

ICRS Curriculum Review “Boil down” of Highlights

Group 1 – Hosseini, Plant,	AMA Consortium	US News top 25 (Primary
Indiana University	Yes	
Mayo Medical School	Yes	
Harvard Med School	Yes (new member)	Yes (tied for 12)
New York University	Yes	
Michigan State	Yes (new member)	Yes (tied for 12)
UCLA		Yes (7)
University of Wisconsin		Yes (9)
U of Pittsburg		Yes (tied for 19)
UC San Diego		Yes (tied for 19)

**School #1: Indiana University**

Distinguishing Features--Consensus List

**9 campus school**, all cover **core curriculum** (80% of contact)

**Faculty integration** in first 2 years (core faculty teach most classes), but little course integration

**Foundations of Clinical Practice and Quality Healthcare Delivery** -L ongitudinal courses first 2 years

**Virtual Healthcare System (vHS) with Teaching EMR (tEMR):** Is clone of actual EMR with de-identified patient information, focused on health care financing, access to care, QI, healthcare disparities, used by students in virtual clinics with faculty as virtual attendings (master clinician educators), review actual patient data, write orders, etc on their 15 patient panel, are organized into learning communities for projects

Idea List

Could we use incorporate a teaching EMR into Doctoring and PBLI activities?

## **School #2: Mayo Medical School**

### Distinguishing Features--Consensus List

**3 campus school** (Rochester, Jacksonville, new Phoenix)

1-2 week **selectives** in first 2 years to allow students to explore

interests Many **core clerkships only 6 week** experiences

3 week **intersession** in the middle of 3 year to bring basic sciences into clinical arena

12 weeks for **research** in the 3<sup>rd</sup> year

1 week residency **boot camp** in the 4<sup>th</sup> year

**Science of healthcare delivery** certificate (and optional masters) program

There are 6 foci of the SHD curriculum:

- Health policy, economics, and technology
- Person centered care
- Leadership Team  
based care
- Population centered care
- High value care

### Idea List

Could we incorporate selective time into first two years to allow students to pursue their interests or complete core experiences if they need more time than their peers to do so (remediate?)?

## **School #3: Harvard**

### Distinguishing Features--Consensus List

1. Overall curriculum changed quite dramatically this year: Most of the preclinical basic sciences are taught during the first 12 weeks, with reduced lecture format. Content that is cut is added both to the pathophys courses that follow as well as to the third and fourth years, when the students have the opportunity to take electives and selectives. Clerkships moved up to the fall of second year. When the required clerkships are completed the students take Step I. Similar to the curriculum recently implemented by Vanderbilt.

2. Details are scant. The curriculum appears to be very much "in progress".

3. When details are available, in may be interesting to look at their terminal capstone course (not going to be offered until 2019) and their professional development weeks.

## **School #4: NYU**

### Distinguishing Features--Consensus List

1. Similar to the Harvard/Vanderbilt model, but with more time dedicated to basic sciences material (22 weeks vs. 12 weeks). Clerkships start up a bit later than at Harvard (January, year 2). Gross anatomy (MDBM) is offered in two blocks mostly as a stand-alone course dedicated to preparing students for the pathophys courses that follow. Step I when required clerkships are complete.
2. Integrated "Pillars" offered throughout, with integrated material from basic and clinical sciences.
3. 8-12 weeks for research between Step I and the selective/elective clerkships of the fourth year.
4. Easily converted into a 3-year curriculum (reduced research and selectives).

## **School #5: Michigan State Osteopathic College**

1. First year starts with 8-week gross anatomy boot camp, followed by 12 weeks of Biochemistry, Histo, Immunology, Pharm and Doctoring. January and February are dedicated to a big neuromuscular course, and Physiology is taught largely by itself from March to early May. This is followed by a traditional organ system based pathophys year.
2. Students take on-line courses while taking clerkships at one of 24 "base hospitals".
3. Expanded required clerkships: Int Med, Fam Med, Peds, OBGYN, Neurology, Psych, Gen Surgery, Anesthesiology, Radiology, Em Med

## **School #6      UCLA**

### Distinguishing Features--Consensus List

2 months between 1<sup>st</sup> and 2<sup>nd</sup> year

Colleges in 4<sup>th</sup> year to strengthen career advising, improve the quality and selection of electives, provide a means of honing clinical skills, stimulate discussion of new findings in the basic, social, and clinical sciences relevant to the future practice of medicine. Options include Academic Medicine College, Acute Care College, Applied Anatomy College, Primary Care College, Drew Urban Underserved College.

### Idea List

A longer break between 1<sup>st</sup> and 2<sup>nd</sup> year would allow for work on scholarly project or remediation

Their college system seems like a way to allow for some “specialization” in the 4<sup>th</sup> year without being over-specialized and while also leaving some options open to generalists

## **School #7: Wisconsin**

### Distinguishing Features--Consensus List

Strong focus on public health including:

**Public Health Integrative Cases:** students examine an issue or case from many perspectives, including basic science, clinical, public health, social/ethical issues and health care systems. Facilitators include community public health practitioners. Through small group active, experience-based activities and faculty-led small group discussions, students discover many factors influencing health and wellbeing, the interconnections between those factors, and important roles for physicians in promoting health and wellbeing for both individuals and populations that extend beyond traditional ideas of clinical medical care. First- and second-year medical students each have 3-4 cases per year, typically over two days, following their exams.

