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THEME OF ISSUE 11:

Block 1: “Becoming a Doctor” ushers in New Curriculum July 12

David C. Aron, M.D., M.S., David.Aron@med.va.gov, leader for **Block 1: Becoming a Doctor**, describes the approach as “starting from the outside and moving in,” by providing an understanding of the “**outer context**” of the patient—which may include family, neighborhood, ethnic group, the larger society, social and economic status—*before* studying the “**inner context**” of physiology, biochemistry, and molecular biology.

After completing Block 1, the student will be able to

- Demonstrate how the care of a patient raises questions across multiple domains in addition to clinical medicine, including biomedical science, society, culture, and economics
- Describe how social and behavioral factors work through individuals and impact health and health outcomes
- Apply the principles of epidemiology and biostatistics to clinical situations and studies
- Describe the doctor’s role(s) and responsibilities to each individual patient (classical professionalism) and also to society at large (civic professionalism)
- Describe the integral role of the physician as scholar.

Guided by oversight from Dean Ralph Horwitz, the Block 1 “core group” developing this innovative approach includes: leader David Aron, M.D., M.S.; co-leader Nick King, Ph.D.; Cynthia Bearer, M.D., Ph.D.; Leanne Chrisman-Khawan, M.D.; Doug Einstadter, M.D., M.P.H.; Scott Frank, M.D.; Susan Wentz, M.D.; Peter Whitehouse, M.D., Ph.D.; Ms. Joanna Grossman (Class of 2008); Jonah J. Stulberg, M.P.H. (Class of 2008); and Ms. Amanda Wiant (Class of 2008); with medical informatics support provided by Thomas Nosek, Ph.D.; David Kaelber, M.D., Ph.D.; and Virginia Saha, M.S.L.S. Course Manager assisting the team is Ms. Laura Clementz.



Block 1 members present for the June 1, 2006 meeting, left to right: Drs. Nick King, Susan Wentz, David Aron, Doug Einstadter, Scott Frank and Ms. Laura Clementz

Dr. Aron explained the inspiration for **Week 1, Diabetes Week**. Intrigued by a poster appearing at a meeting of the Association of American Medical Colleges (AAMC) describing the University of Virginia's 2½-day "Cells to Society" kick-off course for first year medical students, Dr. Aron then asked to participate in the program in 2005 which focused on diabetes. A wide variety of aspects of diabetes was addressed via lecture, small group format, self-directed learning activities using the library, and field experiences. A University of Virginia graduate student with diabetes was interviewed in front of the class by a general internist and answered questions from the new medical students. The program culminated in an example taken from a completely different field—pediatric cardiology. The dean of the medical school gave an impressive talk illustrating the broad scope of issues involved in the cells-to-society influences on a child with congenital heart disease who developed cardiac arrhythmias following surgery and who ultimately died at age 19. Her health insurance stopped at age 18 and she could no longer afford the medications.

Dr. Aron appreciated the generosity of University of Virginia faculty and staff in sharing their materials, as he expanded the 2½-day experience by adding **more detail, more topics, and different types of patient interviews** to design **Week 1 of Case's Block 1**. Besides the expanded framework that distinguishes the Case program from its University of Virginia counterpart, Case follows a different route once the initial component ends. While students at the University of Virginia proceeded directly to study anatomy and embryology, Case students will examine **social and behavioral context as influences on the individual's health** and how the individual responds to disease—as well as science-oriented genetic composition and models of disease. Dr. Aron likes to refer to the variability of individual reactions to "disease," which he breaks down into "dis"- "ease" (comfortability), when looking at how comfortable the individual is in dealing with the disease, his/her own particular reactions to effects of the disease. Dr. Aron considers *disease* in traditional scientific terms as pathophysiology but when he talks about *illness*, he is interested in the individual's response to disease. In addition, management of disease and illness takes place in a healthcare system and organizational context.

During **Week 1**, which 1 runs from July 12 through July 19 and focuses on **diabetes**, students will be exposed to **related field experiences** in various healthcare systems and in the community. These may include visits to a hemodialysis unit (approximately half the patients receiving dialysis have diabetes), a clinic or hospital, a prosthetics unit (diabetes is a major cause of nontraumatic amputations), an eye clinic (diabetes is a major cause of blindness), a social care agency, a school to look at its health program, a grocery store in an indigent area to try shopping for a diabetic diet, etc. Students will develop questions related to their own field experiences—what do *they* want to learn about—and pursue them in groups of three or go to the library on their own. These questions would relate to the levels of cell, individual, and society. Students will search for answers and report back to the other students.

Also planned for Week 1 are lectures, patient interviews, anatomical correlation conferences, and an introduction to the library.

After Week 1 ends, students will continue learning activities related to the 1) **social and behavioral context of disease** (includes **ethics**); 2) the **role of the physician in society: individual and civic professionalism, conflict of interest, medical error, human factors**; 3) **epidemiology and biostatistics**; and 4) **small group case-based learning**. Four interactive **Medical Informatics sessions** on literature searching and appropriate use of patient records are also planned for this first block.

