

Value-Added Medical Education: How Can Medical Students Meaningfully Contribute to Patient Care?

Jed Gonzalo MD MSc
Associate Professor of Medicine and Public Health Sciences
Associate Dean for Health Systems Education
Penn State College of Medicine

Virginia Tech Carilion School of Medicine
February 3rd, 2020

Objectives

Upon completion of this session, participants will be able to:

1. Define value-added medical education,
2. Identify challenges for medical students within clinical learning environments to contribute to patient care,
3. Highlight several examples of pre-clerkship and clerkship roles that can potentially add value to the health system, and,
4. Identify the intersections between Health Systems Science education and value-added roles and tasks.



Are medical students an asset or a “liability”
in the context of care delivery?



Are medical students an asset or “liability”?



“Value-Added Medical Education: Experiential roles for students in practice environments that can positively impact patient and population health outcomes, costs of care, or other processes within the health system, while also enhancing student competencies in Clinical or Health Systems Science.



Cost-Benefit Scorecard

Stakeholders	Benefit	Cost
Health system		
Patient(s)	<ul style="list-style-type: none"> Improved outcomes; patient experience Lower utilization of resources or costs of care 	<ul style="list-style-type: none"> Discomfort/dissatisfaction with program Stress or discomfort with process
Clinical educators	<ul style="list-style-type: none"> Improved work efficiency and work experience Gratification in fulfilling social responsibility 	<ul style="list-style-type: none"> Reduced clinical productivity Concerns regarding quality of mentoring
Clinical or community site	<ul style="list-style-type: none"> Enhanced quality improvement programs Enhanced partnerships with community 	<ul style="list-style-type: none"> Resources and time required for student presence and work
Hospital system	<ul style="list-style-type: none"> Improved relationships with community Improved efficiency through student presence 	<ul style="list-style-type: none"> Time and resources to fund programs
Educational system		
Learners	<ul style="list-style-type: none"> Improved knowledge, skills, and attitudes in HSS Improved attitudes of professional role identity Greater sense of civic responsibility for profession 	<ul style="list-style-type: none"> Competing demands of courses/exams Apprehension with performing patient-centered tasks
Medical educators	<ul style="list-style-type: none"> Improved knowledge and skills in HSS, thereby increasing education for other learners 	<ul style="list-style-type: none"> Investment in learning new concepts
Medical school	<ul style="list-style-type: none"> Enhanced knowledge and skills in new initiative Creation of meaningful clinical work for students Enhanced credibility in fulfilling social contract 	<ul style="list-style-type: none"> Competing demands of curricular initiatives Additional faculty/staff time