## **School #8: UCSD**

### Distinguishing Features--Consensus List

**Academic Communities:** Each incoming student will be assigned to one of the ACs and maintain this affiliation over his or her entire medical school career. Each community has a faculty director. In addition, faculty members participate in each community to provide mentoring, counseling, and support.

**Electives in the first 2 years:** The elective program in the pre-clerkship Integrated Scientific Curriculum provides students the opportunity to broaden their intellectual experiences during the preclerkship years. Students are expected to complete a minimum of 15 weekly hours or approximately 135 total hours of elective work during the first two years of medical school. The elective hour requirement may be satisfied through participation in preclerkship elective courses, directed readings, independent study, preceptorships, and laboratory experiences.

### Idea List

In the spirit of integration across the years, I continue to like the idea of academic communities – at least as a means to provide mentorship

I also like the idea of protecting/requiring time in the first 2 years to work on scholarly activities.

## **School #9: University of Pittsburgh**

### Distinguishing Features--Consensus List

**Student run clinical curriculum:** They have developed a curriculum surrounding their student run clinic program that combines didactics with clinical experiences in the pre-clerkship years and again in the 4<sup>th</sup> year. There are syllabi available on line

**Areas of Concentration:** Area of concentration program provides an opportunity for students to pursue in depth an area of personal interest during their four years of medical school. This is accomplished with a series of longitudinal elective experiences that supplement the required core curriculum. Because of the intensity of study, the School of Medicine recognizes successful completion of the program by granting a certificate. Project work on an AOC topic may be applied toward fulfilling the requirements of both the AOC and the required scholarly project.

Each AOC draws from the following core elements:

1. Content and didactic material, including journal clubs, literature review, national meeting participation, syllabus, and reading lists
2. Faculty mentorship
3. Experiential component
4. Preparation of a scholarly project, often including presentation at a local or national forum
5. Evaluation of student participants

**Assessment week between 3<sup>rd</sup> and 4<sup>th</sup> year:** The overall goal of this course is to have students complete a series of structured assessments and participate in focused review sessions designed to enhance their preparation for the Step 2 Clinical Knowledge and Clinical Skills exams.

**Specific objectives include:**

1. Reviewing common important dermatological conditions and how to describe skin lesions
2. Reviewing common radiologic findings that every graduating student should know how to identify
3. Reviewing targeted areas in obstetrics and gynecology in preparation for Step 2 CK
4. Interpreting clinical pathological lab values to provide better patient care
5. Interpreting common and life-threatening EKG findings
6. Practicing with Step 2 CK exam questions to better understand content and timing of the exam
7. Practicing common clinical procedures often performed in acting internships

**Educational Methods**

- Lectures
- Practice exams
- Skills sessions
- Small group

cases [Idea List](#)

The idea of turning the SR clinic experience into a more rigorous and comprehensive learning experience seems quite innovative and a fabulous way to take something that already exists to the next level. I don't know a lot about the SR clinic experience but it seems like something we could consider here.

I like the idea of areas of concentration to structure the scholarly project, we are seeing this in a lot of schools.

I was disappointed in assessment week. It seemed like a chance to do global summative assessments of third year learning, but it turned out to be quite focused on prep for step 2

<b>Group 2 (Eidson-Ton, Kendall,</b>	<b>AMA</b>	<b>US News top 25 (Primary</b>
Oregon Health Sciences University	Y	#5
Penn State University	Y	
Brody Sch. of Med (report submitted)	Y	
Morehouse (report submitted)	Y (new)	
University of Chicago	Y (new)	#19 (tied)
University of North Dakota	Y (new)	
University of Utah	Y (new)	
Baylor College of Medicine	N	#11
Washington University	?	#19 (tied)

### **School #1: Oregon Health Sciences University**

#### Distinguishing Features--Consensus List

- This is a competency based curriculum that may allow some students accelerated progress based on previous experience. Without acceleration, preclinical years are shortened to 1.5 years to allow for 24 months of clinical rotations.
- Curriculum emphasized self-assessment.
- A scholarly project, capstone experience, and rural learning experience is required.

#### Idea list

- Scholarly project
- Capstone experience

### **School #2: Penn State University**

#### Distinguishing Features--Consensus List

- Curriculum places students in clinical rotations as active members of a larger health care team on preclinical years (as *navigators*). Minimizes the role of students as observers.
- A course called "Profession of Medicine" serves to help student's transition to the medical curriculum.
- Issues such as health care delivery, insurance, finance, quality, safety, and value are included in the curriculum.
- Also has a longitudinal "Medical Humanities" course.

