, which we saw as deficiencies. The committee established a 6-year cohort of graduates from 1987-1992 as the baseline for evaluating the impact because almost all physicians had completed their residency training and only a few had WVRHEP rural training experiences. (Students began doing rural rotations in the fall of 1992 and the spring of 1993.) In each reporting year, we move the cohort up a year (e.g., 1988-1993, 1989-1994, etc.) In this way, we are beginning to capture physicians with WVRHEP experience.

We are reporting by school on graduates (1) practicing in West Virginia; (2) practicing primary care in West Virginia; and (3) practicing in non-urban areas of West Virginia. (Non-urban is defined in the Report Card as areas outside of 10 of our larger cities.) Data are now shown by county on state maps and by school for individual graduating classes. In the past three Report Cards, we have seen a 13.6 percent increase in retention of our medical school graduates overall, a 22.6 percent increase in graduates practicing primary care, and a small 1.1 percent increase in graduates practicing in rural areas.

It will be several years before we can fully evaluate the outcomes of WVRHEP in terms of recruitment and retention of physicians. Because of the time it takes to complete medical school and residency training, 1999 was the first "practice" year for any medical student who had experienced WVRHEP rural rotations, graduated, and completed residency training. It should

Mr. Armentrout  
September 29, 2000  
Page Four

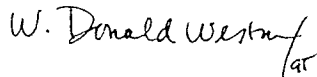
also be noted that strategies to build an educational pipeline for rural medicine in our secondary schools, (i.e., HSTA) will take even longer to evaluate.

Although the mission of WVRHEP is to increase recruitment and retention of primary care physicians and other health sciences graduates in underserved areas of West Virginia, the program also offers immediate benefits to our rural communities. This past year, more than 1,200 student rotations were completed under the supervision of almost 500 rural health care providers in rural West Virginia. Students are not only involved in clinical services, they are also engaged in community services, such as going into our schools and nursing homes to provide health information and preventive services. Many of these students, we hope, will become the next generation of rural health professionals. Even if some students make other career choices, they will have been enriched by their rural training experiences, and the community will have benefited greatly from their services.

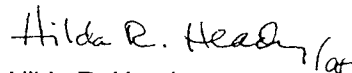
Most importantly, the development of our rural health training program has been accomplished through a partnership of higher education and community members working together to address challenging issues of curriculum, services, evaluation, outreach, funding, and recruitment and retention.

Thank you for the opportunity to work with you on this evaluation.

Sincerely,



W. Donald Weston, M.D.  
Vice-Chancellor for Health Sciences  
WV Higher Education Policy Commission



Hilda R. Heady  
Executive Director  
WV Rural Health Education Partnerships