



Information and the new medical student (Shortliffe, JAMA, 2010)

HEN I FIRST MEET WITH PRECLINICAL MEDICAL students, I make a point of asking them what they believe will receive the greatest focus of their attention once they are in clinical practice. The most common response, not surprisingly, is patients, and yet it is clear to experienced practitioners that the correct answer is information-in the service of their patients. The need for information underlies essentially all clinical work: the questions asked during a patient history, the tests ordered, the books read, and the questions asked of colleagues. A key correlate to information is knowledge, that elusive concept that justifies all the years of education and training, and that provides the background sense of what is true that allows gathering and interpreting information appropriately. Clinicians often start with data (eg, "Mr Jones' creatinine is 5.2 mg/dL"), those individual elements that combine to allow a synthesis of observations with what is known in order to create summary statements of information (eg, "Mr Jones has renal failure").



The search engine is now as essential as the stethoscope

What we know about diseases, diagnosis, and effective treatments is growing rapidly. Today health professionals cannot solely rely on what they were first taught if they want to do the best for their patients. It has repeatedly been shown that clinical performance deteriorates over time.¹ A commitment to lifelong learning must be integral to ethical professional practice. However, the speed of the increase in knowledge—more than 2000 new research papers are added to Medline each day—represents a challenge.² The skills needed to find potentially relevant studies quickly and reliably, to separate the wheat from the chaff, and to apply sound research findings to patient care have today become as essential as skills with a stethoscope.

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Definition of clinical informatics (ACGME)

• *Clinical informatics* is the subspecialty of all medical specialties that transforms health care by analyzing, designing, implementing, and evaluating information and communication systems to improve patient care, enhance access to care, advance individual and population health outcomes, and strengthen the clinician-patient relationship







Facilitated by convergence of many things in mid-2010s

- Supportive Dean (late Mark Richardson, MD)
- Arrival of new supportive Senior Associate Dean for Education (George Mejicano, MD) and
 - New education building
 - Planned curriculum overhaul
- AMA Accelerating Change in Medical Education (ACE) grant – Four of 11 sites with informatics activities

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- HITECH Act
 - Increased EHR adoption
 - Resources from HIT workforce development
- Strong academic informatics department
- Emergence of clinical informatics subspecialty and
 - ACGME-accredited fellowship
 - Visibility in health system and GME



















Blending – cotton ball in a glass* (Howard Silverman, MD; Paul Gorman, MD) Stealth teaching Sensitivity and specificity lecture: not much interest Sane content, different frame Blended session Example: Serology in rheumatology Faculty collaboration key Active learning, application by

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- Active learning, application by students
- Clinical content rheumatologist led
- Testing for lupus, RA, vasculitis
- Health systems content
- Bayes theorem, ROC curves, etc.





















Informatics – a field of global truths