#### Idea list

- Patient navigator role for preclinical students
- Longitudinal humanities course

### **School #3 Brody School of Medicine at ECU**

#### Distinguishing Features--Consensus List

- Focus on producing primary care physicians who will serve in underserved areas (especially in NC).
- AMA Grant: focused on comprehensive core curriculum in patient safety and clinical quality improvement for all medical students and faculty development.
- Ethics, Social issues, and “foundations of Medicine” courses: throughout the entire first 2 years. There is a lack of clarity at this time as to exactly what this means, but interested in the idea of having these as continuing themes for the first 2 years.

Idea List:

Nothing at this time.

**School #4 Morehouse School of Medicine**

Distinguishing Features--Consensus List

- Community health course and project: Public and community health course that culminates with each student creating their own project with a community leader to identify a community health need and then address the need and initiate a health intervention in the community. These data are then shared with community leaders.
- Faculty Development: well-constructed and extensive faculty development program required of all incoming faculty within 3 years of appointment.
- Mission of school is to take underrepresented minorities as students and turn them into well-trained physicians and trusted community leaders. Often the students are non-traditional in their experience and often with lower MCAT scores (average for incoming class = 26). Graduates have national averages for USMLE scores and match well for residencies. There is limited information on curriculum specifics, but there seem to be very specific remediation programs to help struggling students. Of note, the most recent curriculum reform was in 2005 and subsequent outcomes have been well assessed.

Idea List

- Community Health Course in first year with community as faculty and including required community engaged research project. The community project improves community health education, provides research experience for each student's portfolio, and connects the medical school with the local community.
- Faculty development program: Could use Morehouse's program as a template to expand current program. Required faculty development program (all faculty within 3 years of appointment)
- Remediation programs: look into the specifics of this (most likely requires contacting the school as it is not on their website). Use to help further develop our current remediation program.

**School #5: University of Chicago**

Distinguishing Features--Consensus List

- Maintains extended resources for faculty development.
- Students complete a scholarly project that develops over the four years of the curriculum, which includes mentorship by faculty and self-directed learning.
- Specialty elective courses are offered in year one.



- Longitudinal Technology in Med Ed course (includes simulation, on-line modules, etc)
- Basic science courses are not integrated.
- Year four includes a subinternship, four weeks of emergency medicine, and electives. One elective must include the topic *Scientific Basis of Medicine*.

#### Idea list

- Scholarly Project
- Faculty resources

### **School #6: University of North Dakota**

#### Distinguishing Features--Consensus List

- Pre-clinical learning: Patient centered learning- case based learning. 1<sup>st</sup> and second year. Clinical case, different each week. Meet 3 times that week for 2 hours to discuss case and information in lectures presented that week related to case.
- Lectures are about ½ "clinical sciences" and ½ "basic sciences" in first two years.
- Required Interprofessional Health Care Course (one evening/week for 5 weeks)
- Clinical training in years 3-4 may occur in any of four locations.
- Three curriculum options are offered for 3<sup>rd</sup> year: 1) traditional eight week clerkships, 2) increased emphasis on rural experience, 3) an integrated longitudinal experience.
- Reflections integrated into e-portfolio.
- School has an Asst. Dean of Faculty Development. Offers training in teaching, administration, research, supervision and mentoring, and leadership.

#### Idea list

- Patient-centered learning cases (i.e. PBL/ AMP) as organizing structure for first and second year pre-clinical curriculum.
- 3 different options for completion of 3<sup>rd</sup> year (traditional, LIC, rural)

## **School #7: University of Utah**

### Distinguishing Features--Consensus List

- School emphasizes clinical experiences through all four years. This includes working as a group of approximately ten student with one or two preceptors.
- Students receive special instruction for transition to clerkships.
- Curriculum integrates several threads through the four years, including interprofessional education, nutrition, women's and gender health, health care systems, public and global health, medical ethics and humanities, translational research, biomedical informatics, and cultural diversity.
- Students complete a scholarly project.
- Required service learning project

### Idea list

- Scholarly project
- Service learning project
- Longitudinal clinical coaches/mentors

## **School #8 Baylor College of Medicine**

### Distinguishing Features--Consensus List

- First year curriculum includes a class in integrated problem solving.
- The clinical curriculum begins in January of year two.
- Students receive training in the business and leadership in medicine and in evidence-based medicine during year two.
- Students may select some concentrated training in several different tracks; ethics, global health, geriatrics, care of underserved, medical management, genetics, space medicine, and medical school research.
- Professional advancement for Faculty can be based entirely on teaching excellence.

### Idea list

- Integrated problem solving in 1<sup>st</sup> year (? PBL)
- Faculty track for medical education
- Weekly continuity clinics from 1<sup>st</sup> year

## **School #9: Washington University**

### Distinguishing Features--Consensus List

- Students are required to complete *Selectives* in year one. Selectives allow students in-depth exploration of areas of interest beyond the core curriculum. These selective subjects are very diverse, including art & medicine, terminal illness and death, hands-on autopsy, philosophy of medicine, and many others.
- Required initial course called WUMP "Washington U Medical Plunge:" fieldtrips into local communities, health disparities and diversity issues, public health projects, etc.

