

Training “Clinicians Plus”: A New Paradigm of Medical Education

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Learning Objectives

- Recognize the importance of Population Medicine in Undergraduate Medical Education
- Describe the creation and components of the Primary Care-Population Medicine Program at Brown
- Define the outcomes for success of the Primary Care-Population Medicine Program



United States Health Care 2016

Most technologically advanced, responsive, and expensive healthcare in the world

- Suboptimal health outcomes
- Non-system system
- Unaligned incentives
- >7% uninsured & 23% underinsured

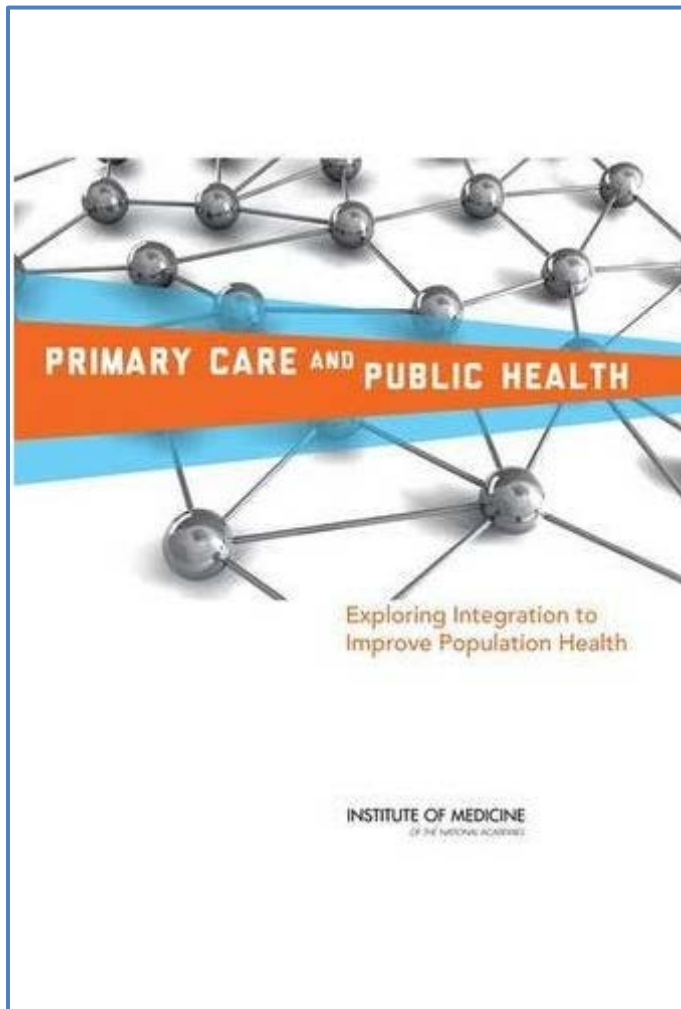


Commonwealth Fund Recommendations

- Revise Medicare physician fees
- Strengthen primary care and support team based care
- Bundle hospital payments
- Adopt payment reform
- Adopt malpractice reform
- Simplify and unify administrative policies



Institute of Medicine Report 2012



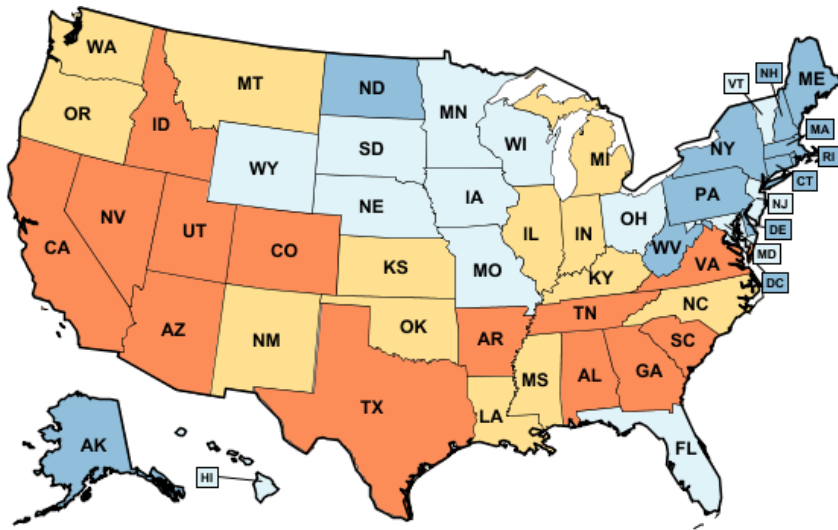
“Although primary care and public health share a goal of promoting the health and well-being of all people, these two disciplines historically have operated independently of one another. Problems that stem from this separation have long been recognized, but new opportunities are emerging for bringing the sectors together in ways that will yield substantial and lasting improvements in the health of individuals, communities, and populations.”



