

# STATE OF MEDICAL EDUCATION



**MARSHALL UNIVERSITY**  
Joan C. Edwards School of Medicine



# Topics

- **Current Students**
- **Curriculum**
- **Outcomes**
- **Initiatives:**
  - **Admissions**
  - **Student Affairs**
  - **Academic Affairs**
  - **Clinical Skills**
  - **Office of Medical Education**



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# Current Students

	2015	2014	2013	2012	2011	2010	2009	2008
<b>Overall GPA</b>	3.5	3.6	3.6	3.5	3.5	3.5	3.5	3.5
<b>Science GPA</b>	3.4	3.5	3.5	3.4	3.4	3.4	3.4	3.4
<b>Average MCAT</b>	28.5	28.5	27.9	29.1	29.3	29.1	27.2	26.9
<b>Gender of Entering Class</b>								
<b>Males</b>	50	46	44	46	49	47	40	35
<b>Females</b>	26	33	31	20	22	28	34	43

**For 2015 – 1,820 applicants, 165 were WV Residents and we interviewed 93 of them**

**For 2016 – 1782 applicants, 206 are WV Residents, 86 are female, and we will interview 153 of them**

# Current Students

n = 295

SGUL = 5

LOA = 7

Entering Class	2015	2014	2013	2012	2011	2010
	N=75	N=79	N=75	N=66	N=71	N=75
Underrepresented Minorities in Medicine*	11% (8)	7% (5)	12% (9)	6% (4)	3% (2)	5% (4)
All Minorities*	20% (15)	17% (13)	28% (21)	11% (7)	11% (8)	19% (14)
Females*	31% (23)	42% (33)	41% (31)	30% (20)	31% (22)	37% (28)
From Appalachia Counties*	77% (58)	80% (63)	79% (59)	59% (39)	68% (48)	73% (55)
Rural Hometowns - WV Residents Only	35% (16 of 46 Res.)	35% (21 of 61 Res.)	36% (19 of 53 Res.)	31% (9 of 29 Res.)	38% (15 of 40 Res.)	42% (20 of 48 Res.)



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# Curriculum



# Pre-Clinical Schedule

FIRST YEAR COURSES					
MDC 710 Elements of Medicine	MDC 711 Structure and Function I	MDC 712 Structure and Function II	MDC 713 Structure and Function III	MDC 714 Structure and Function IV	SUMMER
Molecular Basis of Medicine, Basic Tissue Types, Intro to Hematology	Musculoskeletal, Integument, Spinal Cord and Peripheral Nerves	Head and Neck, Brain and Behavior	Cardiovascular, Respiratory and Renal Systems	Gastrointestinal, Endocrine and Reproductive Systems	Electives Available
IDM 715 - Introduction To Clinical Skills					

SECOND YEAR COURSES					
Students must pass the USMLE Step One to be promoted to Year 3					
MDC 750 Principals of Disease	MDC 751 Disease & Therapeutics I	MDC 752 Disease & Therapeutics II	MDC 753 Disease & Therapeutics III	MDC 754 Disease & Therapeutics IV	SUMMER
Core Concepts, Infectious Disease, Antimicrobials, Neoplasia, Immunology	Musculoskeletal, Dermatology and Hematology Systems	Nervous System, Eye and Psychopathology	Cardiovascular, Respiratory and Renal Systems, ENT	Gastrointestinal, Endocrine and Reproductive Systems, Toxicology	Prepare for USMLE Step One
MED 755 - Advanced Clinical Skills					



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# Clinical Curriculum

## THIRD YEAR COURSES

Students must pass the MUJCESOM Clinical Competency Examination to be promoted to Year 4  
 \*During third and fourth years students are required to complete the established list of Procedures and Patient Encounters.

8 WEEKS	8 WEEKS	8 WEEKS	8 WEEKS	4 WEEKS	4 WEEKS	8 WEEKS
Family Practice Clerkship	Internal Medicine Clerkship	Obstetrics/ Gynecology Clerkship	Pediatrics Clerkship	Psychiatry Clerkship	Neurology Clerkship	Surgery Clerkship

## FOURTH YEAR COURSES

Students must pass the USLME Step Two Clinical Skills and Clinical Knowledge Examinations, and Year 4 Radiology Exam. \*During third and fourth years students are required to complete the established list of Procedures and Patient Encounters.

2 WEEKS	4 WEEKS	2 WEEKS	28 WEEKS
Required Emergency Medicine	Selective Sub-Internship Choose 1 of 7 options: Family Med; Internal Med; Obstetrics; Orthopaedics; Pediatrics; Psychiatry; Surgery	Selective ICU Choose 1 of 4 options: Medical, Neonatal, Pediatric, Surgical	Electives



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# Integration

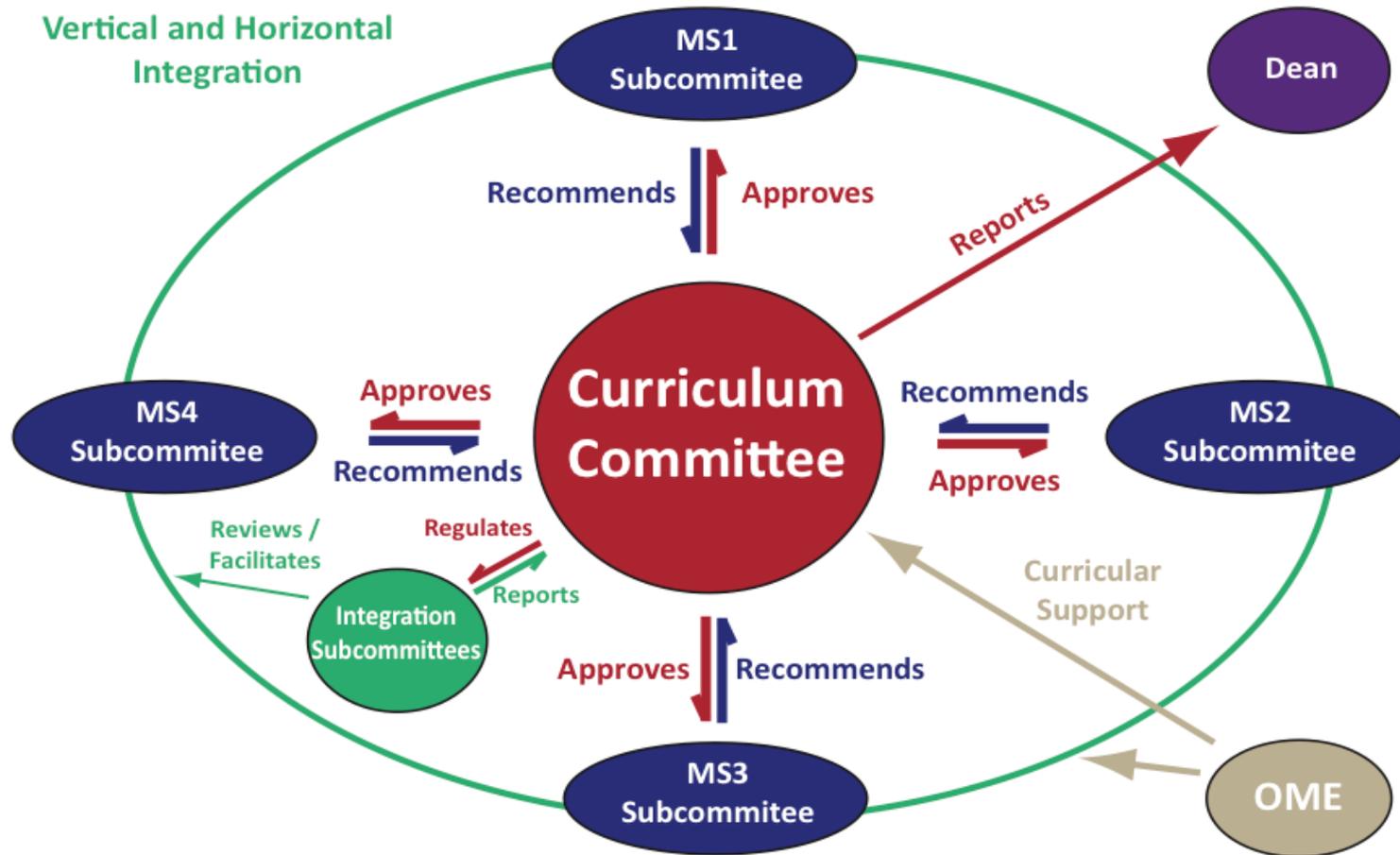
- **Horizontal – within the year**
- **Vertical – across all 4 years**
- **115 Diseases → ~ 60 Diseases**
- **3<sup>rd</sup> and 4<sup>th</sup> years mapping their curriculum**
- **Continuous Quality Improvement**