### Idea list

- First year selectives

- Required learning about medically underserved local communities at beginning of medical school (kind of like the TEACH “Race and Health” course we have for TEACH students between 1<sup>st</sup> and 2<sup>nd</sup> year)
- Fourth year capstone—prep for residency course

Group 3: Venugopal, Rosseel, Traynham	AMA Consortium	US News top 25 (Primary
U of North Carolina	Yes (new member)	Yes (2)
Emory University	Yes (new member)	
U of Pennsylvania		Yes (tie for 12)
U of Iowa		Yes (16)
U of Nebraska (Indiv Report)	Yes (new member)	
U of Massachusetts (Indiv Report)		Yes (tie for 12)
Warren Alpert (Brown U) (BD Report pending)	Yes	
UCSF (BD Report pending)	Yes	Yes (3)

**Group: Group 3**

**Date Presented: 1/19/2016**

**School #1 University of North Carolina**

Distinguishing Features--Consensus List

- Integrated preclinical curriculum, teaching physiology and pathophysiology simultaneously
- Clinical curriculum divided into three tracks, each with dedicated focus and unique experiences (i.e. Ethics and Humanism, Emergency Medicine, Cardiology, and Radiology); all tracks have Longitudinal Integrated Curriculum
- “Career Exploration Electives” in 4<sup>th</sup> year include two-week courses in Sports Medicine, Global Health, Medical Education.

Idea List

- Integrated preclinical curriculum
- Longitudinal Integrated Curriculum within 3<sup>rd</sup> year

**School #2 Emory**

Distinguishing Features--Consensus List

- MS1 year begins with one week Orientation and one week “Week on the Wards,” a dedicated shadowing experience
- Continuity Clinic one afternoon every other week, beginning November of MS1 year, providing students with early clinical exposure
- Breadth of required clinical clerkships in the MS3 year, including Radiology, Dermatology, Urology, Orthopaedic Surgery, ENT, Ophthalmology and Palliative Care
- Required 5-month Discovery/Research period on any topic related to medicine (creative writing, public health, community development, education, health policy) with one required course on publishing and writing papers, reading literature, IRB

#### Idea List

- Early clinical exposure beginning MS1 year
- Increase breadth of third year clerkships
- Required research experience/project with dedicated time

#### **Group: Group 3**

**Date Presented: 3/15/2016**

#### **School #1 U Penn**

##### Distinguishing Features--Consensus List

- 'Integrated' basic and clinical sciences in pre-clinical curriculum
- School encourages students to take courses in other schools at Penn at no additional cost
- 18-month pre-clinical experience where students are paired up with chronically ill patients
- Third year includes traditional clerkships, plus 3 weeks optho, ENT, ortho
- Fourth year includes discipline based boot camp in final month of medical school
- Students take Step 1, Step 2 ck/cs between Jan of 3<sup>rd</sup> year and May or 4<sup>th</sup> year
- School offers multiple fifth year fellowships, including women's fellowship, ortho, and anatomic path
- Grading in MS1 p/f, MS2 h/p/f, MS3 and MS4 h/hp/p/f,

##### Idea List

- Early clinical experience, especially the idea of being paired with a patient vs. being paired with a preceptor
- Integrated pre-clinical curriculum
- Greater subspecialty choice during third year clerkships
- "Boot camp" preparation for residency

#### **School #2 U Iowa**

##### Distinguishing Features--Consensus List

- Preclinical includes Foundations course + integrated basic and clinical science courses
- Keystone between preclinical and clinical years
- Fourth year curriculum has menu of recommended electives and selectives based on three paths: generalist, interventionalist, undifferentiated
- Distinction tracks (global health, humanities, research, teaching, service)

##### Idea List

- Integrated pre-clinical curriculum with Foundations block
- Distinction tracks

**Group: Group 3**  
**Date Presented: 2/16/2016**

**University of Nebraska**

Your name: Ryan Traynham
Your Group: 3

<b>School Reviewed: University of Nebraska, College of Medicine – New for 2015</b>
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Sources of information on this school:
website
Webinar: <a href="http://webmedia.unmc.edu/com/COM%20Curriculum%20Transition%20June%202015.html">http://webmedia.unmc.edu/com/COM%20Curriculum%20Transition%20June%202015.html</a>

**ASPECT 1:**

Aspect #1 of school being reviewed:
Phase 1 - Integrated Systems Blocks

Aspect being reviewed is:
Preclinical <input checked="" type="checkbox"/>
Clinical <input type="checkbox"/>
Both <input type="checkbox"/>

**To the best of your judgment, please consider the following in highlighting each unique aspect you have identified for this school:**

**Does it add educational value? Is it innovative?**

**How difficult or easy would it be to implement at UCD School of Medicine? Whether you are aware if educational outcomes of the aspect have been assessed?**

Aspect #1 for this school—please elaborate: Phase 1 - Integrated Systems Blocks
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Please elaborate on what/why you found aspect #1 of this school worth consideration by ECRS? Foundations Block
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- 6 weeks in length
- Background Courses to ensure all students have a base knowledge
- OSLER-type Instruction around study habits
- Professional Identity
- Introduction to Clinical Decision Making