Triple Aim



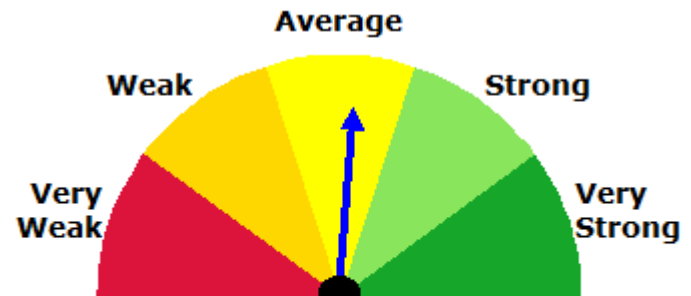
Medical Costs vs. Performance in Rhode Island



Health Care Expenditures per Capita by State of Residence, 2009



Rhode Island Dashboard on Health Care Quality Compared to All States

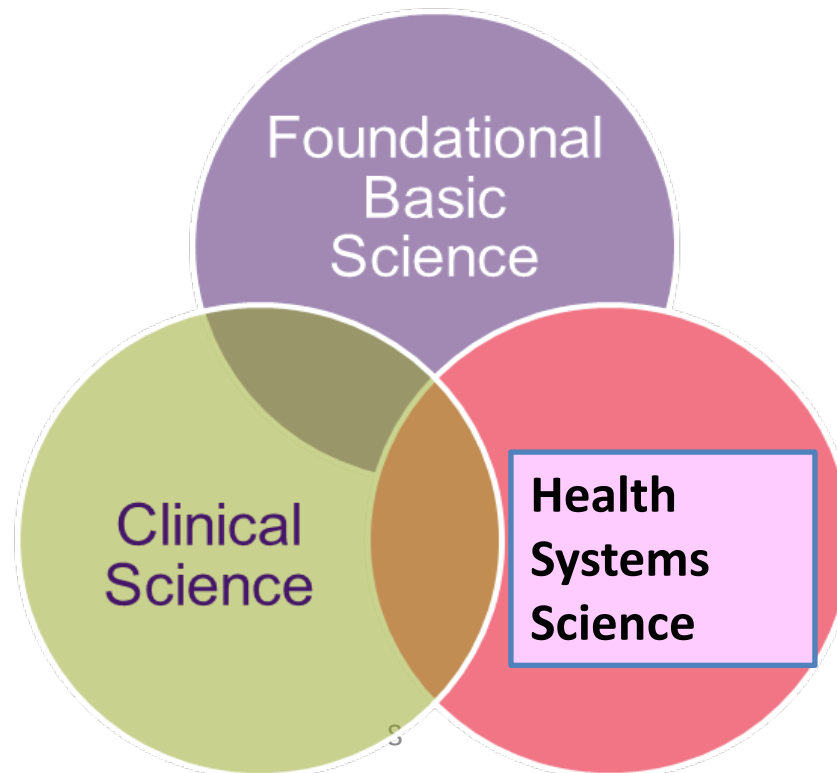


**Performance Meter:
All Measures**



Health Systems Science

- Third Science of Medicine
- Preparing students for 21st Century practice in the broader context of patient's lives and population health
- Seamlessly integrate with the First Science and the Second Science

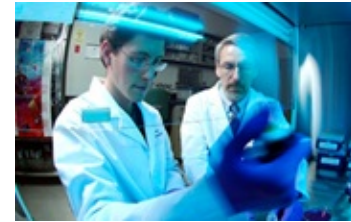


PRIMARY CARE – POPULATION MEDICINE PROGRAM

Warren Alpert Medical School of Brown University



BROWN
Alpert Medical School



Definitions

<p>Public Health (WHO)</p>	<p>All organized measures (whether public or private) that prevent disease, promote health, and prolong life among the population as a whole</p>
<p>Population Health (IHI)</p>	<p>The health outcomes of a group of individuals, including the distribution of such outcomes within the group</p>
<p>Population Medicine (IHI)</p>	<p>The design, delivery, coordination, and payment of high-quality healthcare services to manage the Triple Aim for a population using the best resources we have available within the healthcare system</p>



Vision for the Program

A bold and innovative scholarly program that trains “clinicians-plus” with a primary care and population medicine focus

- 4-year program – dual degree MD-ScM
- Up to 24 students per class
- Methods for integrated, active learning
- Interdisciplinary and leadership training
- Longitudinal integrated clerkship
- Scholarship in primary care, population medicine, and health policy