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Vertical and Horizontal  
Integration



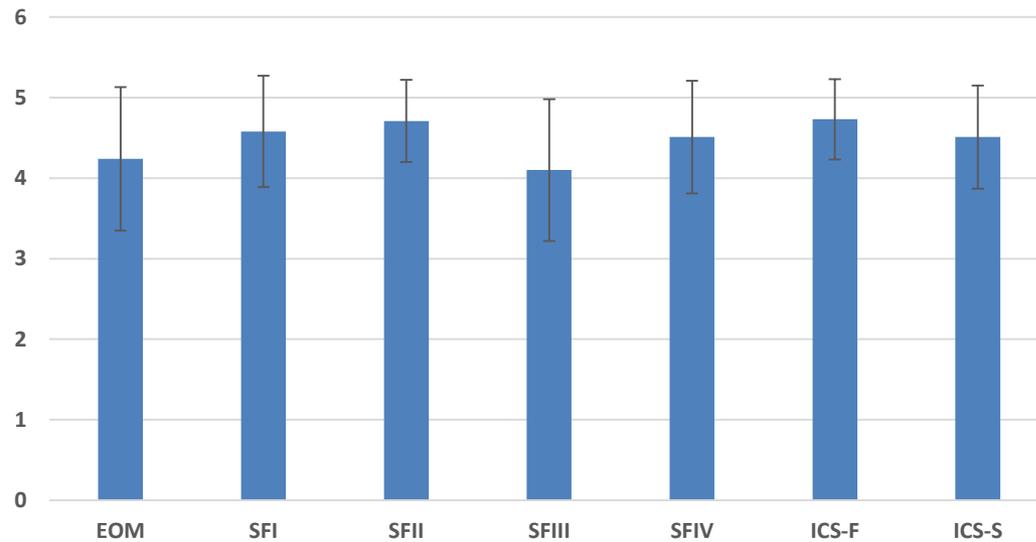
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# Pre-Clinical Outcomes

# Student Satisfaction

2015 Year 1 Courses

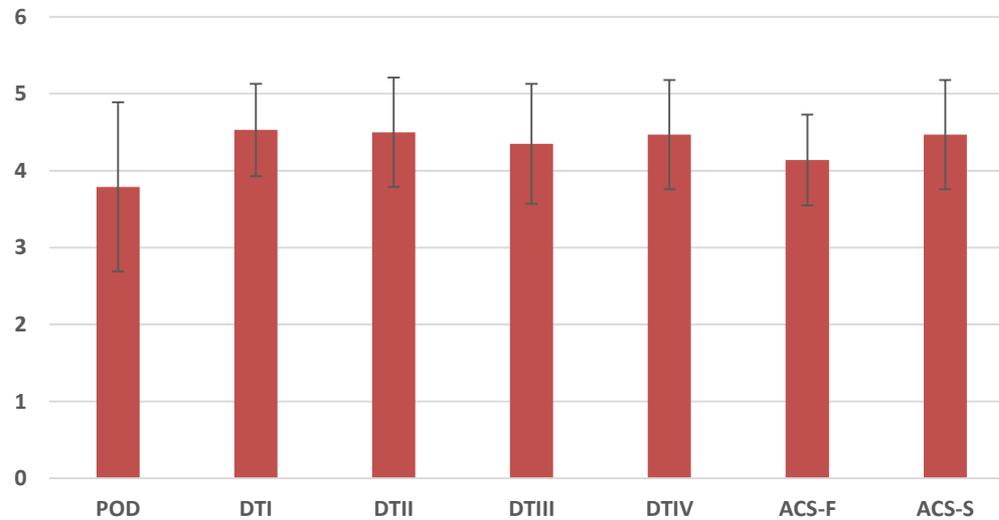


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# Student Satisfaction

2015 Year 2 Courses

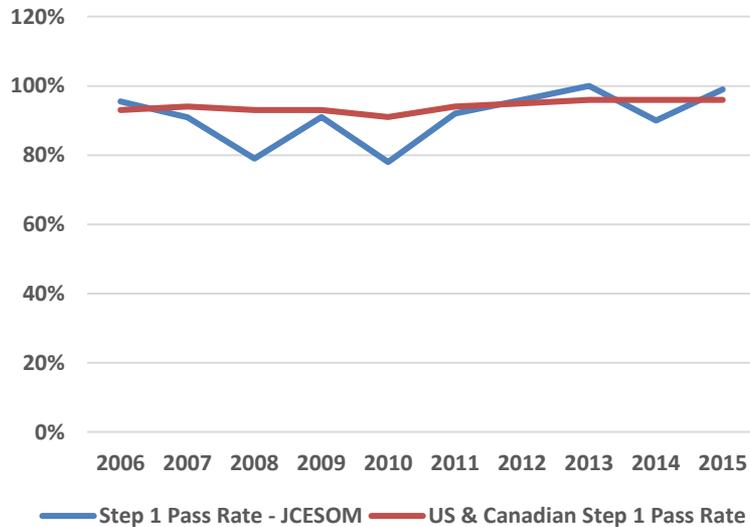


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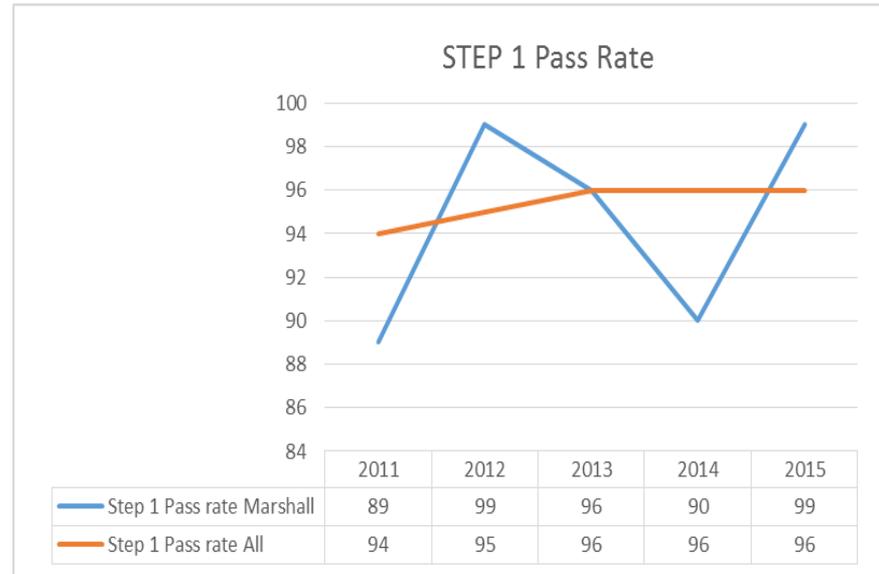