Systems-Based Blocks:

- Common Approach to Basic Science and Pathophysiology Teaching
  - Normal Health (Structure/Function)
  - Abnormal (Structure/Function)
  - Diagnoses (Histology / PE / Testing)
  - Treatment (Pharmacology / Surgical / Therapy / Dietary)
  - Teams/QI/Population Health/Economics
- Approximately 6 weeks in length
- Finished with a Capstone Block called Synthesis where topics from pervious blocks are applied in cases where multiple disease processes are present and other factors such as population health are also addressed.
- Longitudinal Clinical Experience runs throughout the 18months

**ASPECT 2:**

Aspect #2 of school being reviewed:
Phase 3 – Career Track (Elective) Year

Aspect being reviewed is:
Preclinical ____
Clinical <u>  X  </u>
Both ____

**To the best of your judgment, please consider the following in highlighting each unique aspect you have identified for this school:**

**Does it add educational value? Is it innovative?**

**How difficult or easy would it be to implement at UCD School of Medicine? Whether you are aware if educational outcomes of the aspect have been assessed?**

Aspect #2 for this school—please elaborate:
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NUMC's 4<sup>th</sup> year curriculum starts in early April and ends in early May. New elective year utilizes a Career Track setup, which students must choose at the outset.

Please elaborate on what/why you found aspect #2 of this school worth consideration by ECRS?

- Department Leadership develop the curriculum for each track with a focus on broad clinical foundations
- A General Study track will be developed for those that remain unsure
  - 11 – 4-week Electives
  - 3 FTT Months (AIs)
    - 1 must be completed POST Interviews
  - 1 month of Personal Wellness
    - Internship preparation
    - Reflection on training
    - Individual Goal Setting
  - Transition to Practice (6-weeks)
    - QI
    - Track/Career Focused
    - IPE
    - Teaching
    - EMR Training (Order Entry)

**ASPECT 3:**

Aspect #3 of school being reviewed:

New Curriculum Roll Out Plan

Aspect being reviewed is:

Preclinical \_\_\_\_\_

Clinical \_\_\_\_\_

Both\_\_\_\_\_

**To the best of your judgment, please consider the following in highlighting each unique aspect you have identified for this school:**

**Does it add educational value? Is it innovative?**

**How difficult or easy would it be to implement at UCD School of Medicine? Whether you are aware if educational outcomes of the aspect have been assessed?**

Aspect #3 for this school—please elaborate:

Because UNMC is developing a new curriculum for roll out in 2017, they have laid out their transition plan. CEP may want to reference this as we develop the process moving forward from the subcommittee work.

Please elaborate on what/why you found aspect #3 of this school worth consideration by ECRS?

**Group: Group 3**  
**Date Presented:**

**2/16/2016 University of**

**Massachusetts**

Your name: Sandhya Venugopal

Your Group: 3

**School Reviewed: University of Mass**

Sources of information on this school:

Website

**ASPECT 1:**

Aspect #1 of school being reviewed:

OPEX: Learner-centered Integrated Curriculum (LInC) Portfolio

Aspect being reviewed is:

Preclinical \_X\_



Clinical \_\_\_\_\_

Both \_\_\_\_\_

To the **best of your judgment**, please consider the following in highlighting each unique aspect you have identified for this school:

**Does it add educational value? Is it innovative?**

**How difficult or easy would it be to implement at UCD School of Medicine? Whether you are aware if educational outcomes of the aspect have been assessed?**

- Aspect #1 for this school—please elaborate: Each FOM1 and FOM2 course is created and directed by faculty teams with complementary basic and clinical science expertise.
- FOM1 courses such as Building Working Cells and Tissues (BWCT) and Development, Structure and Function (DSF), and FOM2 courses such as Organ System Diseases (OSD) and The Brain: Nervous Systems and Behaviors (NSB) integrate related material from multiple basic and clinical perspectives.
- The LInC FOM1 curriculum sequence begins with a study of molecules, genes, cells and tissues, then examines organs and organ systems and how they are regulated at both tissue and systemic levels (DSF).
- The second semester introduces a study of various diseases and agents that impact physiological function, and ends with our first FOM2 organ system disease (OSD) block – the cardiovascular system. Courses include an introduction to pharmacology, an introduction to cancer concepts, a study of infectious diseases and their causal agents and an examination of host defense systems and blood. These concepts are tied together through the learning communities' curriculum (DCS) and by a series of integrated case exercises (ICE) that both run throughout FOM1 and 2.
- Each builds in complexity as students master the concepts developed over two years. The FOM2 curriculum builds on FOM1 by integrating and advancing the concepts introduced by individual courses in Year 1. The OSD course continues through respiratory, renal, GI, reproductive, endocrine and musculoskeletal/skin blocks in parallel with the teaching of neurologic content in 'The Brain: Nervous System and Behavior.'
- The students are engaged in learning about populations and non-pathophysiological causes of disease in the FOM2 course Determinants of Health, (DoH) and they become immersed in an interdisciplinary, community based service-learning experience through the DoH clerkship.
- The year culminates in a course titled 'Patients' which uses undifferentiated complaints to return to the basic sciences that underlie disease in a patient-centered, case-based .