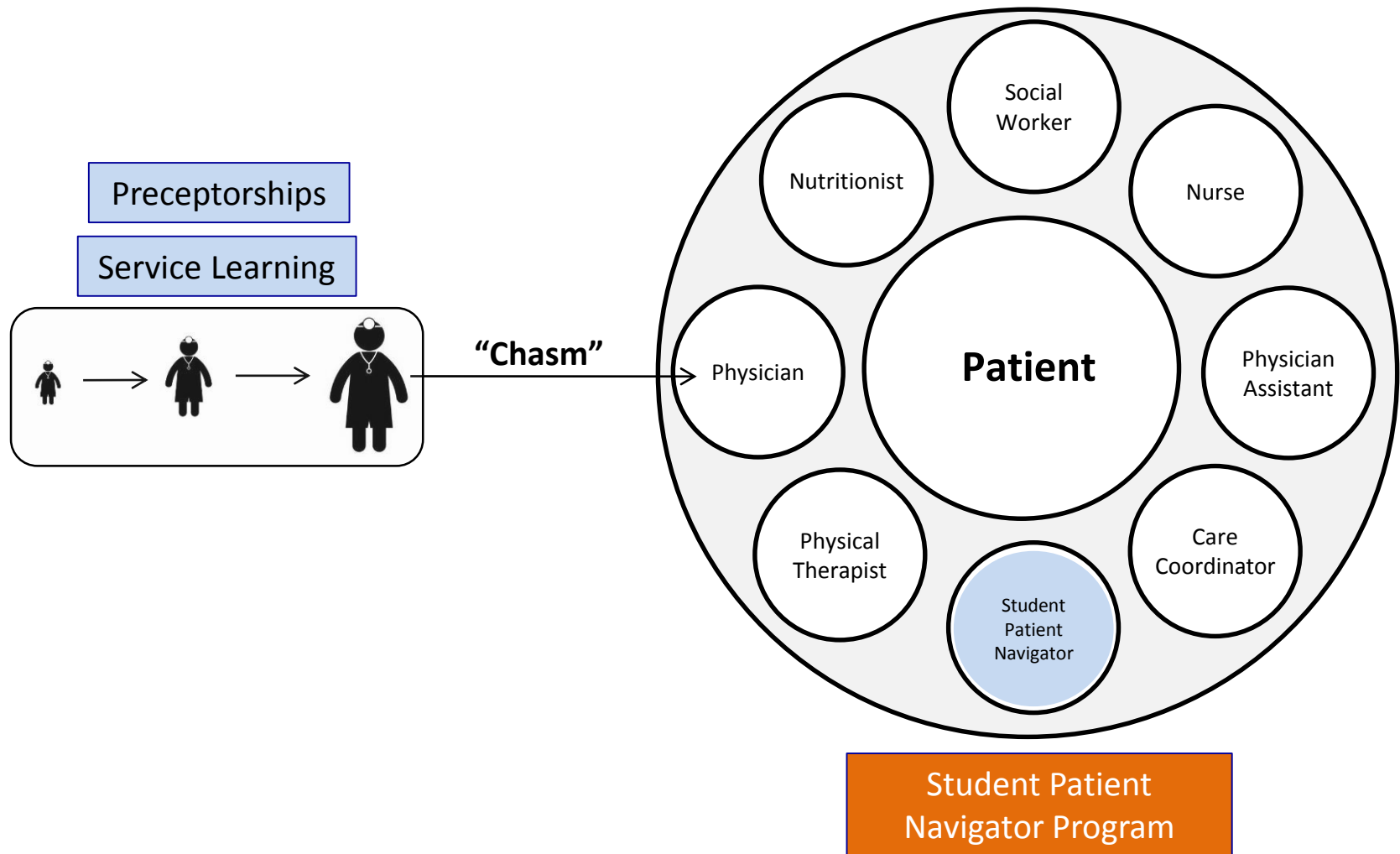
Value-Added Roles and Tasks

Direct patient care
History-taking
Evidence-based medicine
Patient education
Patient advocates
Value chief
Care Extenders
Clinical process extenders
Patient navigator
Safety analysts
QI team extenders
Population health managers
Research and systems projects
“Systems” Projects

“New vs old”