# USMLE Step 1 Pass Rate

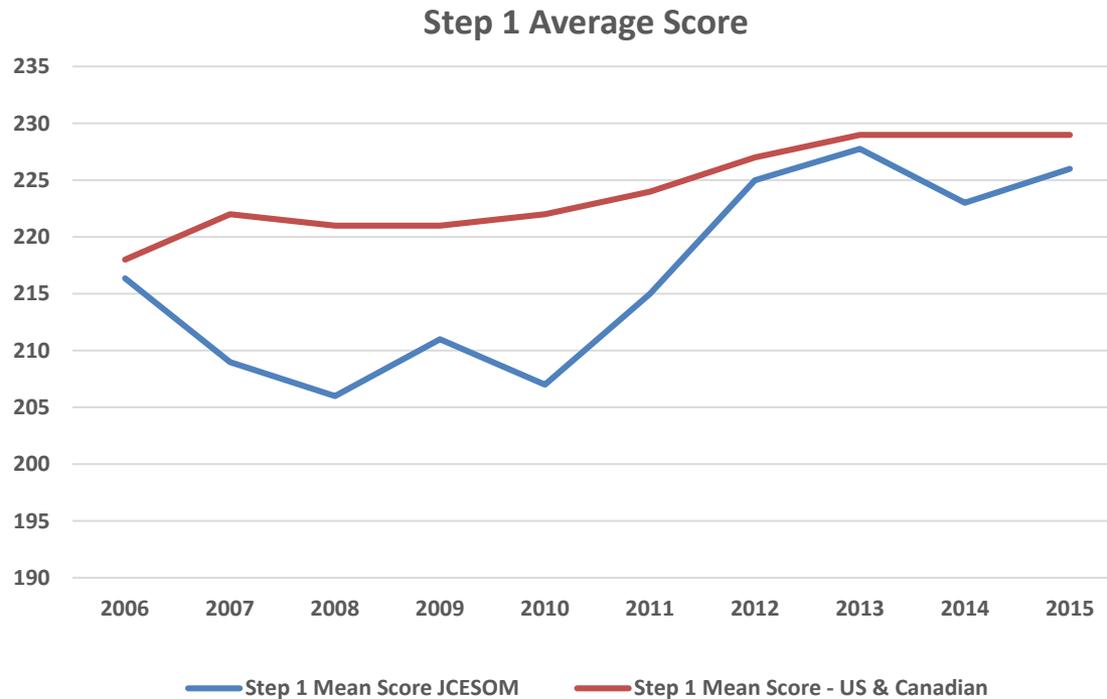
Step 1 Pass Rates



STEP 1 Pass Rate



# USMLE Step 1 Average Score



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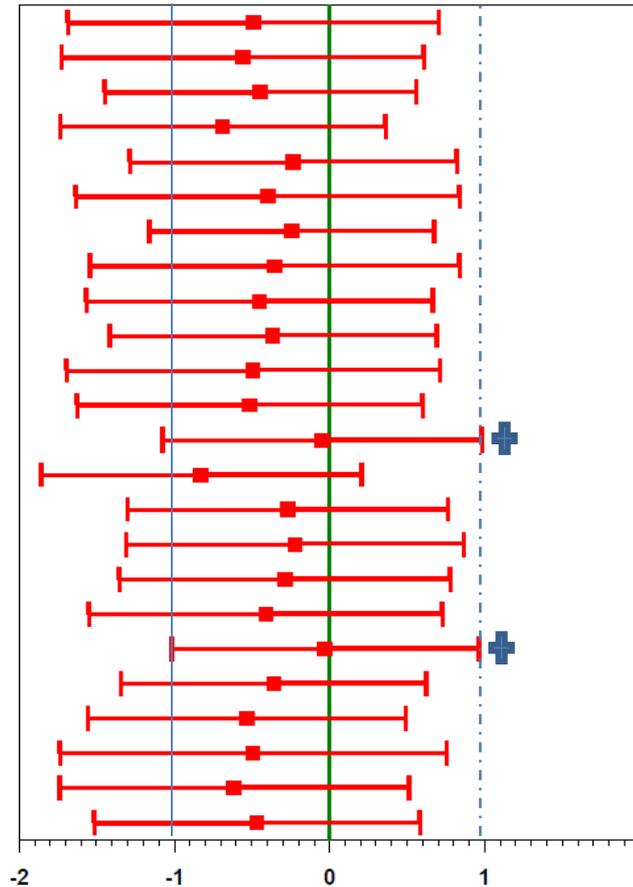


# NATIONAL BOARD OF MEDICAL EXAMINERS®

Interim Report on Performance of Examinees Taking USMLE® Step 1  
for the First Time in 2014 with Scores Reported Through September 24

Medical School: 049-010 Joan C Edwards Sch Med at Marshall Univ

- 1-Behavioral Sciences
- 1-Biochemistry
- 1-Biostatistics
- 1-Genetics
- 1-Gross Anatomy & Embryology
- 1-Histology & Cell Biology
- 1-Microbiology & Immunology
- 1-Nutrition
- 1-Pathology
- 1-Pharmacology
- 1-Physiology
- 2-General Principles of Foundational Science
- 2-Immune System
- 2-Blood & Lymphoreticular System
- 2-Behavioral Health & Nervous Systems/Special Senses
- 2-Musculoskeletal, Skin, & Subcutaneous Tissue
- 2-Cardiovascular System
- 2-Respiratory System
- 2-Gastrointestinal System
- 2-Renal/Urinary System
- 2-Reproductive System
- 2-Endocrine System
- 2-Multisystem Processes & Disorders
- 2-Biostatistics & Epidemiology/Population Health