Dr. Aron believes that Case is unique among medical schools in its *immediate* introduction of first year medical students to **healthcare quality and patient safety**. Students will encounter a **case of wrong site surgery**, based on a true story, where the wrong leg was amputated. Three **other cases** planned for Block 1 focus on **adolescent health issues in a middle school, a natural disaster, and investigating an infectious disease outbreak**.

Block 1 examines **the doctor's role in society**. An introduction to **how doctors think** will be given by **Dean Ralph Horwitz** and **Dr. Jerry Kassirer**. Dean Horwitz, a clinical epidemiologist, has contributed his special oversight to the development of Block 1 with its vision linking the practice of medicine to civic responsibility and the impact of social influences on health and health care. Dr. Jerry Kassirer, Professor Emeritus at Tufts University and Adjunct Professor at Case, is a former editor of the *New England Journal of Medicine* and recognized expert on clinical reasoning and conflict of interest. Dean Horwitz and Dr. Kassirer will present two lectures on **clinical reasoning** and **conflict of interest**.

Block 1 will feature many elements from the current curriculum's Fundamentals of Medical Decision Making (FMDM) committee such as **epidemiology and biostatistics** lectures and **critical appraisal/Journal Club** skills. A learning **activity similar to the position paper** will be included, where groups of students will debate the merits of screening for various conditions. Students within each group will collaborate to research the topic, critically evaluate the literature, and advocate collectively either for or against screening. The majority of **large group discussions** in Block 1 will be **interactive** and traditional lectures will make up less than 20% of all sessions. Use of the electronic audience response system will allow students to participate actively in the discussion and enhance the traditional lecture learning environment. During Dr. Aron's Public Health and Disease lecture, students will estimate their own risk of getting diabetes to be compared with results from entering personal data on a diabetes Web site during the class session. Other sessions will employ learning activities done by **groups** of students in class.

To understand the impact behind the statement that "one-half of health status is determined by social and economic environment," students will look into the **interaction between genes and environment**. They will examine a case study of inhabitants in the Marshall Islands (former U.S. nuclear testing site in the North Pacific Ocean) where the prevalence of diabetes dramatically increased from 0% in 1900 to 25% in 1990.

Students will be asked regularly what has not yet been solved. Dr. Aron plans for the entire class to revisit these particular issues in their fourth year two weeks prior to Match Day in order to take stock of what we have learned, what we previously learned that has subsequently been shown to be incorrect, and what remains to be solved. There is much in medicine that remains to be "figured out."

Believing that, "One should take a **scholarly approach** wherever one happens to be," Dr. Aron cites the example of the evolution of a therapy for treatment of diabetes. During World War II, a physician ordered a readily available oral sulpha drug to combat an outbreak of typhoid in Vichy-occupied France. Noticing the resulting low blood sugars, he approached a scientist to experiment on dogs to determine whether the cause of the lowered blood sugar was from the drug itself or from the interaction of the disease with the drug. The physician's inquisitive nature led to the discovery of the sulfonylurea class of drugs for treatment of diabetes.



Dr. David Aron, fortified by one of his many Diet Cokes, reviews Block 1 slides

Dr. David Aron has been at the Louis Stokes VA Medical Center since 1980. Beginning there as a bench (lab) researcher, he decided to pursue his interest in improving health care by commuting to the University of Michigan to earn a Master of Science in Clinical Research Design and Statistical Analysis. Currently funded in this area, Dr. Aron is involved in Phase II translational research ("implementation"), where knowledge discovered in the "bench to bedside" Phase I (hopefully) gets expanded "from **one** bedside to **all** bedsides." Dr. Aron is a professor of Medicine at the Case School of Medicine with a secondary appointment as professor of Epidemiology and Biostatistics. He is also a professor of Organizational Behavior at the Case Weatherhead School of Management.

QUICK OVERVIEW OF THE NEW CURRICULUM

Recall that the curriculum vision focuses on **four pillars: civic professionalism, leadership, research and scholarship, and clinical mastery**.

The curriculum develops the pillars through **four major components**:

- 1) *Foundations of Medicine and Health*
- 2) *Research and Scholarship*
- 3) *Core Clinical Rotations*
- 4) *Advanced Clinical and Scientific Studies*

Curriculum Overview: the University Program

Year I	Year II	Year III	Year IV
Foundations of Medicine and Health (20 months, including vacation)	Core Clinical Rotations (48 weeks, flexible scheduling)		
	Research and Scholarship (4-month block plus electives, flexible scheduling)		
		Advanced Clinical and Scientific Studies (10 months, flexible scheduling)	