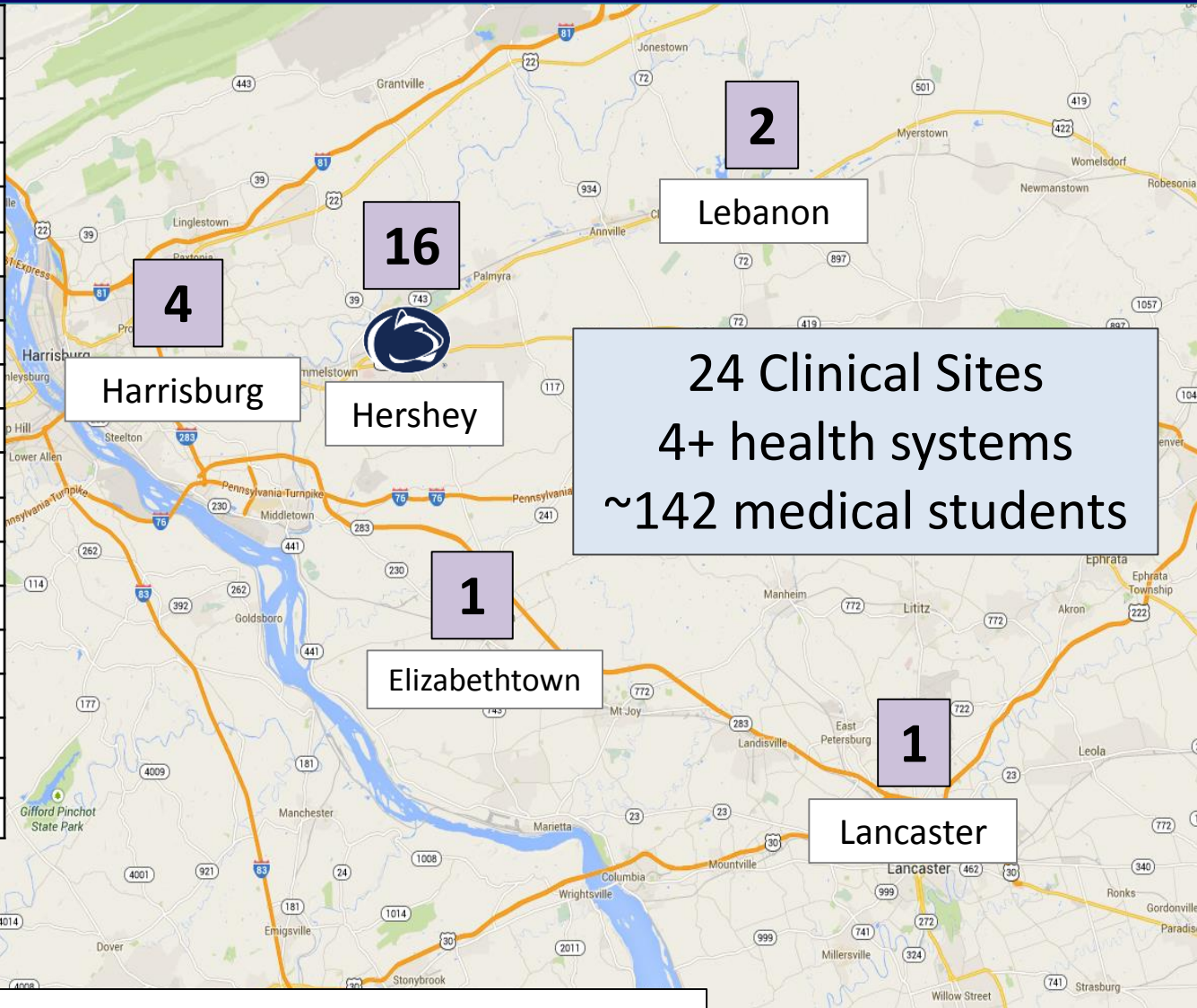


Current Education Model: The Mini Physician Model



Student Patient Navigator Network

Inpatient Setting
Rehab Hospital Transitions Program
Veteran's Affairs
Internal Medicine D/C Program
Psychiatric Hospital Program
Skilled Nursing Transitions Program
Outpatient Setting
Breast Cancer Program
Heart Failure Clinic
Behavioral Health Clinic
Senior Living Center
Internal Medicine Clinic
Family Practice Outreach Program
High-Risk Outreach Clinic
Patient-Centered Medical Home
Lebanon Free Clinic
Surgical Weight Loss Program
Pain Management
Pediatric Clinic



PSCOM Student Patient Navigator Program:

1. Started in 2014, now in Year 6
2. # of patients impacted by students: ~2500



PennState
College of Medicine

The Evolving Social History in Medicine

The Evolving Social History Components:

1. Racial or ethnic background
2. Marital status and children
3. Occupation
4. Highest level of education
5. Tobacco, ethanol, drugs
6. Seatbelt and helmet use
7. Firearms in the home
8. Victim of domestic violence
9. Poverty
10. Cultural barrier
11. Poor neighborhood composition
12. Poor quality housing
13. Educational limitations
14. Unstable work schedule
15. Language barriers
16. Lack of access to healthcare
17. Unstable housing or homelessness
18. Legal troubles
19. Unemployed/underemployed
20. Lack of or no insurance
21. Food insecurity/unhealthy diet
22. Family care demands
23. Near poverty/financial struggles
24. Visit no show/unable to reach patient
25. Social isolation
26. Health literacy limitations
27. Frequent healthcare utilization
28. Lifestyle quality
29. Elderly or disability
30. Transportation issues
31. Health system coordination/mistrust
32. Behavioral and mental health

Traditional Social History Components:

1. Racial or ethnic background
2. Marital status and children
3. Occupation
4. Highest level of education
5. Tobacco, ethanol, drugs
6. Seatbelt and helmet use
7. Firearms in the home
8. Victim of domestic violence