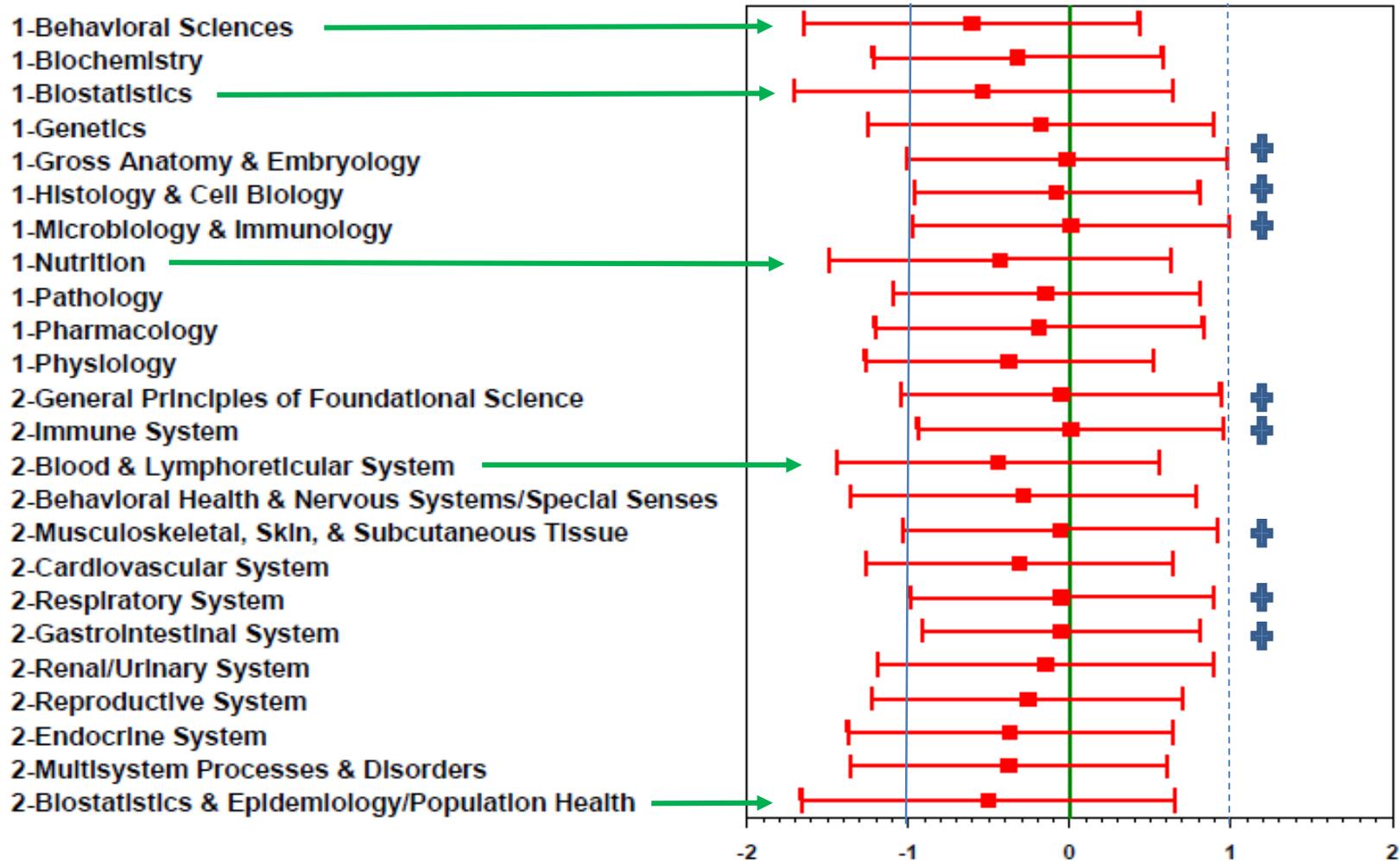
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# NATIONAL BOARD OF MEDICAL EXAMINERS®

Interim Report on Performance of Examinees Taking USMLE® Step 1  
for the First Time in 2015 with Scores Reported Through September 23

Medical School: 049-010 Joan C Edwards Sch Med at Marshall Univ



# Summary of STEP 1

- **Consistent with National Averages in:**
  - Immunology/Microbiology
  - Histology and Gross Anatomy
  - GI
  - Respiratory
  - Skin/MSK
- **Need to Improve:**
  - Biostats./Epidemiology
  - Nutrition
  - Blood/Lymphoreticular
  - Behavioral Sciences (improved at level of Clerkship)
- **Currently expanding coverage in Biostats., Safety Science**
- **Continuous quality improvement processes**



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# Identifying Students at Risk



# Risk Factors for Failing Step 1

- **MCAT**
- **1<sup>st</sup> MS 1 exam**
- **Overall MS 1 performance**
- **Overall MS 2 performance**
- **2<sup>nd</sup> year Miniboard performance**
- **CBSSA performance**



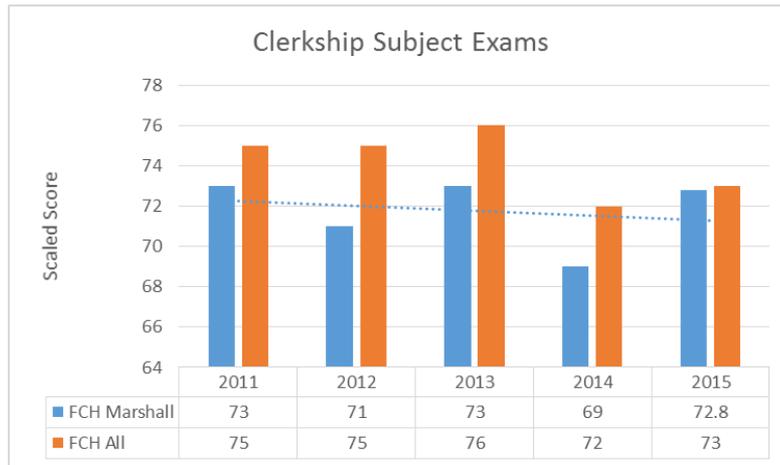
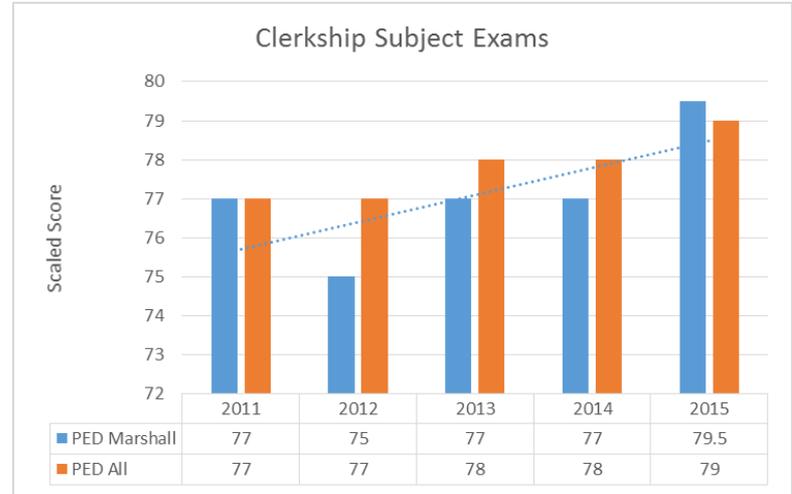
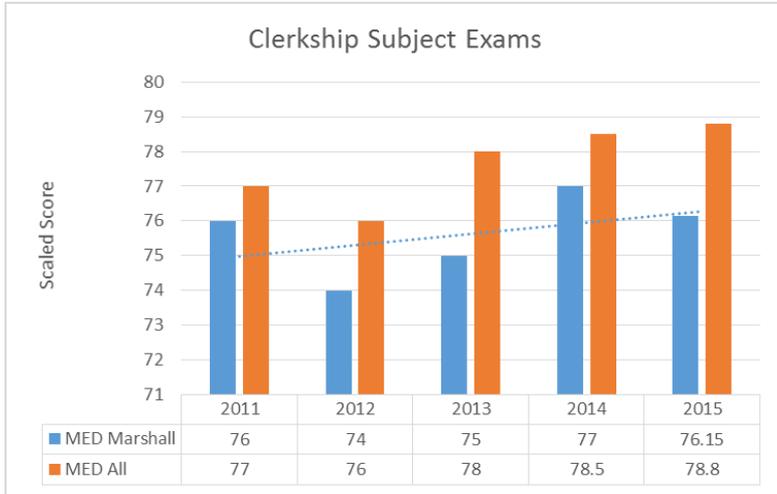
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# Clinical Years Outcomes