Please elaborate on what/why you found aspect #1 of this school worth consideration by ECRS? Organ Based courses are set up as MDS course with both basic scientist and clinician course directors

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**ASPECT 2:**

Aspect #2 of school being reviewed:
Clinical Curriculum: Application Phase

Aspect being reviewed is:
Preclinical _____
Clinical <u>  X  </u>
Both_____

**To the best of your judgment, please consider the following in highlighting each unique aspect you have identified for this school:**

**Does it add educational value? Is it innovative?**

**How difficult or easy would it be to implement at UCD School of Medicine? Whether you are aware if educational outcomes of the aspect have been assessed?**

Aspect #2 for this school—please elaborate: Core clinical experiences are organized into three coordinated thematic sections: Care of Adults (Medicine and Neurology), Care of Families (Family Medicine and Community Health, Pediatrics and Psychiatry) and Perioperative and Maternal Care (Surgery and Obstetrics/Gynecology). Each of these sections also has a basic science section leader who is responsible for working with the clerkship directors and FOM1 and FOM2 course co-leaders to integrate appropriate basic science instruction throughout the clinical clerkships. An ‘interstitial curriculum’ scheduled throughout the CCE will link threaded curricula in areas such as professionalism, patient-safety and quality improvement and interdisciplinary content areas such as domestic violence and geriatrics to students at set times in the year.
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Please elaborate on what/why you found aspect #2 of this school worth consideration by ECRS? Each clerkship has a Basic Scientist as co-director too.
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**ASPECT 3:**

Aspect #3 of school being reviewed:
Individualized Phase (4 <sup>th</sup> year): Electives and Research

Aspect being reviewed is:
Preclinical _____
Clinical X_
Both_____

**To the best of your judgment, please consider the following in highlighting each unique aspect you have identified for this school:**

**Does it add educational value? Is it innovative?**

**How difficult or easy would it be to implement at UCD School of Medicine? Whether you are aware if educational outcomes of the aspect have been assessed?**

Please elaborate on what/why you found aspect #3 of this school worth consideration by ECRS?  It seems that the 4 <sup>th</sup> year elective options are more robust and found across 4 different campuses. I wonder if this is feasible at our institution.
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<b>Group 4 (Aronowitz, Drummer,</b>	<b>AMA Consortium</b>	<b>US News top 25 (Primary</b>
Vanderbilt University	Yes	No
University of Michigan	Yes	Yes (5)
Case School of Medicine	Yes (new member)	No
University of Washington	Yes (new member)	Yes (1)
University of Connecticut	Yes (new member)	No
Sydney Kimmel (Jefferson)	Yes (new member)	No
University of Colorado	No	Yes (8)

University of Alabama	No	Yes (tie for 17)
University of Minnesota	No	Yes (10)

**School #1: Vanderbilt University**

Distinguishing Features--Consensus List

**VC3 – Core Curriculum**

-Vandy 25 core presentations framework via Master Clinical

Teachers Idea List

Informatics to construct learner’s case exposure portfolio  
 Educator Development Core  
 Education Technology Development

**School #2: University of Michigan**

Distinguishing Features--Consensus List

**Initial Clinical Experience**

-Early exposure to interdisciplinary team; immersion to clinical setting in the pre-clinical years

**M-Home**

-Doctoring course, structured learning activities, career counseling, learning services  
 -Longitudinal interactions with house mentor, doctoring faculty and administrative support

**Leadership Matrix**

-Message is not developing leaders who take control, but rather leaders who can work on teams, systems-based practice, influence & communication, change management

**Paths of Excellence**

-Students get to focus on concepts peri-medicine, such as ethics, global health & disparities, health policy, innovation & entrepreneurship, medical humanities, and scientific discovery.

Idea List

Admissions Requirements

-AAMC competency-based admissions approach

<https://www.michigandaily.com/news/medical-school-changes-admissions-requirements>

Educator Development

<http://faculty.medicine.umich.edu/faculty-career-development/skill-development/teaching>

### **School #3: Case School of Medicine**

#### Distinguishing Features--Consensus List

##### **Case Inquiry (IQ)**

Group of 6-9 students meets with faculty M-W-F. 2 cases introduced on Monday and objectives created for research/learning. All students follow through and have to learn, research, teach. Weds and Friday cases are discussed from basic science to clinical aspects. Every student required to research all of the learning issues, and then members are responsible for teaching one another. Throughout their experience in IQ, students develop skills of teamwork, professionalism, critical thinking and effective utilization of resources (Evidence-based IQ), including primary literature. Longitudinal IQ sessions continue in the third year —4 hours every other week that include check-in, reflection, case, clinical skills.