Associated
with patient
outcomes

Patient Needs Identified By Students

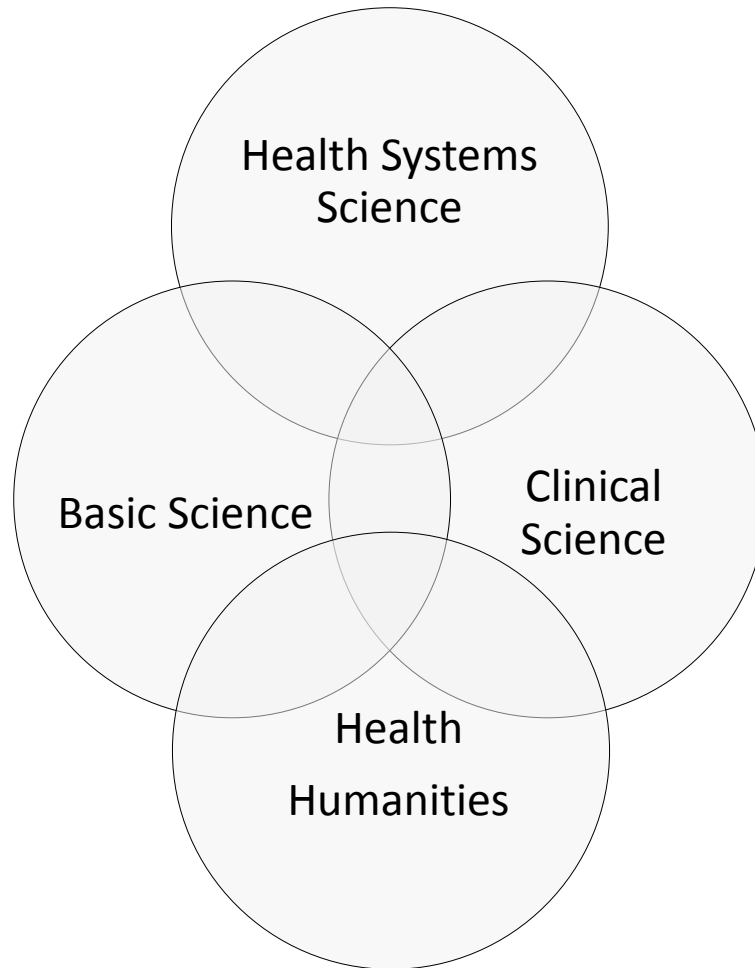
Poverty
Poor Neighborhood Composition
Cultural Barrier
Language Barriers
Educational Limitations
Unstable work schedule
Lack of Access to Healthcare
Poor Quality Housing
Legal Troubles
Unemployed/Underemployed
Lack of or No Insurance
Unstable housing or homelessness
Family Care Demands
Food Insecurity/Unhealthy Diet
Visit No Show/Unable to reach pt
Near Poverty/Financial Struggles
Social Isolation
Lifestyle Quality
Frequent Healthcare Utilization
Elderly or Disability
Transportation Issues
Health Literacy Limitations
Health System Coordination/Mistrust
Behavioral and Mental Health

% of total

Educational Benefits



The “Third” Pillar



Health Systems Science definition:
the principles, methods, and practice of improving quality, outcomes, and costs of healthcare delivery for patients and populations within systems of medical care.



What are students learning?



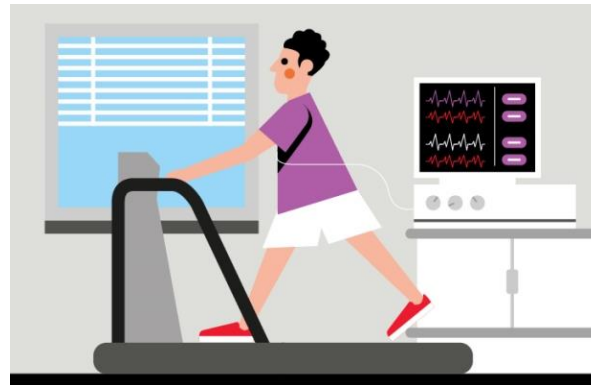
1. Patient's perspective on health care and his/her health
2. Patient's social determinants that are impacting his/her health
3. Communicating with patients
4. Interprofessional collaboration and teamwork
5. Healthcare delivery and the system
6. Systems thinking
7. Clinical medicine



What are students learning?



1st-year medical student working as a patient navigator in the Physical Medicine and Rehab Hospital was assigned to perform a home safety assessment for a patient pending discharge. He failed to attend the scheduled appointment with the patient, which was uncovered after the social worker talked to the patient the following week. When confronted with this information, the student communicated that it was not clear to him about the expectation for the experience.