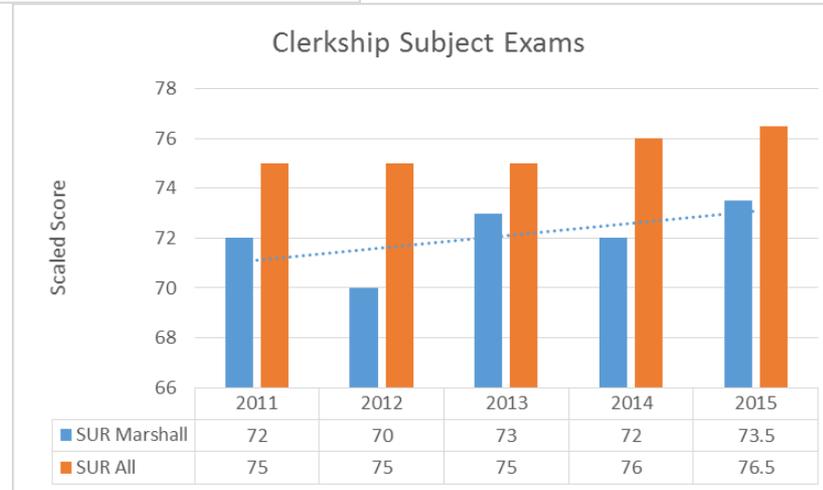
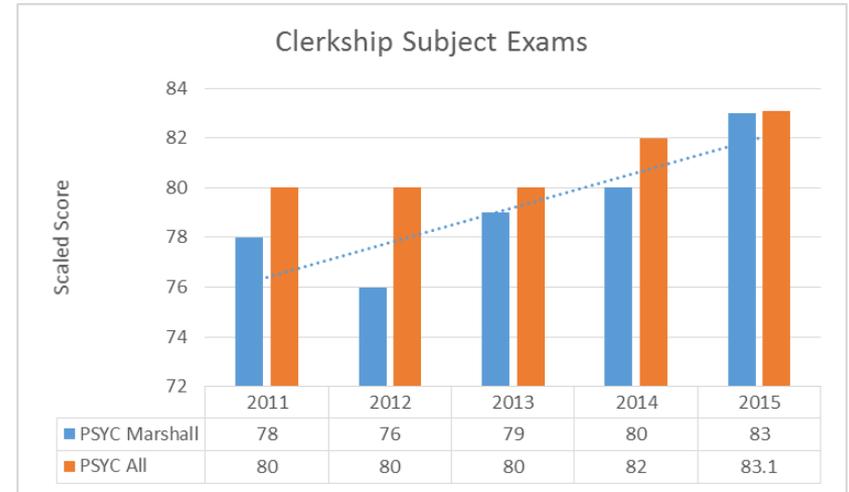
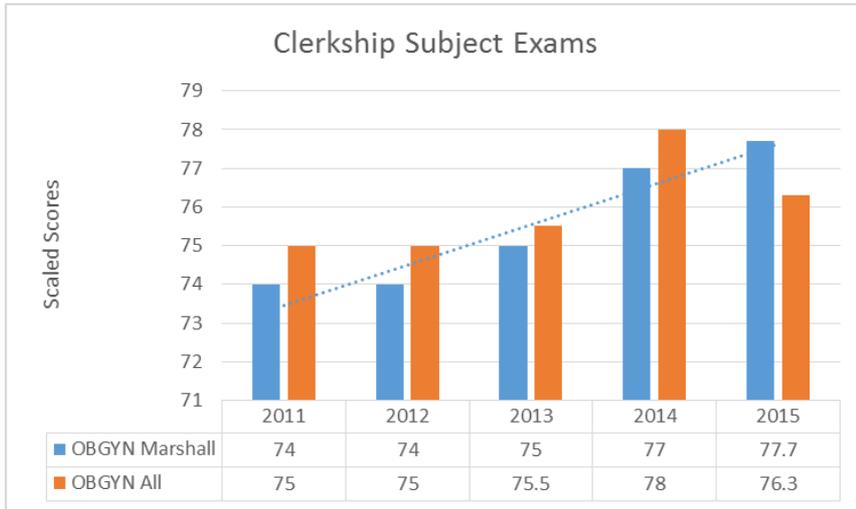
# Clerkship Exams



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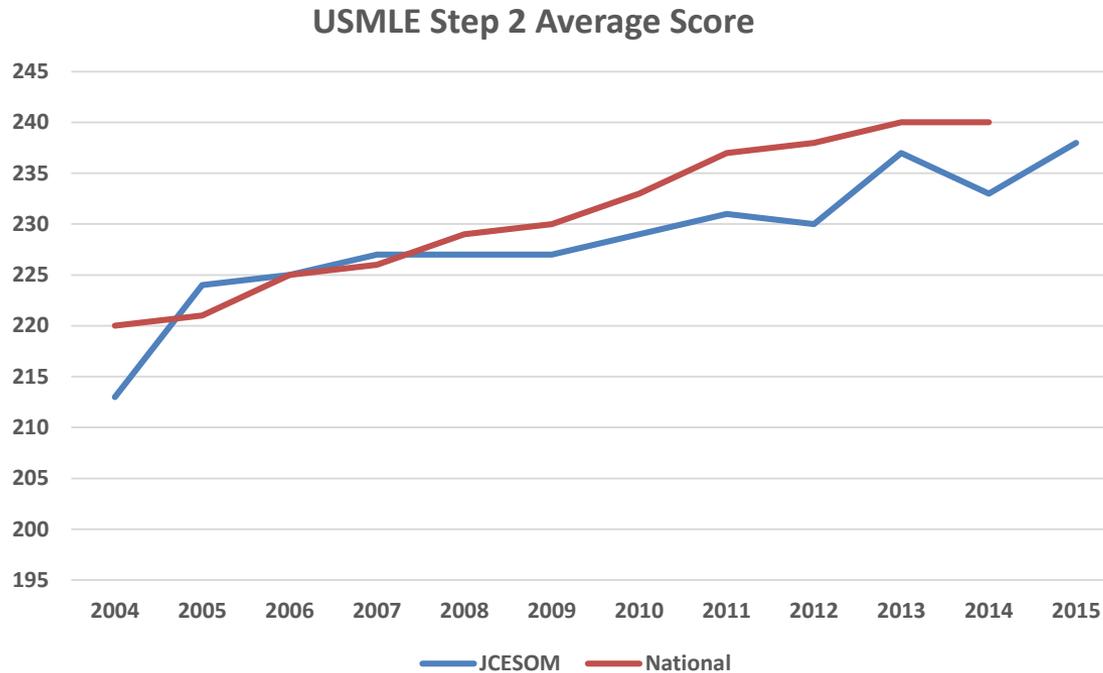
# Clerkship Exams



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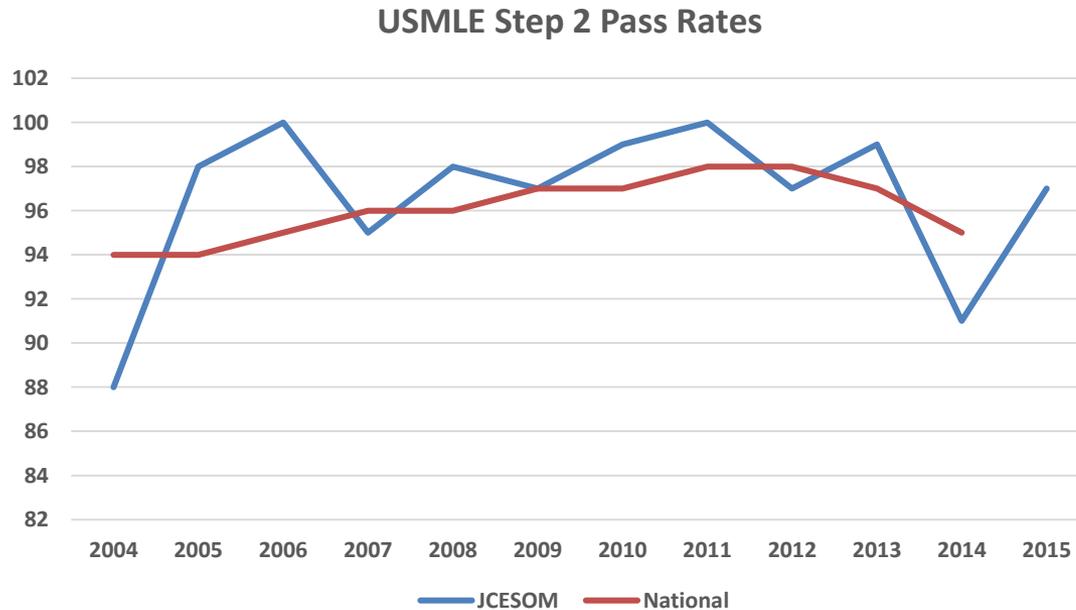
# USMLE Step 2 CK Average Score