##### **Clinical Immersion Weeks (Scheduled between blocks)**

During this week, students leave the classroom and enter the clinical setting to see the relevance of the basic science they have been studying as the concepts are used in the setting of patient care. Students are assigned to numerous different clinical sites and activities during each respective blocks immersion week. Activities can include rounding with inpatient services at area hospitals, shadowing clinical faculty in area hospitals and community-based settings, observing patient procedures, and participating in simulation exercises with Standardized Patients and electronic simulators.

Advantage from wellness perspective.

##### **Paired Clerkships**

Core I: Medicine, Family Medicine,  
Geriatrics (12 weeks)

Core II: Pediatrics, Obstetrics and  
Gynecology (12 weeks)

Core III: Neuroscience,  
Psychiatry (8 weeks)

Core IV: Surgery and Emergency  
Medicine (8 weeks)

#### Idea List

Affiliated Program – Research – Cleveland Clinic Lerner College of Medicine  
5 year curriculum – 32 students - research focused curriculum that prepares students for careers as physician-investigators. Students graduate with an MD with special qualifications in biomedical research. 12 month masters level research requirement.

Teaching Opportunities – listed on their website, may encourage greater participation.  
Years 1 and 2

<http://casemed.case.edu/curriculum/education/year1-2curriculum.cfm#curriculum1> Year 3

<http://casemed.case.edu/curriculum/education/teaching3.cfm>

Learning through Technology website

<http://www.wcer.wisc.edu/archive/cl1/ilt/intro/intro.htm>

#### **School #4: University of Washington**

Distinguishing Features--Consensus List

##### **Curriculum Review Process**

Extensive five year process led to new curriculum starting in 2015-16. Over 500 participants, multiple committees and groups. The 2015 WWAMI Curriculum Toolkit was created to give students talking points and basic information to help them in their communications to faculty, staff, students, media and others about the revised curriculum. The Toolkit includes links to several messaging documents, a video, slide presentation, and key contact information.

##### **Colleges**

There is one head of each of the approximately 6 colleges but a mentor for each student within each college. The college has responsibility for teaching the students about early clinical exposure, physical exam, professionalism with emphasis of the teaching at the bedside for one afternoon/week. The mentor follows the student through all four years, but UW is unique in that the mentor is responsible for teaching and assessment of clinical skills.

Smaller group takes responsibility for making sure each student is clinically strong. Teaching at the bedside—a strength.

##### **Idea List**

The school has made a huge investment in information – education technology to implement curriculum change. See “curriculum renewal technology” at:

<http://www.uwmedicine.org/education/md-program/curriculum-renewal>

CLIME--Center for Leadership and Innovation in Medical Education <http://clime.washington.edu/teaching-resources-overview/>

#### **School #5: University of Colorado**

Distinguishing Features--Consensus List

##### **Mentored Scholarly Activity**

The MSA project is a four year requirement for all undergraduate medical students. The project culminates in a capstone presentation in Phase IV prior to graduation. The goal of the MSA curriculum is to foster self-directed, life-long learning over the course of the medical student career. The MSA requires students to identify and work with a mentor to complete their projects, which also prepares them for working with mentors in their careers and serving as mentors to others in the medical profession. Themes: Basic Biomedical Science Bioethics, Humanities, Arts and Education Clinical Research Global Health Public Health and Epidemiology

## **Academy of Master Clinical Educators**



The Academy of Medical Educators works closely with the Office of Faculty Affairs to provide all members of the campus community with a comprehensive faculty development program designed to train interested individuals in teaching skills, mentoring, curriculum development, programmatic evaluation and leadership.

Includes teaching scholars program, grants, peer mentoring, consultation service, online courses, programs for residents.

Centerpiece for faculty development recommendation at UCD.

### **The Integrated Clinicians Course (ICC)**

An 8-week course composed of five (5) mini-courses, spread out over the 3rd and 4th years of medical school. ICC brings together an entire class with two specific goals. The first goal is to provide important skills and knowledge in areas that are vital to the practice of medicine, but are often difficult to teach or not uniformly taught in the clinical setting. ICC topics include health policy, ethics, professionalism, clinical decision-making, culturally effective care, clinically relevant basic science material, and advanced clinical skills. The second, but no less important goal, is to provide students with the time and opportunity to reflect on and discuss the process of becoming a physician.

Doctoring 3 mostly longitudinal preceptorship, but includes “hidden curriculum” sessions similar to our “checkin” sessions in D3.

Clinical clerkships appear fairly traditional, but with 32 weeks of requirements in Year 4, the clinical curriculum seems extremely intense.

### Idea List

Center for Advanced Clinical Excellence: Model for interprofessional training opportunities including simulation, team training, etc.

*Amazing website.*

### **School #6: University of Connecticut**

New curriculum rolling out in 2016 called “M-Delta”

### Distinguishing Features--Consensus List

#### **CLIC (Clinical Longitudinal Immersion in the Community)**

Early clinical exposure. Years 1-3, 1 afternoon per week, Students assigned to a single clinical site (Medical Home).