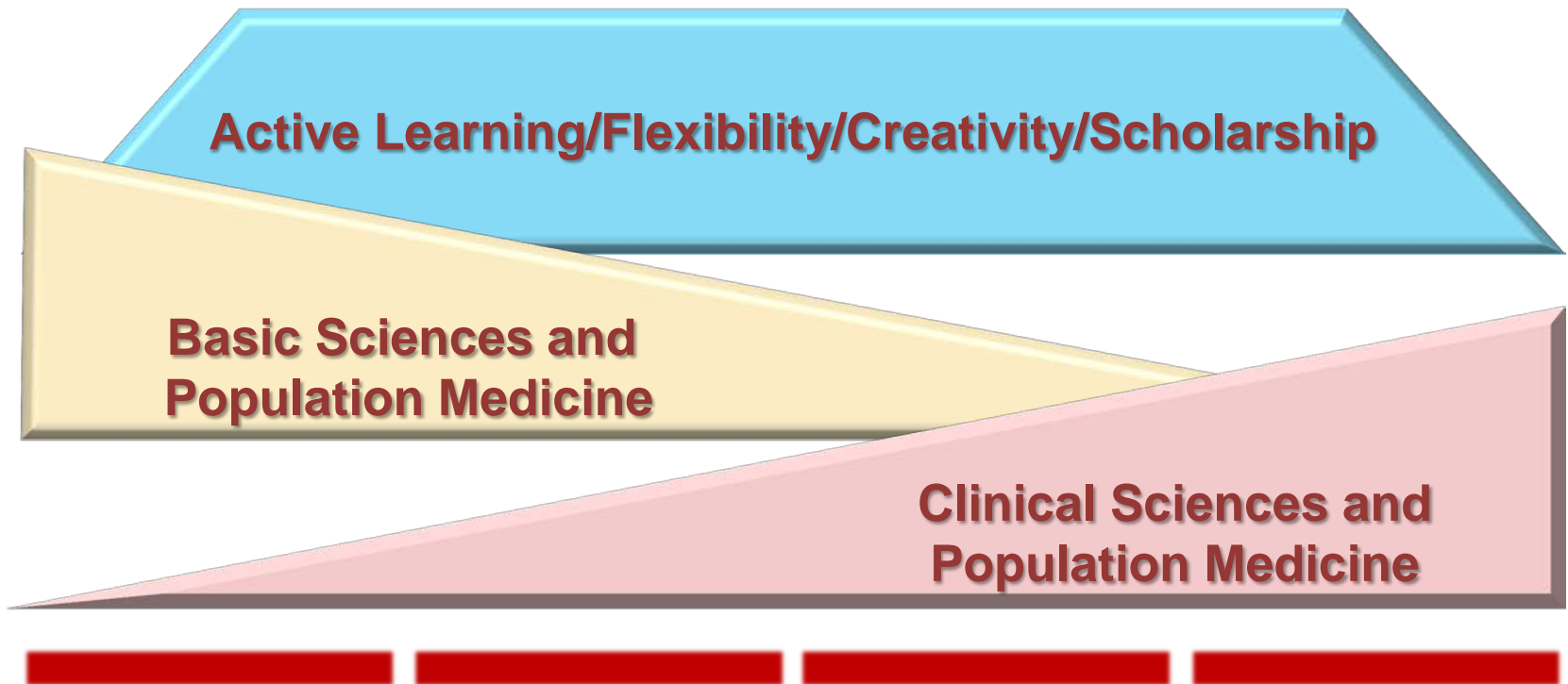


Expected Outcomes of the Program

- Primary Care “clinicians plus”
- Halo effects – on faculty and mentors, physician groups, hospitals, and healthcare systems
- Extension of innovations to the traditional MD program
- Improvement in the outcomes, quality, and cost of healthcare in Rhode Island
- Foster further research in primary care, population medicine, and health policy
- Enhancement to the reputation of Brown and Alpert Medical School



The Four Year Continuum



Master's in Population Medicine

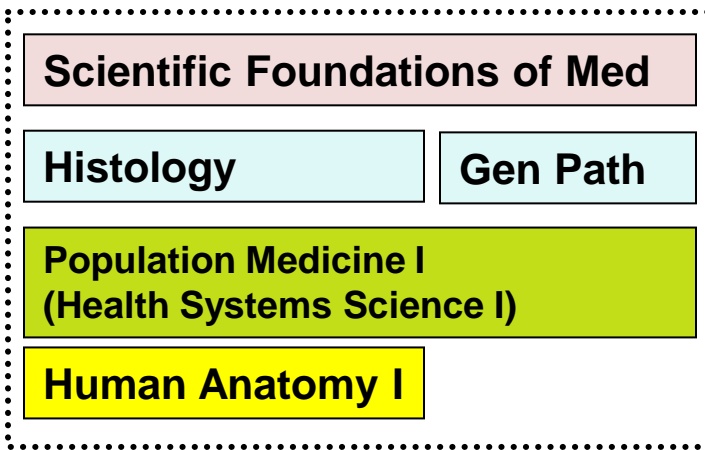
- Health Systems Science I and II
- Research Methods in Population Medicine
- Quantitative Reasoning
- Independent Study/Thesis Research
- Leadership
- Population and Clinical Medicine I and II
- Capstone in Population Medicine