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# USMLE Step 2 CK Pass Rate



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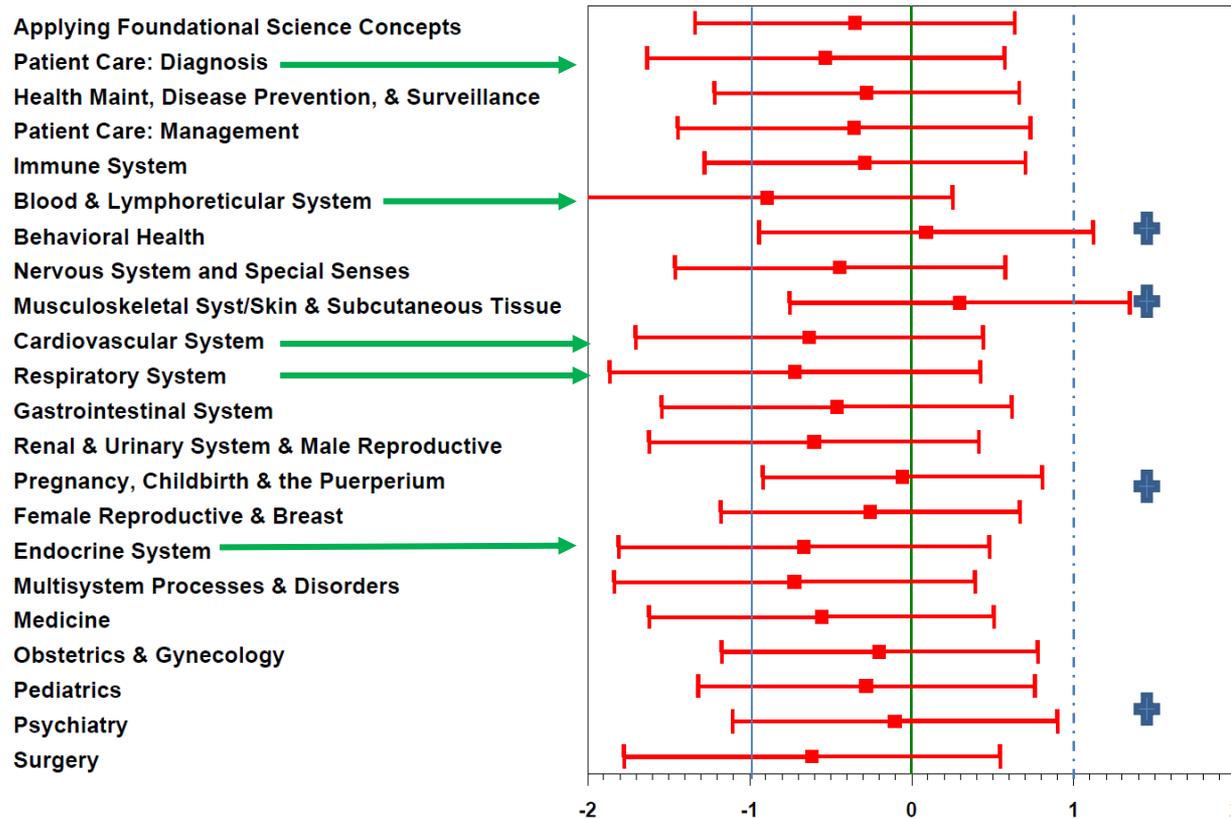
# NATIONAL BOARD OF MEDICAL EXAMINERS®

## Performance of Examinees Taking USMLE® Step 2 Clinical Knowledge (CK)

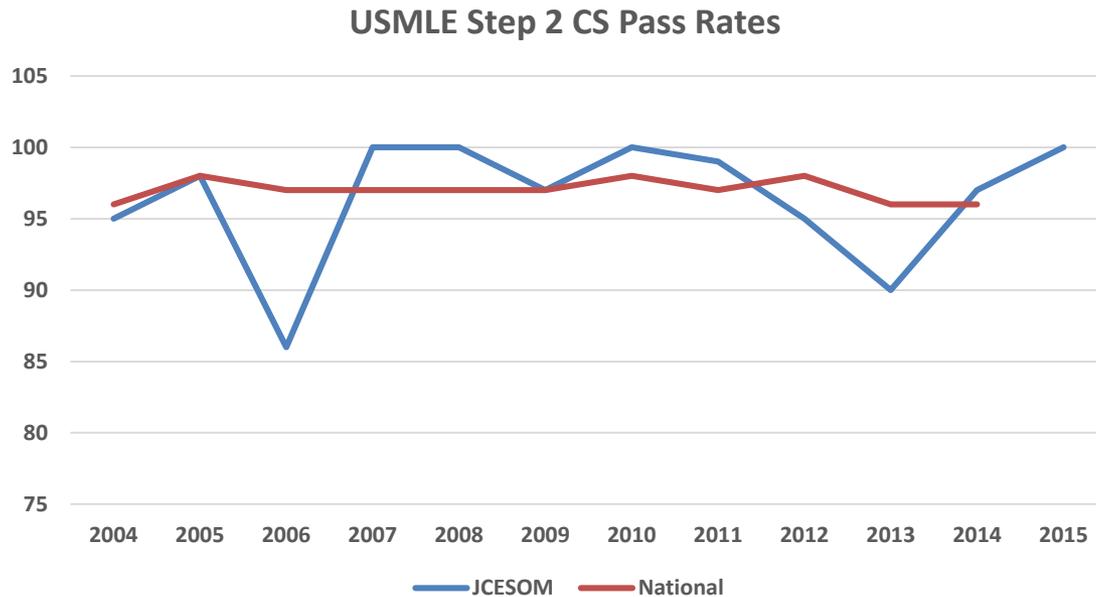
for the First Time in the Academic Year

July 2014 to June 2015

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# USMLE Step 2 CS Pass Rate



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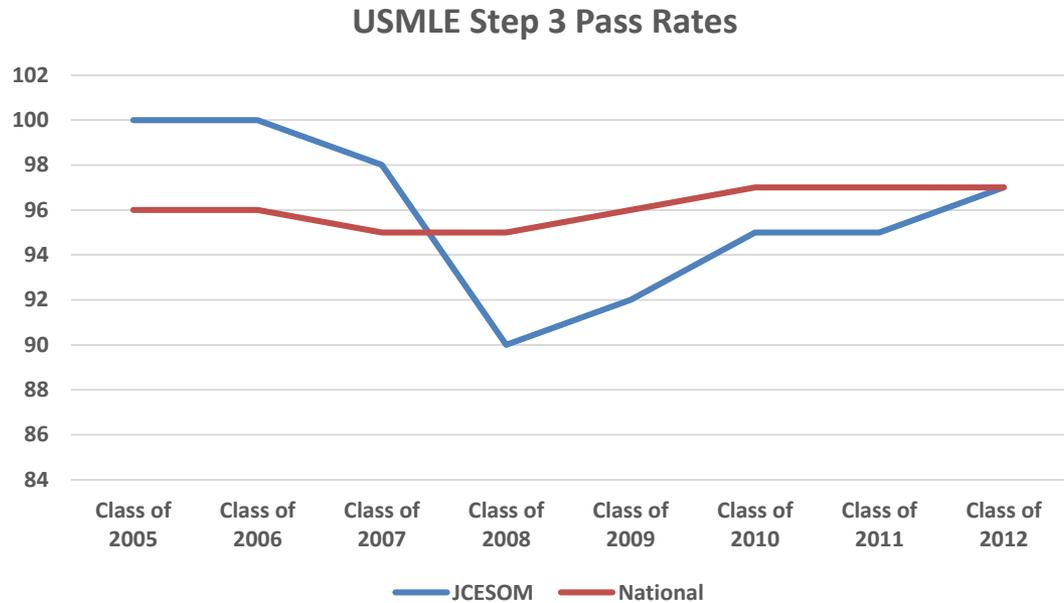
# Rate the quality of your educational experiences on the following clerkships:

**2014-2015 (2013-2014)**

	Poor %	Fair %	Good %	Excellent %
Family Medicine	0.0 (0.0)	2.4 (1.4)	35.7 (24.3)	61.9 (74.3)
Internal Medicine	4.8 (7.3)	21.4 (10.3)	47.6 (41.2)	26.2 (41.2)
OB/GYN	2.4 (2.9)	11.9 (2.9)	35.7 (33.3)	50 (60.9)
Pediatrics	2.4 (0.0)	4.8 (1.4)	33.3 (12.9)	59.5 (85.7)
Psychiatry*	0.0 (0.0)	11.9 (6.0)	38.1 (36.4)	50.0 (57.6)
Neuroscience*	0.0 (0.0)	0.0 (6.0)	45.2 (36.4)	54.8 (57.6)
Surgery	21.4 (20.0)	38.1 (31.4)	33.3 (27.0)	7.1 (21.4)

\*Psychiatry and Neuroscience became 2 separate clerkships

# USMLE Step 3 Pass Rates



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# Program Director Surveys

## MARSHALL UNIVERSITY SCHOOL OF MEDICINE CLASS OF 2013 PG 1 Residency Director Survey

Name of Resident \_\_\_\_\_ Residency Program \_\_\_\_\_ Status of Resident: \_\_\_\_\_ Trans. to Another Program, If so, Where? \_\_\_\_\_ Dismissed \_\_\_\_\_ TRANSFER To Specialized Residency \_\_\_\_\_ Remediating Part/All of PG 1 \_\_\_\_\_ REASON FOR REMEDIATION \_\_\_\_\_

AREAS OF EVALUATION	UNSATISFACTORY	SATISFACTORY	GOOD	VERY GOOD	OUTSTANDING	NOT EVALUATED
PROFESSIONALISM	<input type="checkbox"/> Does not accept responsibility; inappropriate or immature behavior	<input type="checkbox"/>	<input type="checkbox"/> Exhibits good judgment in personal and professional situations	<input type="checkbox"/>	<input type="checkbox"/> Exceptional professional conduct; demonstrates maturity, excellent judgment and integrity	<input type="checkbox"/>
RELATIONSHIP WITH PATIENTS	<input type="checkbox"/> Insensitive and avoids personal contact with patients	<input type="checkbox"/>	<input type="checkbox"/> Relates appropriately to patients and demonstrates understanding of their personal and emotional needs	<input type="checkbox"/>	<input type="checkbox"/> Exhibits exceptional warmth and empathy with patients; respects patients' cultural and religious beliefs; effectively explains medical care	<input type="checkbox"/>
RELATIONSHIP WITH OTHERS	<input type="checkbox"/> Serious problems with interactions with others	<input type="checkbox"/>	<input type="checkbox"/> Works cooperatively with others	<input type="checkbox"/>	<input type="checkbox"/> A highly valued team member who promotes cooperation among others	<input type="checkbox"/>
FUND OF KNOWLEDGE	<input type="checkbox"/> Insufficient knowledge base	<input type="checkbox"/>	<input type="checkbox"/> Average knowledge base; usually applied appropriately	<input type="checkbox"/>	<input type="checkbox"/> Extensive knowledge base; excellent ability to integrate factual knowledge	<input type="checkbox"/>
DATA GATHERING ABILITY	<input type="checkbox"/> Incomplete or inaccurate histories and physicals; essential data frequently not obtained	<input type="checkbox"/>	<input type="checkbox"/> Careful, reasonable organized history with most significant issues covered; generally complete physical with most pathology detected	<input type="checkbox"/>	<input type="checkbox"/> Comprehensive, well organized histories with pertinent negatives; thorough and accurate physical exam	<input type="checkbox"/>
DIAGNOSTIC PROBLEM SOLVING ABILITY	<input type="checkbox"/> Frequently has difficulty integrating data from history and physical when developing differential; poor clinical judgment in selection of treatment plan	<input type="checkbox"/>	<input type="checkbox"/> Usually able to analyze data from history and physical to obtain concise problem list; ability appropriate for level of training to plan patient management; sound judgment in selection of lab tests, consults and therapeutic program.	<input type="checkbox"/>	<input type="checkbox"/> Consistently synthesizes data from history and physical to arrive at accurate, comprehensive differential; unusual abilities in patient management with excellent judgment in selection of laboratory tests, consults and therapeutic program	<input type="checkbox"/>
PROCEDURAL SKILLS	<input type="checkbox"/> Has difficulty performing the basic techniques and has difficulty with timing or organization	<input type="checkbox"/>	<input type="checkbox"/> Can adequately perform the basic techniques in an organized and coordinated manner	<input type="checkbox"/>	<input type="checkbox"/> Highly skilled with use of proper technique, organizes equipment prior to procedure	<input type="checkbox"/>
LEARNING ATTITUDE	<input type="checkbox"/> Lacks motivation, shows little evidence of independent work	<input type="checkbox"/>	<input type="checkbox"/> Conscientious worker who is receptive to teaching and feedback	<input type="checkbox"/>	<input type="checkbox"/> Exceptionally hard worker who maximizes learning opportunities	<input type="checkbox"/>
COMMUNICATION SKILLS	<input type="checkbox"/> Oral presentations are unorganized and does not accurately present patient information; write-ups and progress notes are unorganized or inadequate	<input type="checkbox"/>	<input type="checkbox"/> Oral presentations present patient information in an organized and accurate manner; write-ups and progress notes are clear and well organized	<input type="checkbox"/>	<input type="checkbox"/> Oral presentations demonstrate total knowledge of patient with outstanding ability to communicate; write-ups are outstanding; progress notes are thorough and well-organized	<input type="checkbox"/>
OVERALL EVALUATION: (please circle one)	UNSATISFACTORY	SATISFACTORY	GOOD	VERY GOOD	OUTSTANDING	

(Over, please)



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MarshallHealth

# Program Director Survey

Resident's standing in relation to others at same program level : (please underline one)	Bottom 50%	Top 50%	Top 25%	TOP 10%
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PLEASE COMMENT ON THE RESIDENT'S PERFORMANCE NOTING STRENGTHS AND WEAKNESSES:

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Has the resident required any disciplinary action?      If so, please describe.

