ABSTRACT: 2016 ELAM Institutional Action Project Symposium

Project Title: Linking 3-Year Accelerated Program with Longitudinal Integrated Clerkship to Build Primary Care Workforce Capacity

Name and Institution: Shou Ling Leong, MD, Director of Longitudinal and Accelerated Programs, Penn State College of Medicine

Collaborators: A. Craig Hillemeier, MD (Dean, CEO and Senior Vice President for Health Affairs); Terry Wolpaw, MD, MHPE (Vice Dean for Educational Affairs); James Herman, MD, MSPH (former Chair); William Bird, DO (Interim Chair); Daniel Schlegel, MD (Residency Director) in the Department of Family and Community Medicine

Background, Challenge or Opportunity:

For more than a decade, prominent organizations have called for educational reform to better align medical training with national healthcare needs.

Rationale for change:

- Education should be competency-based rather than solely time-based
- Education should be individualized, including length of medical school
- Debt due to the high cost of medical education is a major hardship for many graduates
- The national shortage of physicians, especially in primary care, needs to be addressed
- Longitudinal integrated clerkships (LIC) foster empathy and patient-centeredness

Purpose/Objectives: Develop an accelerated program with LIC as the clinical core to nurture interest in primary care and prepare future physicians to practice in the changing healthcare environment.

Methods/Approach:

Multiple meetings were held with key leadership including the Dean, CEO of the medical school, Vice Dean of Educational Affairs, and the Chair and Residency Director in Family Medicine. After agreement to develop a 3-year accelerated program, approval was obtained from other leaders including the Dean of Admissions, Chief Financial Officer, legal counsel and the Liaison Committee on Medical Education (LCME). A team worked on curriculum design through an iterative process, with consultation from national experts on medical education including David Hirsh (Harvard) and Ann Poncelet (UCSF) on longitudinal integrated clerkships, and Betsy Jones (Texas Tech) and Joan Cangiarella (NYU) on accelerated programs.

Outcomes and Evaluation:

In December 2014, Penn State College of Medicine launched a pilot 3+3 accelerated program in Family Medicine (FM-APPS) that allows students to complete medical school and Family Medicine Residency (3 years each) at Penn State Hershey. Currently, 3 students are enrolled in the program. Student feedback has been very positive.

Penn State is a member of the Consortium of Accelerated Medical Pathway Programs (CAMPP) of eight medical schools funded by the Josiah Macy Jr. Foundation. The goals of CAMPP are to share best practices from member schools and to generate new knowledge regarding scalable, replicable and portable models that can be adopted by other medical schools developing accelerated programs.

Research topics: Selection process (student characteristics) to best ensure success and avoid student burnout; mentoring over 6 years of medical school and residency to enhance learner development; how best to monitor competency and confirm residency readiness; whether LIC in 3 year programs can foster empathy and patient centeredness shown in 4 year curriculum.

Linking 3-Year Accelerated Program with Longitudinal Integrated Clerkship to Build Primary Care Workforce Capacity



PennState College of Medicine

Shou Ling Leong, MD (Director of Longitudinal and Accelerated Programs); Penn State College of Medicine

Collaborators: A. Craig Hillemeier, MD (Dean, CEO and Senior Vice President for Health Affairs); Terry Wolpaw, MD, MHPE (Vice Dean for Educational Affairs); James Herman, MD, MSPH (former Chair); William Bird, DO (Interim Chair); Daniel Schlegel, MD (Residency Director) in the Department of Family and Community Medicine

Background and Opportunity:

For more than a decade, prominent organizations including the IOM, AAMC, AAFP and Josiah Macy Foundation, have called for educational reform to better align medical training with national healthcare needs.

Rationale for change:

- Education should be competency-based rather than solely time-based
- Education should be individualized, including length of medical school • Debt due to the high cost of medical education is a major hardship for many graduates
- The national shortage of physicians, especially in primary care, needs to be addressed
- Medical education is too long; the average age of medical graduates is 8 years older
- Longitudinal integrated clerkships (LIC) foster empathy and patientcenteredness
- Three year accelerated program is not a new concept. In the 1970s, 25% of U.S. medical schools offered 3-year programs. With rising student debts and calls for individualized education, there is renewed interest in 3-year programs. In a 2014 survey of medical school deans, 35% of schools are considering the development of accelerated pathways.