#### **CORe (Case Oriented Essentials)**

Team-based Learning / flipped classroom

Major shift away from lecture to TBL/hybrid. Advertise abundance of on-line learning modalities coupled with traditional TBL method. Six hours of TBL per week.

### **Fabric of Anatomy & Biology Lab**

High-tech used in the anatomy lab, combined with traditional dissection. Imaging (including ultrasound) in virtual anatomy lab.

### **Vertically Integrated Teams Aligned in Learning and Scholarship (VITALS) Teams**

Longitudinal teams of students from across the four years join dental students to learn together and teach each other critical, timely material across the spectrum. The content includes such topics as bioethics in the news, emerging diseases, health care policy and social determinants of health. These sessions support students' future roles as scholarly physicians, life-long teachers and learners.

Promotes IPE and collaborative learning between students at different levels and covers underemphasized topics. Provides forum for development of scholarly project which is required in the fourth year.

Idea List

### **School #7: Sydney Kimmel (Thomas Jefferson University)**

New curriculum scheduled to start in 2017. Three phase curriculum. Details about the curriculum lacking.

Distinguishing Features--Consensus List

### **Required Research Project (4 years)**

#### **EMR in Education—AMA Grant**

Collaborating with Indiana.

Idea List

### **School #8 University of Alabama**

Distinguishing Features--Consensus List

Preclinical Curriculum Organization

### **Organization of Preclinical Blocks**

1. Physician-Patient-Society block (3 wks) covering ethics and health care systems at the beginning of first block
2. Foundations block divided into five 3-wk blocks, covering:

Block 1: "Biomolecules and Bioenergetics"

Block 2: "Development and Anatomic Structure" (includes genetics, little anatomy) Block 3: "Cells and Foundations of Pharmacology"

Block 4: "Pathology and Immunology: Response to Insult and

Infection" Block 5: "Microbiology: Infectious Agents and Antimicrobial Therapy"

3. Rest of Year 1-2 organized by system into 9, 4-5 week blocks, with normal and pathophysiology integrated.
4. Concurrent clinical skills course (like Doctoring) but very focused on clinical skills.
5. Evidence-based Medicine Course in Year 2, mostly online.

### **Clinical Skills Scholars Program**

Clinical Skills Scholars (about 30 faculty) are teaching in the existing clinical skills curriculum for first and second year medical students (Introduction to Clinical Medicine-ICM). Each Clinical Skills Scholar is assigned a group of six to seven 1st year students and six 2nd year students. Scholars spend one-half day per week engaged in a variety of activities including conducting small group teaching sessions on clinical skills with the students, providing supervision and mentorship to the students over the course of their two years in the ICM curriculum and other activities.

### **Scholarly Project in Third Year**

Two months at end of 3<sup>rd</sup> year. Not highlighted as a strength by the group, but because of unusual placement. The project must be designed to test a specific hypothesis or investigate a specific question within a Focus Area. This can be achieved through 1) data collection and analysis or 2) a critical review of the literature or existing data. Depending upon the nature of the project, students may work independently or as part of a team. However, the Scholarly Activity requires that each student submit a sole authored final paper, even if the student plans to submit the paper for publication under joint authorship.

### **Idea List**

### **School #9: University of Minnesota**

Split Campus- Duluth and Twin Cities, with emphasis on rural health and native american health in in Duluth.

### **Distinguishing Features--Consensus List**

#### **The Flexible MD program**

Students have option of extending program without adding cost of tuition. Choose an experience that serves as a significant enhancement of the standard curriculum and is designed to achieve personal educational goals. They have to apply for this and be a student in good standing. Have to give q3 month progress reports.

Types of academic experiences students may participate in:

- Research
- Community-based service learning
- Global health opportunities via the GMER program
- Advanced courses, certificate programs, or additional degrees
- Dual degree programs, excluding the MD/PhD program

### **Population based health initiatives**

Students may participate in variety of programs designed to meet needs of underserved populations. Some programs include longitudinal clinical clerkships. Rural program is one of oldest in US, and most accomplished in terms of outcomes.

Examples:

Center of American Indian and Minority Health

Medical Education through Diversity Services

(MEDS) Center for Rural Mental Health Studies

Veterans' Administration Longitudinal Undergraduate Education

(VALUE) Rural Physicians Associate Program (RPAP)

Metropolitan Physician Associate Program (MetroPAP)

Urban Community Ambulatory Medicine (UCAM)

### **Summer internship in Medical Education**

Offered in the summer after the first year. \$3,000 stipend for 8 weeks.

### **Simulation Experiences**

Many opportunities for simulation throughout curriculum.

### **1Health – Interprofessionalism**

Phase I: Orientation – Provide introduction to interprofessional education concepts and teamwork skills. Phase II: Necessary Skills – Providing them with additional skills and experiences. Learn communication through TeamSTEPPS modules and QI skills via IHI open school modules. Small teams students from medicine, nursing and pharmacy partnered with community teacher who share experiences of health care systems.

Phase III: Expertise in Practice – Observation and reflection activity paired with interprofessional debriefing session being integrated into required clinical/fieldwork rotations.

### **Idea List**