Year I

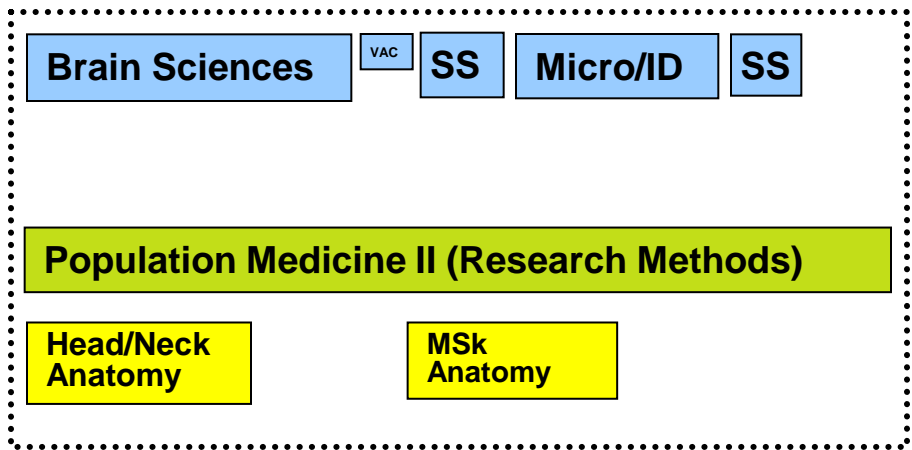


IMS I



Doctoring I

IMS II



Doctoring II

Summer between Year 1 and 2: Pop Med III, IV and V

SS, Supporting Structures (Orthopedics, Rheumatology, Dermatology)

Pop Med III: Quantitative Reasoning; Pop Med IV: Health Systems Science II;

Pop Med V: Independent Study/Thesis Research



Health Systems Science I

- Module 1: *Health Systems & Social Determinants of Health*
- Module 2: *Environmental Factors in Health*
- Module 3: *Vulnerable Populations*
- Module 4: *Population Health & Advocacy*
- Module 5: *Epidemiology*
- Module 6: *Quality Improvement & Patient Safety*
- Module 7 (PC-PM only): *Chronic Disease, Policy & Advocacy*



Research Methods

- Deciding on a study design
- Biostatistics
- Qualitative research epidemiology
- Quality improvement research
- Research ethics and misconduct
- Human subjects protection
- Data interpretation
- Manuscript writing skills
- Presentation of research
- Choosing a journal and peer review process