“The Mini Stress Test”

Penn State College of Medicine Medical Student EPAs for Patient Navigation

Student is entrusted to:

1. Interact professionally with patients, staff, and clinicians in both informal and clinically-based settings.
2. Effectively manage communication with patients and members of the interprofessional care team.
3. Comprehensively assess and diagnose the root causes of a patient’s healthcare situation.
4. Identify and facilitate linkage of health system and community resources for patients in need.
5. Participate in and contribute to the ongoing work of an interprofessional care team within a clinical setting.
6. Document patient encounters in the electronic health record in a timely and accurate manner.
7. Apply the habits of a system thinker when they work to address patients’ healthcare situation.
8. Build a therapeutic relationship with a patient.

VTCSOM Context

Report of the Task Force on Health Systems Science and the VTCSOM Curriculum Presented to Dean Lee Learman, January 31, 2020

IV. Recommendations for Year Two

The task force recommends consideration of the follow changes to the second year curriculum:

- e. A new patient navigation experience (or similar) for M2 students should be created, in collaboration with our health system partner Carilion Clinic and working closely with the Carilion Office of Community Health Outreach as well as with additional, to be identified community health agencies. To create this experience, a total of five dedicated time slots have been identified as part of a revised curriculum schedule for the M2 year. To be of maximum impact, the navigation experiences must be designed to allow students to follow a patient/family longitudinally, and thus ideally would continue into subsequent years of the curriculum whenever feasible. It is also recommended that the M3 clerkship directors be included in the planning of the navigation experience, along with leadership of the current M1/M2 LACE program.



Question

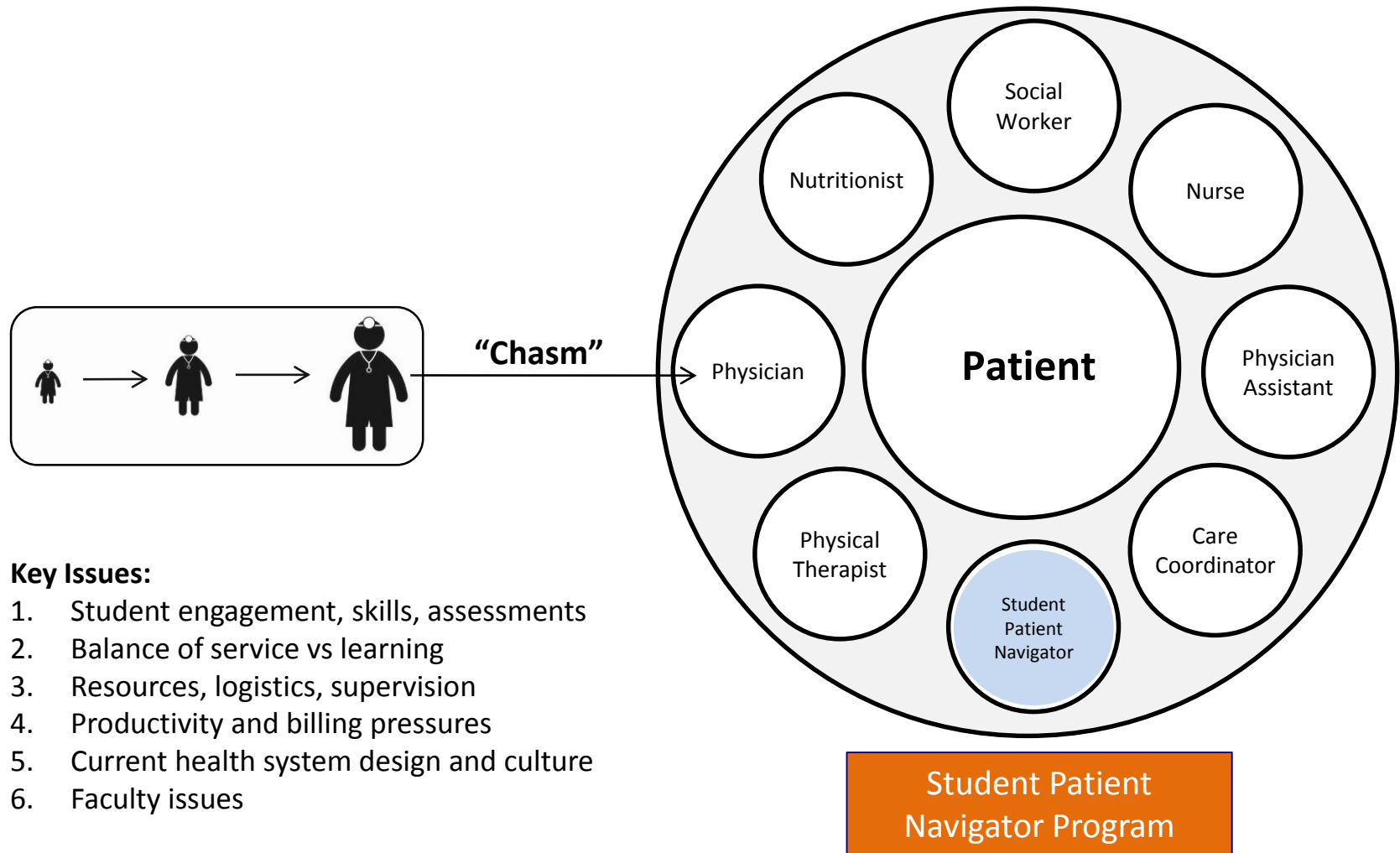
What do you see as the potential opportunity for designing and implementing a patient navigator program at VTCSOM?