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Mehiar El-Hamdani, MD

Marshall University School of Medicine Program, Internal Medicine, WV

\_\_\_\_\_  
Program Director's Name

\_\_\_\_\_  
Residency Program Name

\_\_\_\_\_  
Signature and Date



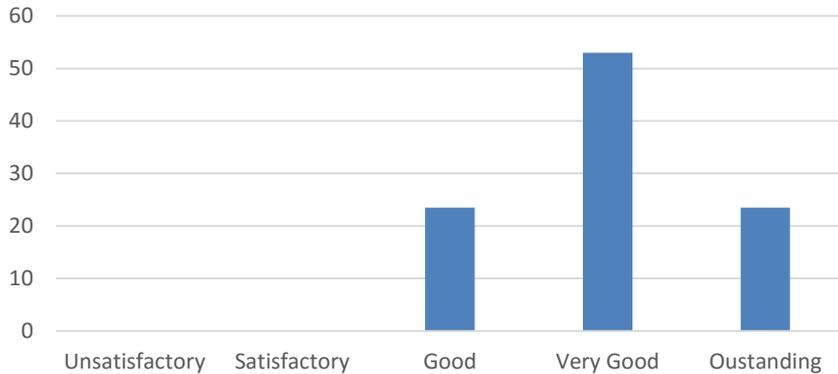
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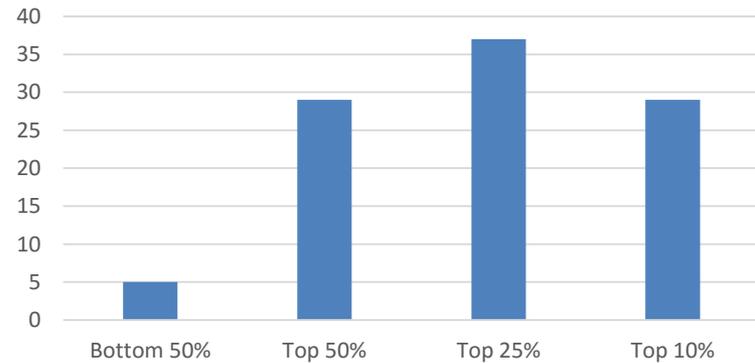
# PD Survey Results

## Class of 2014

### Student Rating as a Resident



### Students Rank Amongst Peers



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# Current Initiatives



# Admissions

- **High Schools 2014-2015**
  - 2,839 students in 30 schools in 15 counties
  - Targeting underserved, females, and minorities
  - Pre- and post-testing indicate over a 60% increase in health care awareness and knowledge
- **Colleges**
  - Focused on in-state students
  - MOU with Hampton University
- **Summer Academy**
  - Began in 2013
  - 20% accepted to Medical School with an additional 3 applying this year.



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**MarshallHealth**

# Admissions

- **Accelerated BS/MD Program**
  - **ACT of 30 with Math of 27**
  - **Last Year 34 applicants, 15 were selected, 13 accepted positions (11 were female)**
  - **This year 42 applicants, 33 selected for interviews, 22 of which are females**



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# Admissions

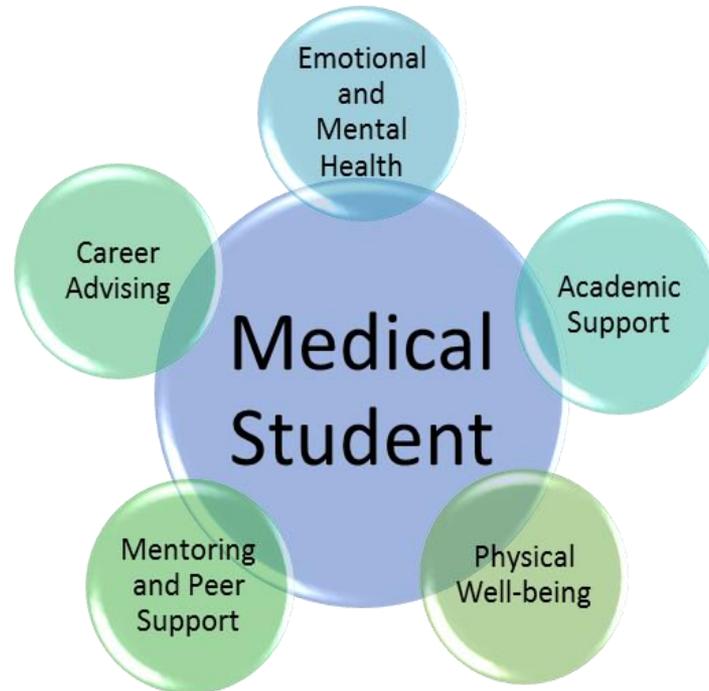
- **Accelerated BS/MD Program**
  - This year we will be trialing the Multi-Mini-Interview process
  - Short, structured interviews to assess non-cognitive qualities:
    - Cultural Sensitivity
    - Teamwork
    - Reliability
    - Maturity
    - Empathy
    - Communication Skills



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# Office of Student Affairs

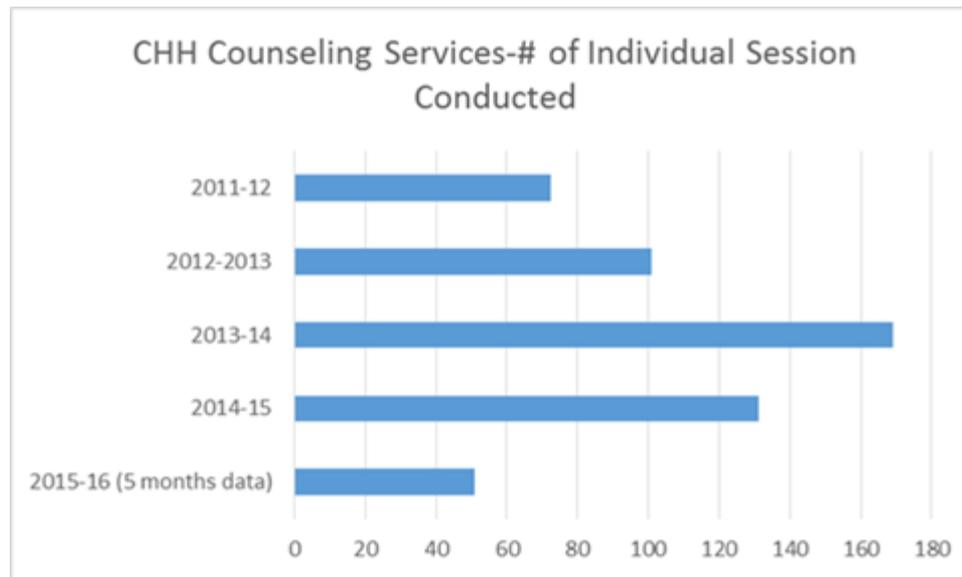


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# Office of Student Affairs

- Emotional Health and Well-being



# Office of Student Affairs

- **Careers in Medicine Curriculum**
- **Inter-Professional Education**
- **College of Health Professions Senate**
- **Academic Support Services**
  - **Congruent training through HELP Program**
- **Student Services Annual Survey**

# Office of Student Affairs

- Match Day – March 18<sup>th</sup>

Anesthesia	2
Dermatology	2
Emergency Medicine	6
Family Community Health	8
Internal Medicine	7
Med/Peds	3
Military	4
Neurology	5
Neurosurgery	1
OBG	5
Ophthalmology	1
Orthopedic Surgery	2
Pathology	2
Pediatrics	3
PMR	1
Psychiatry	4
Radiology	4
Radiology Oncology	1
Surgery	1
Urology	1

## Second Attempt Match

Family Community Health	1
Internal Medicine	2
OBG	1
Orthopedic Surgery	2



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# Academic Affairs

- **Certifying current 4<sup>th</sup> years for Graduation**
- **Small Group meetings with current 3<sup>rd</sup> years regarding 4<sup>th</sup> year scheduling**
- **Processed ~60 applications for visiting students**



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**MarshallHealth**

# Clinical Skills Lab

- **Maintain and train roughly 45 active standardized patients**

ICS	600
ACS	750
3rd Year	450
Final CCE's	450
Total	2250



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# Office of Medical Education

- **Question Writing Analytics of Preclinical Assessment Questions**
- **Predictive Algorithms**
- **Curriculum undergoing a Continuous Review Process with review of 2014-2015 now complete**

# Office of Medical Education

- Progress Report to LCME
- St. George's University of London
- Honors/Pass/Fail for clinical years
- Ongoing LCME Accreditation
- 4 Peer-Reviewed Publications

# Questions?