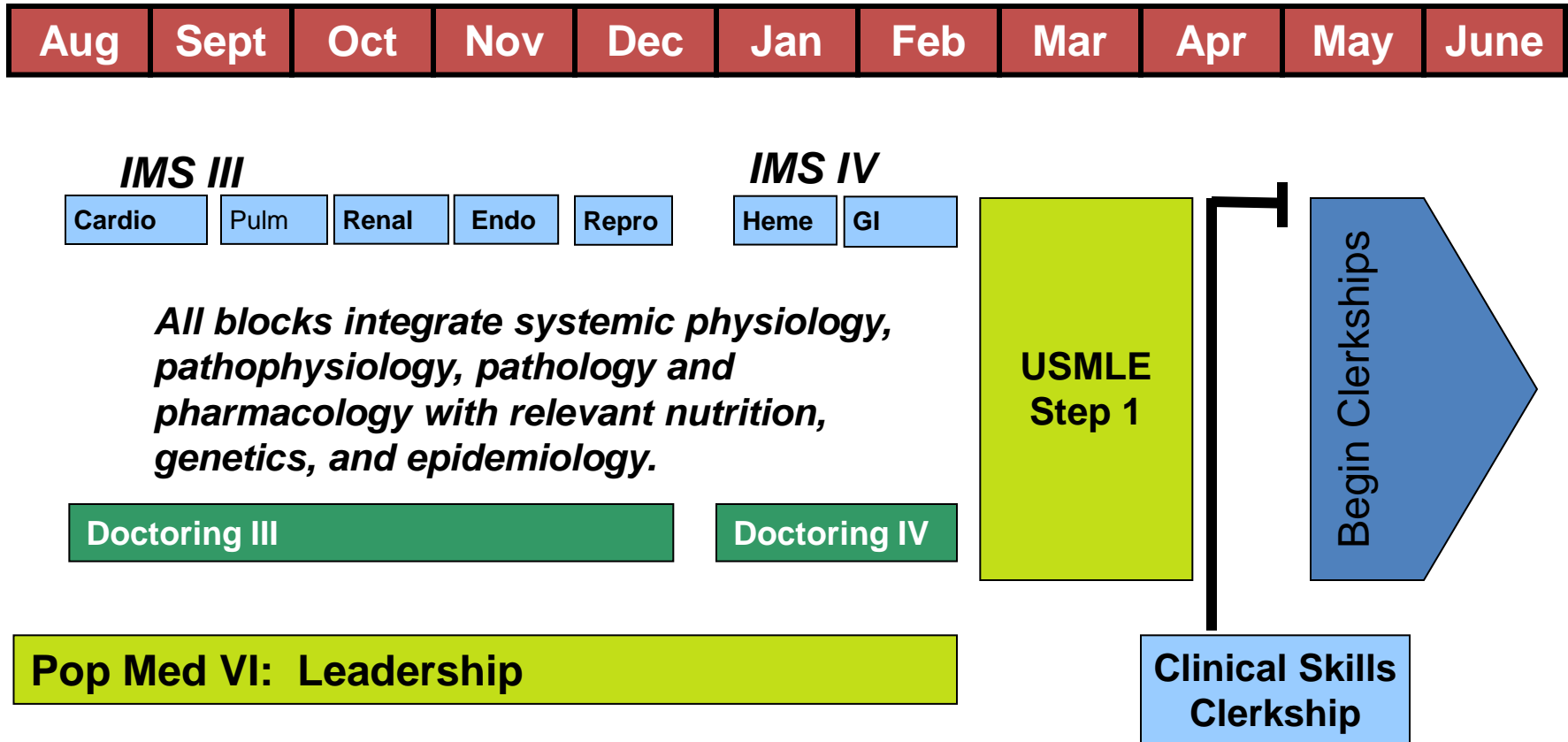


Health Systems Science II

- Module 1: *The US Health Care System and Healthcare Reform*
- Module 2: *Health Insurance*
- Module 3: *Health Care Costs and Value-Based Reforms*
- Module 4: *Health Care Quality and Patient Safety*
- Modules 5-7: *Tools for Health Policy & Systems Change*
- Modules 8-9: *Public Health Policy*



Year II



Leadership

Leadership is...a practice of accepting responsibility for enabling others to achieve shared purpose under conditions of uncertainty



Assumptions

Leadership ...

...can be learned

...is developmental

...is a process

...is situational



Principles

The **leadership** curriculum is...

- Experiential
- Team-focused
- Integrated
- Service-oriented



Goals & Objectives

Educational **Goal:**

- To develop physician-leaders who improve the quality of health care and wellness of the population



Goals & Objectives

Learning **Objectives:**

- Identify as a health care leader
- Demonstrate and apply core leadership attributes
- Apply relationship-building skills to improve team dynamics and effectiveness



Goals & Objectives

Learning **Objectives:**

- Demonstrate effective communication skills
- Demonstrate critical thinking skills
- Manage change effectively in a team environment



Knowledge

Competencies

- Leadership theory
- Group dynamics
- Organizational culture
- Healthcare acumen

Strategies

- Case-based learning
- Team exercises
- Large group presentations
- Teamwork training



Skills

Competencies

- Effective communication
- Empathetic listening
- Leading teams/motivating others
- Management skills
- Advocacy

Strategies

- Case simulations
- Public speaking/media training
- Application exercises
- Peer feedback
- Writing assignments



Qualities

Competencies

- Emotional intelligence
- Personal integrity
- Self-motivation
- Innovative thinking
- Adaptability

Strategies

- Self-assessment tools
- Leadership inventory
- Reflective writing exercises
- Leadership advisory team



Leadership Action Project

- Capstone “change” initiative
- Includes elements of quality improvement and leadership
- Collaborative
- Solution-focused
- Mentored
- Final proposals/presentations to health care leaders



Year III



- **Internal Medicine**
- **Surgery**
- **Pediatrics**
- **Obstetrics & Gynecology**
- **Family Medicine**
- **Psychiatry/Neurology**

Pop Med VII and VIII: Population and Clinical Medicine



Longitudinal Integrated Clerkship

Inpatient

- 6-week inpatient immersion (3 weeks of medicine/3 weeks of surgery)
- 2-week rotations “sprinkled” in (pediatrics, OB-GYN, and psychiatry/neurology)
- ER shifts

Outpatient

- 32 weeks with weekly sessions (pediatrics, medicine, surgery, family medicine, OB-GYN, psychiatry/neurology)
- Weekly didactics
- Morning report
- Shelf exams (last half of year)