Key Challenges and Principles



Current Education Model: The Mini Physician Model



Key Issues:

1. Student engagement, skills, assessments
2. Balance of service vs learning
3. Resources, logistics, supervision
4. Productivity and billing pressures
5. Current health system design and culture
6. Faculty issues



Student Perspectives on Preferred Tasks

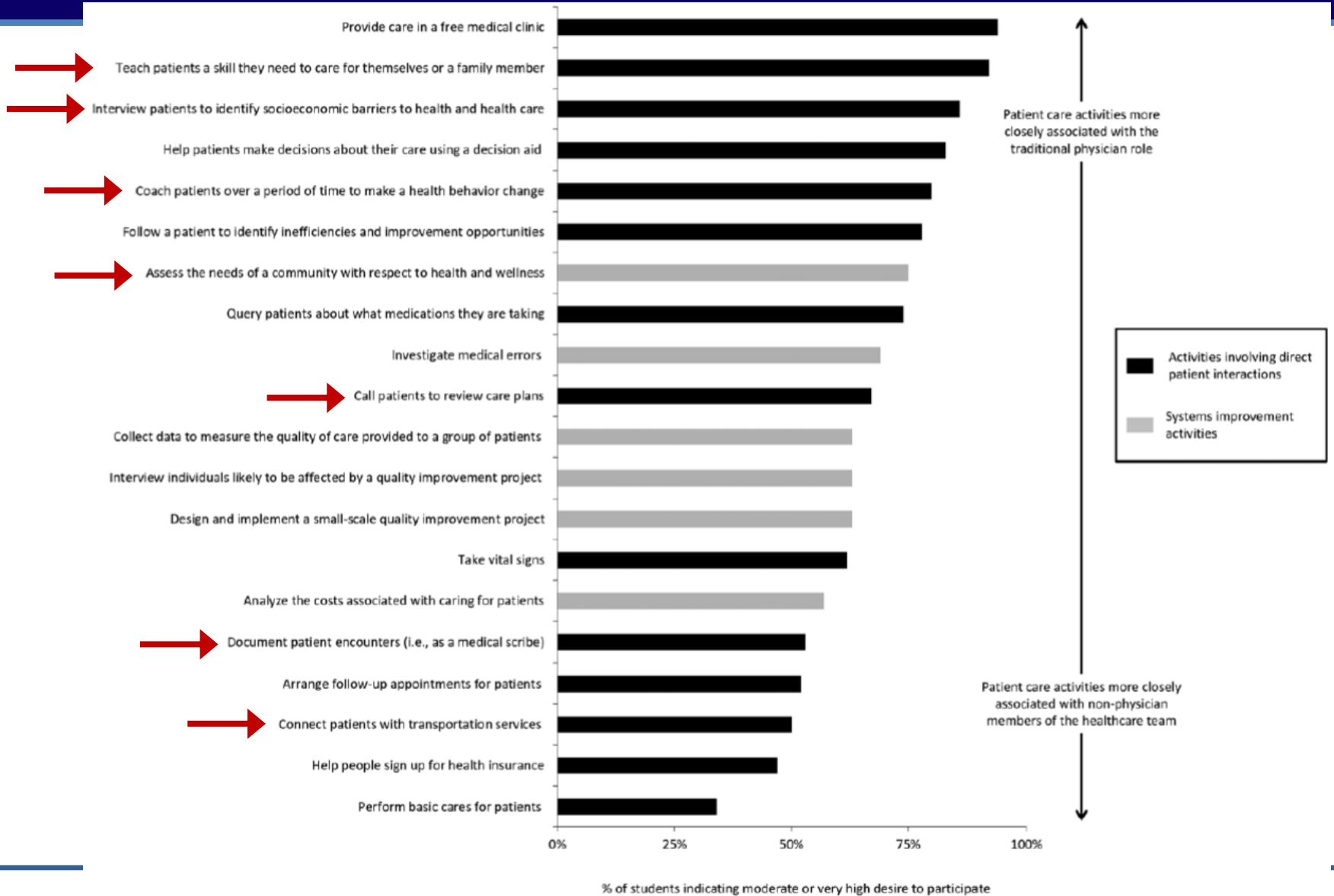


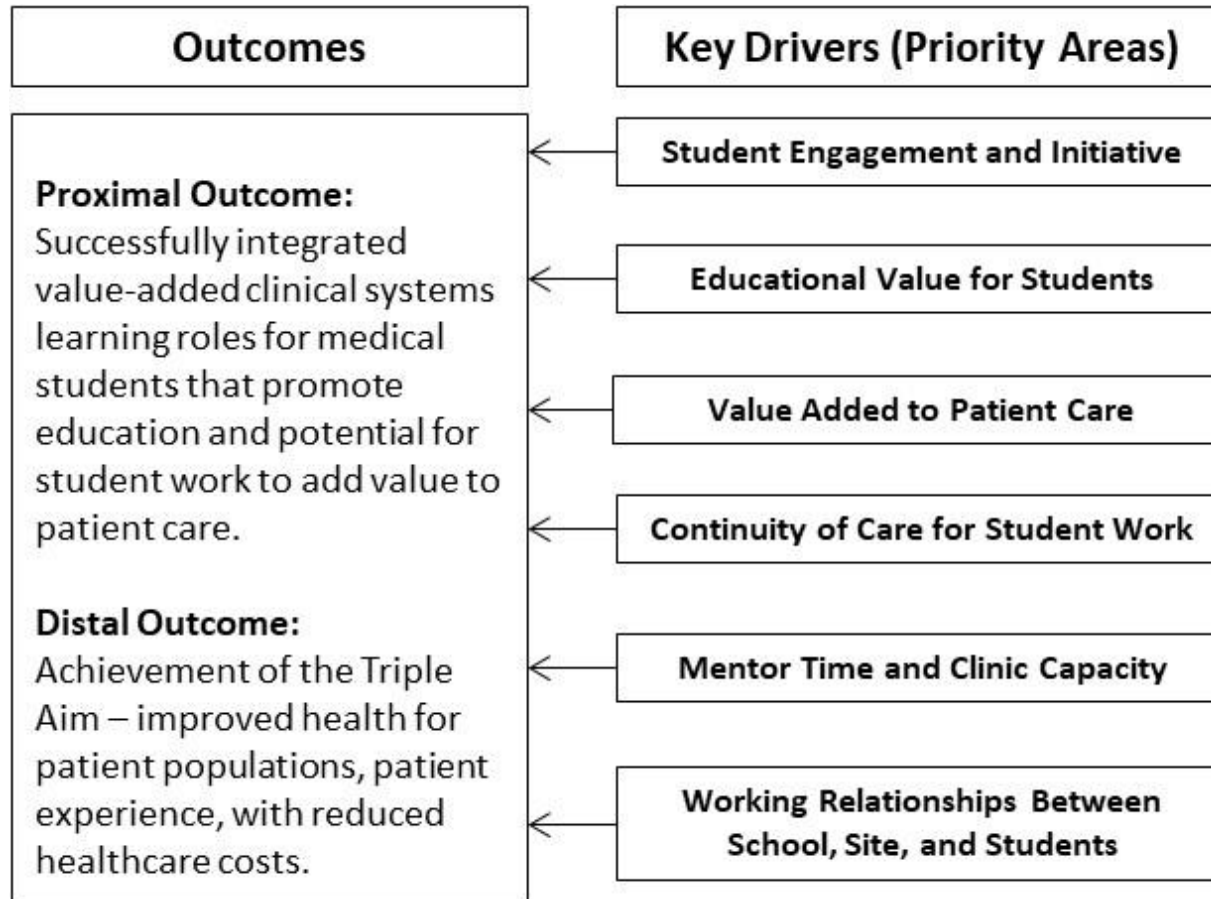
Figure 1 Percentage of first- and second-year U.S. medical students indicating moderate or very high desire to participate in value-added activities, from a survey of attitudes toward value-added education at nine U.S. medical schools, 2017.