Foundations of Medicine and Health

July 2006							March 2008
Block 1 Becoming a Doctor (Social-Behavioral Context, Civic Professionalism, Epi/Biostats)	Block 2 The Human Blueprint 1 Week Clinical Immersion (Endo, Repro, Development, Genetics, Mol Biol, Cancer Biology)	Block 3 Food to Fuel 1 Week Clinical Immersion (GI, Nutrition, Energy, Metabolism, Biochemistry)	Block 4 Homeostasis 1 Week Clinical Immersion (CV Pulm, Renal, Cell, Regulation, Pharmacology, Cell Physiology)	Block 5 Host Defense and Host Response 1 Week Clinical Immersion (Host Defense, Microbiology, Blood, Skin, Auto-immune)	Block 6 Cognition, Sensation, and Movement 1 Week Clinical Immersion (Neuro, Mind Musculoskeletal Cellular Neurophysiology)		
Block 7: Structure (Anat., Histo-Path, Radiology)	→	→	→	→	→	→	
Block 8: Clinical Mastery	→	→	→	→	→	→	
LONGITUDINAL THEMES							
<ul style="list-style-type: none"> • Civic Professionalism • Leadership • Population Medicine • Bioethics • Research & Scholarship 	→	→	→	→	→	→	
	Reflection & Integration	Reflection & Integration	Reflection & Integration	Reflection & Integration	Reflection & Integration	Reflection & Integration	Reflection & Integration
							BOARD REVIEW BLOCK

RESEARCH AND SCHOLARSHIP

Each student will:

- Undertake a mentored experience in research and scholarship
- Have a minimum of 4 months protected time for his/her scholarly project
- Identify a research question, develop an approach to studying the question, prepare a proposal, pursue the project and interpret the observations
- Develop a thesis in the format of a journal manuscript

CORE CLINICAL ROTATIONS

The Core Clinical Rotations encompass three **16-week blocks** of clinical experiences that also incorporate basic science objectives. There are two 16-week blocks of basic core rotations (Basic Core I and Basic Core II) and 16 weeks of advanced core rotations (Advanced Core). Students experience both breadth and depth in clinical care, along with basic science integration, through clinical experiences that are developmental and provide opportunities to reinforce, build upon, and transfer knowledge and skills.

The new core clinical rotations will begin in July 2006 for current students in the Class of 2008 and will be shared by students in both the University and College programs. In the following year they will begin as early as March of the second year for students in the University program. Each 16-week block will be offered at our three affiliated teaching sites (UH/VA, MetroHealth, CCF). For Basic Core I and Basic Core II, students are based at one site for the 16-week block. The Advanced Core can be taken in modules and shared among teaching sites.

CORE CLINICAL ROTATIONS

March 2008-July 2009

BASIC CORE I:

Family Medicine, Internal Medicine, Surgery
Basic Science Integration
(16 weeks at one of 3 teaching sites)

BASIC CORE II:

Neurosciences, Pediatrics, Psychiatry, Women's
Health (OB/GYN)
Basic Science Integration
(16 weeks at one of 3 teaching sites)

ADVANCED CORE:

Undifferentiated Care
Chronic Care
Care of the Aging
Peri-Operative Critical Care and Pain Management
(Each four weeks, flexible scheduling)

TYPICAL OPTIONS FOR CORE CLINICAL ROTATIONS AND RESEARCH

March 08

July 09

Research 16 weeks (March-July)	Basic Core I or II 16 weeks	Basic Core I or II 16 weeks	Advanced Core 16 weeks Flexible scheduling
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Basic Core I or II 16 weeks	Research 16 weeks (July-November)	Basic Core I or II 16 weeks	Advanced Core 16 weeks Flexible scheduling
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Basic Core I or II 16 weeks	Basic Core I or II 16 weeks	Research 16 weeks (November-March)	Advanced Core 16 weeks Flexible scheduling
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ADVANCED CLINICAL AND SCIENTIFIC STUDIES

- Becoming a Doctor II: For two weeks prior to Match Day of the fourth year, students will return to the concepts introduced in Becoming a Doctor I. They will take stock of what we have learned in four years, what we previously learned that has subsequently been shown to be incorrect, and what remains to be solved. There is much in medicine that remains to be “figured out.”
- Two Sub Internships
- Areas of Concentration: 12 weeks of linked experiences integrating basic science and clinical experiences and intended to result in an area of expertise
- Further clinical and research electives

EDITOR’S CORNER

Those of you old enough to remember the lyrics to “Gee, Officer Krupke!” in the Leonard Bernstein/Stephen Sondheim musical “West Side Story” may remember the reference to “a social disease.” I’m using this term in a very different context here.

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“Social” Disease?

Block 1 explores the infinite variety
Of influences on health—from the economy to society.
It takes a look at gene/environment interactions
To discover the cause of disease in certain population factions.

Block 1 recognizes the role behavior plays
By sending new medical students out on forays
Into a neighborhood school or grocery store
To situate the patient in a much larger context before

Zooming in to study physiology, biochemistry, and molecular biology
Without acquiring some sense of sociology, psychology, and epidemiology.
Since disease is “managed” through a healthcare system with its own organization,
Visits to local clinics and hospitals enhance understanding the patient’s situation.

Heredity, community, the type of healthcare system or its utter lack
All offer their own little “codes” (à la Da Vinci) to crack.
Each patient has a “culture” that makes him unique.
Explain “same disease/different response.” Isn’t your curiosity piqued?

Look to Block 1 to boldly declare
That social influences impact on health and health care.
The link between science and society compels
Treating the patient as much more than just a collection of cells.