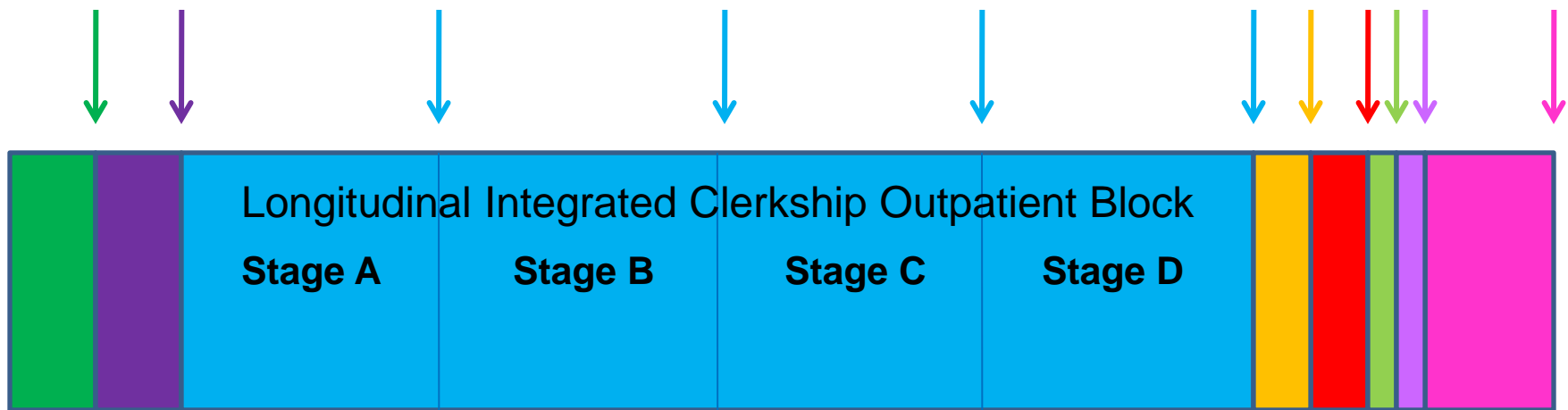


LIC vs. Traditional Clerkship

	LIC	Traditional
Specialties represented	Same	Same
# of inpatient weeks	12	23
# of outpatient weeks	32	21
Elective weeks	4	4
4 th year requirements	Sub-internship (4 weeks); ICU (4 weeks)	Sub-internship (4 weeks); surgery selectives (6 weeks)
Evaluation	Shelf exam, OSCE, direct observation	Shelf exam, OSCE, direct observation
Didactics	Integrated, scheduled across entirety of LIC (includes pop med content)	Not integrated, scheduled per block rotation
Sites	Based on outpatient link	Variable



LIC and Timing of Clinical Evaluations



- Inpatient Medicine (3 weeks)
- Inpatient Surgery (3 weeks)
- Inpatient Pediatrics (2 weeks)
- Inpatient OB/GYN (2 weeks)
- Inpatient Neurology (1 week)
- Inpatient Psychiatry (1 week)

- Outpatient LIC (32 weeks)
 - Family Medicine
 - Internal Medicine
 - Psychiatry/Neurology
 - Surgery
 - Pediatrics
 - OB/Gyn
- Elective (4 weeks)

→ Evaluation points



Sample Outpatient LIC Weekly Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
AM	Internal Medicine Outpatient	Open (for continuity patients, etc)	Open (for continuity patients, etc)	OB/GYN Outpatient	Family Medicine Outpatient
PM	Neurology alt with Psychiatry Outpatient	Pediatrics Outpatient	Surgery Outpatient	Open (for continuity patients, etc)	LIC Didactics



Student Considerations

- Student learning style
- Student personal circumstances
- The community
- The faculty
- Bottom line: **The LIC is not for every student (maybe)**



Challenges

- Communication
- Didactics
- Students felt disadvantaged regarding exam preparation
- Social isolation
- Inpatient Medicine exposure inconsistent/lacking
- Scheduling nightmares



Student Evaluations

- All would do it again
- Excellent balance between autonomy and supervision
- Excellent level of observation
- Greater degree of longitudinal patient experiences
- Greater sense of involvement in patient care