Purpose/Objectives:

Develop a 3-year accelerated program with curricular innovation to nurture interest in primary care and prepare future physicians to practice in the changing healthcare environment. The overall goals are:

1) Accelerate training to allow completion of medical school in three

years, followed by 3 year of Family Medicine Residency training at Penn State Hershey

2) Increase the efficiency and integration of the learning environment for clinical core training by replacing traditional block clerkships with longitudinal integrated clerkships (LIC)

3) Nurture and support students to prevent erosion of patient centeredness and empathy

4) Develop crucial primary care skills (team-based care, care coordination, medication safety, and population health) by offering the Patient Centered Medical Home (PCMH) as a longitudinal course

Methods/Approach:

Multiple meetings were held with key leadership including the Dean, CEO of the medical school, Vice Dean of Educational Affairs, and the Chair and Residency Director in Family Medicine. After agreement to develop a 3year accelerated program, approval was obtained from other leaders including the Dean of Admissions, Chief Financial Officer, legal counsel and the Liaison Committee on Medical Education (LCME). A team worked on curriculum design through an iterative process, with consultation from national experts on medical education including David Hirsh (Harvard) and Ann Poncelet (UCSF) on longitudinal integrated clerkships, and Betsy Jones (Texas Tech) and Joan Cangiarella (NYU) on accelerated programs.

Presented at the 2016 ELAM® Leaders Forum

CURRICULUM							
PHASE I – "Foundations" (20 months)							
Scientific	Principles of	Medicine			Organ Blocks		
Science of Health Systems							
Foundations of Patient Centered Care							
Humanities							
ACCELERATION					Medical Home Longitudinal Course	(Summer) Underserved Medicine Clerkship Elective	Family Medi Clerkship Elective
PHASE II - Longitudinal Integrated Clerkship (11.5 mor					. ,	PHASE III - Residenc Board Prep	y Preparation (3 r
MON	TUE Pro-Bo	WED	THUR	FRI	SAT SUN	USMLE Step I & II	
Pre-Round on Inpatient Inpatient Attending Rounds/Didactics				tics	Occasional	Acting Internship	
Neurology Clinic		Internal Medicine Clinic	OB/GYN Clinic	Pediatric Clinic	ED Shift	Complete Elective Re Complete Medical Ho	•
Self - Directed Learning	Family Medicine Acting Internship	Psych Clinic	Self - Directed Learning	Self - Directed Learning			





Executive Leadership in Academic Medicine

Key features of the accelerated program: • Customized for Family Medicine specialty to ensure educational continuity over 6 years • Course work during summer between years 1 and 2 • Start clinical training in March of year 2 • Postpone Step I board exam until after the clerkships • Up to 4 students selected each year **Outcomes and Evaluation:** licine ✤ In December 2014, Penn State College of Medicine launched a pilot 3+3 accelerated program in Family Medicine (FM-APPS). Currently, 3 students are enrolled in the program. Student feedback has been very positive. ◆ Penn State is a member of the Consortium of Accelerated Medical Pathway Programs (CAMPP) of eight medical schools funded by the Josiah Macy Jr. Foundation. The goals of CAMPP are to share best practices from member schools months) and to generate new knowledge regarding scalable, replicable and portable models that can be adopted by other medical schools developing accelerated programs. ✤ Research topics: Selection process (student characteristics) to best ensure success and avoid student burnout; mentoring over 6 years of medical school and residency to enhance learner development; how best to monitor competency and confirm residency readiness; whether LIC in 3 year programs can foster empathy and patient centeredness shown in 4 year curriculum; factors that would support scalable and replicable models. **Student Testimony:** "...three year program is not a "shortcut" to finishing medical school; all the requirements for the traditional fourth year curriculum are being met. It is not merely about saving money... it is not about foregoing extra learning in favor of earlier advancement to residency. What it does allow is earlier-than-early exposure to clinical education and a "big picture" perspective on "why we are really here" that can get lost in the conventional two first years. During my electives, I am able to tailor my learning to those things that I'll most likely be able to use. This type of program is not simply about a shorter education, but a better education...there's a steep learning curve that allows for an integrated and multimodal educational process." **Next Steps:** • Expand and develop accelerated programs in General Internal Medicine, Orthopedics and Neurosurgery • Develop LICs in 2-3 community hospital sites as part of 4-year curriculum • Steering committee will monitor the progress and modify the curriculum as needed Conduct studies on the research topics in collaboration with schools in CAMPP