“Continuity”

Continuity	Goals	Objectives
Care	Learning through patient connection, caring, advocacy	Involvement with patient at the start and during course of illness
Curriculum	Learning in an integrated fashion to promote competence	Acquisition of competencies in developmental fashion; application of science to problem solving
Supervision	Learning from close and serial connection with most able educators	Community of learners, educators, caregivers; coaching and mentorship



Key Driver Diagram for Implementing Value-Added Roles



Questions

What are some of the anticipated challenges here at VTCSOM in developing and implementing a patient navigator program?



Take Aways: Top 5 Features for VAME Roles

1. Integrate students into interprofessional care teams.
2. Ensure students are aware of site functionality and role within team.
3. Provide students the opportunity to be active, “value-added” participants in the clinical site (i.e. not observers).
4. Provide students the opportunity to have a high degree of continuity within the clinical site and with patients.
5. Develop a proactive continuous quality improvement process between curriculum, students, and mentors.



Objectives

Upon completion of this session, participants will be able to:

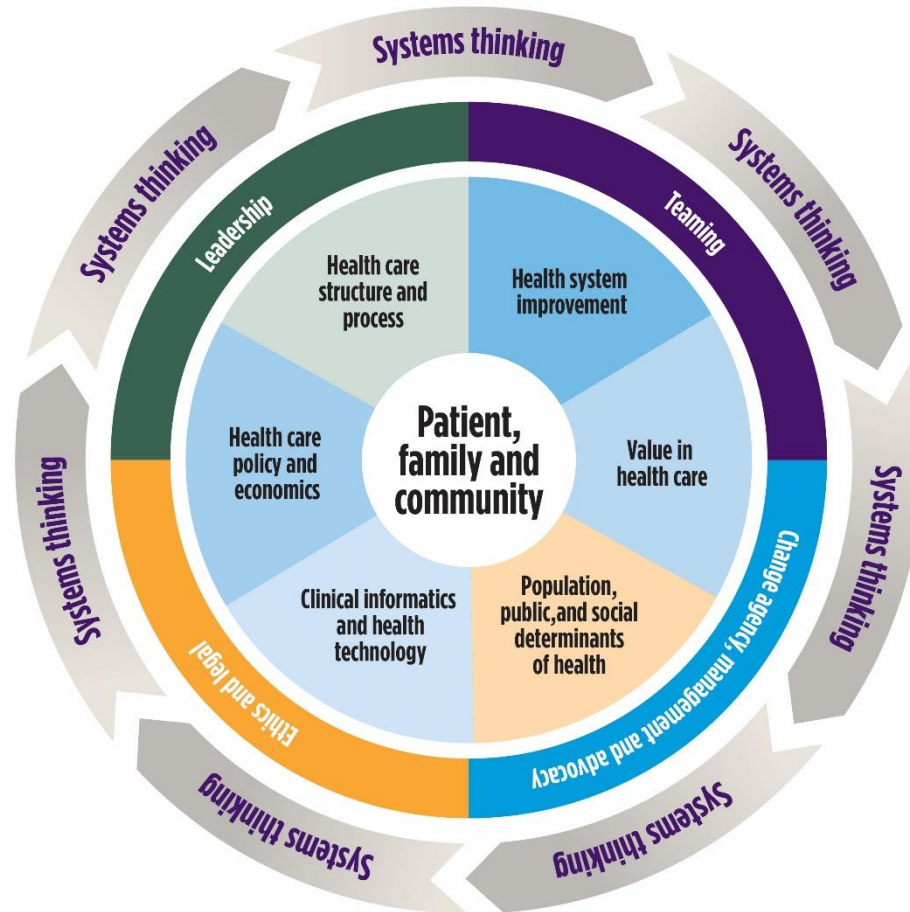
1. Define value-added medical education,
2. Identify challenges for medical students within clinical learning environments to contribute to patient care,
3. Highlight several examples of pre-clerkship and clerkship roles that can potentially add value to the health system, and,
4. Identify the intersections between Health Systems Science education and value-added roles and tasks.



Thank you!



The HSS Framework



VAME Roles – The Change Process