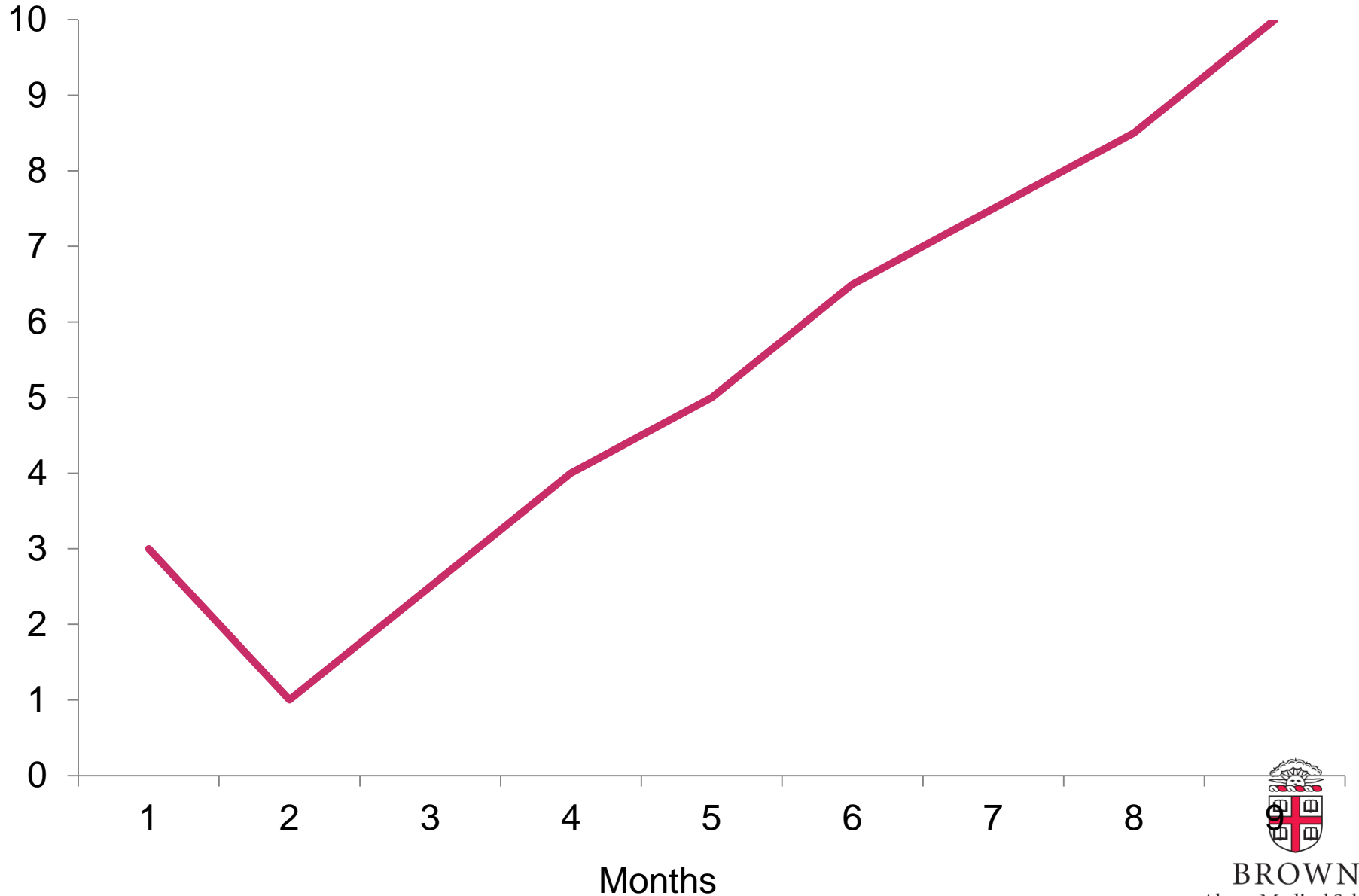
Student Performance

No differences in

- Shelf scores
- Clerkship grades
- The Match
- Anything else!



Confidence and Satisfaction



Lessons Learned

- Choose the students carefully
- Don't underestimate the amount of time necessary to administrate the program
- Expect a rocky start
- Prepare for faculty failures
- Expect comparisons with the block
- Check-in regularly



Faculty Development

- Different kind of teaching
 - Longitudinal and developmental
 - Greater individual responsibility
- Office staff development
- Patient development



Clinical & Population Medicine

Clinical Medicine

- One physician/team; one patient
- History and physical
- Treatment plan for patient
- Monitor using symptoms, labs, etc.

Population Medicine

- One physician/team; populations
- Patterns of disease
- Programs that “treat” groups
- Monitor using population-level data



Population-Based Topics

- Incarceration
- Homelessness
- Race
- Immigrant health issues
- Adolescent and elderly patients
- LGBT patients
- Chronic pain
- Substance abuse



Systems-Based Topics

- Group visits
- Patient-Centered Medical Home
- Advocacy
- Behavior change
- End-of-life care
- Dental care
- Community Health Centers
- Caring for oneself while caring for others



Longitudinal Components

- Social and Community Context of Care (SACC)
- Quality Improvement (QI)
- Leadership



Social & Community Context

- Get to know the community
- Review public health data
- Explore community resources
- Talk to patients
- Talk to community figures
- Logistics
 - Propose a community-based intervention
 - Implement and evaluate the intervention



Quality Improvement

- Understand how quality improvement it can be used to enhance services for medically underserved populations
 - Hands-on practice
 - Provider and practice-level data



Quality Improvement Project

- Consider areas in the clinical care of patients in which a measurable improvement could be made
- Propose a quality improvement project that will address that area
- Storyboard assignment to present results of that project



Leadership

- Describe general principles of leadership and their application to the practice of medicine
- Assess own leadership qualities
- Apply leadership principles to implementation of SACC and QI projects



Year IV

Residency Interviews

May Jun July Aug Sept Oct Nov Dec Jan Feb Mar Apri May

Subinternship, Electives, ICU

Pop Med IX: Capstone in Population Medicine

Thesis Completion



Admissions & Incentives

Admissions

- Expansion to 144 students
- Indicate interest on secondary application
- Admissions Committee determines acceptance into Alpert Medical School; PC-PM acceptance later in year
- Program for Liberal Medical Education, Early Identification, and post-baccalaureate students eligible

Incentives

- Increased stipend during medical school
- Graduate Medical Education in a Rhode Island primary care residency (“saved” positions)



Secondary Application Questions

- Imagine that you are approached by a multibillionaire philanthropist who wants to donate a substantial fund of money to a single project with the goal of “fixing the US healthcare system.” He/she asks for your expert opinion on what project this money should go towards; what would you advise and why?



Secondary Application Questions

- Often when we talk about medicine, we focus on the individual physician-patient relationship. Why should medical schools train future physicians to care for communities and populations as a whole, and not just individual patients?



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Applicants and Matriculants

Class Year	MD 2019	MD 2020
Total AMCAS Applications	8,153	8,133
Total Secondary Applications	6,174	6,374
Total PC-PM Applications	783	757
PC-PM Matriculants	16	24
Traditional	12	
PLME	1	
EIP	1	
Post-baccalaureate	2	



Master's Thesis Projects

- A baseline assessment of Rhode Island physician engagement in population health alternative payment models
- Developing a clinical decision rule for EMS to determine whether intoxicated patients require hospital-based care
- Long-term outcomes for the path of freedom mindfulness curriculum



Master's Thesis Projects

- Examining the impact of insurance status and changes in insurance availability on access to and utilization of care by chronically ill children and young adults
- Air pollution and emergency department visits and hospitalizations for respiratory-related diseases in Rhode Island
- Health experience of Syrian refugees living in Jordan



Master's Thesis Projects

- The impact of incorporating formal end-of-life care training in resident education
- Barriers to buprenorphine treatment in primary care settings in Rhode Island
- Major trauma outcomes for patients with psychiatric disorders
- Use of salivary vesicles as a biomarker for traumatic brain injury in martial arts



Master's Thesis Projects

- Risk-adjusting Medicare Advantage plans for socio-economic status
- Evaluation of the Commodity Supplemental Food Program for low-income elderly Rhode Island recipients
- The narrative of living with serious illness while incarcerated in Rhode Island's prisons



Master's Thesis Projects

- Impact of distance on the Summer Food Service Program on participation in children aged 6-12 years in Newport, RI
- The effectiveness of palliative care interventions on outcomes to patients, CHF quality metrics, and health systems
- Outcomes of the uninsured after major trauma



Evaluation: Plans

- # who successfully complete program
- # who enter primary care residencies
- # who remain in Rhode Island
- Clinical competency
- Presentations
- Publications
- Satisfaction



Evaluation: Plans

- Empathy
- Tolerance of ambiguity
- Attitudes in working with underserved
- Ability to work in healthcare teams
- Residency Director surveys
- # who become physician leaders



Evaluation: Early Key Findings

Methods: focus groups, surveys, meetings with student representatives

- No differences in metrics for students applying to PC-PM program and traditional MD program
- Additional workload in PC-PM program not an issue (at least in Year I)
- Students enjoyed the LIC model (piloted with those not in the PC-PM program)



AMA Grant

- Accelerating Change in Medical Education
- Consortium Medical Schools
 - Alpert Medical School of Brown University
 - Brody School of Medicine
 - Indiana University
 - Mayo Medical School
 - New York University School of Medicine
 - Oregon Health & Science University School of Medicine
 - Penn State College of Medicine
 - UC Davis School of Medicine
 - UC San Francisco School of Medicine
 - University of Michigan Medical School
 - Vanderbilt University School of Medicine



AMA Grant

- Formative Site Visits
 - AMA Division of Medical Education
 - Healthcare/Education Experts
- Focused Workshops
- Collaborative Projects
- Consortium Expansion
- Team Conferences
 - Meetings at Host Schools (AMS in Spring 2018)
- Define Outcomes
 - NBME, ACGME, LCME, National Center IPE



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- Sybil Cineas, MD
- AMS Students & Staff
- AMS Clerkship Directors
- Department Chairs
- PC-PM Advisory Council
- AMA



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please fill out your evaluation.**

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