

Hi, Welcome back to Data Science for Drug Discovery
Health and Translational Medicine
This is Module 2



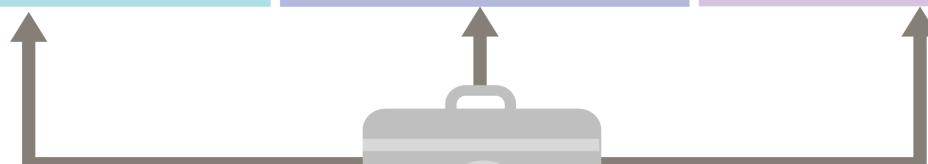
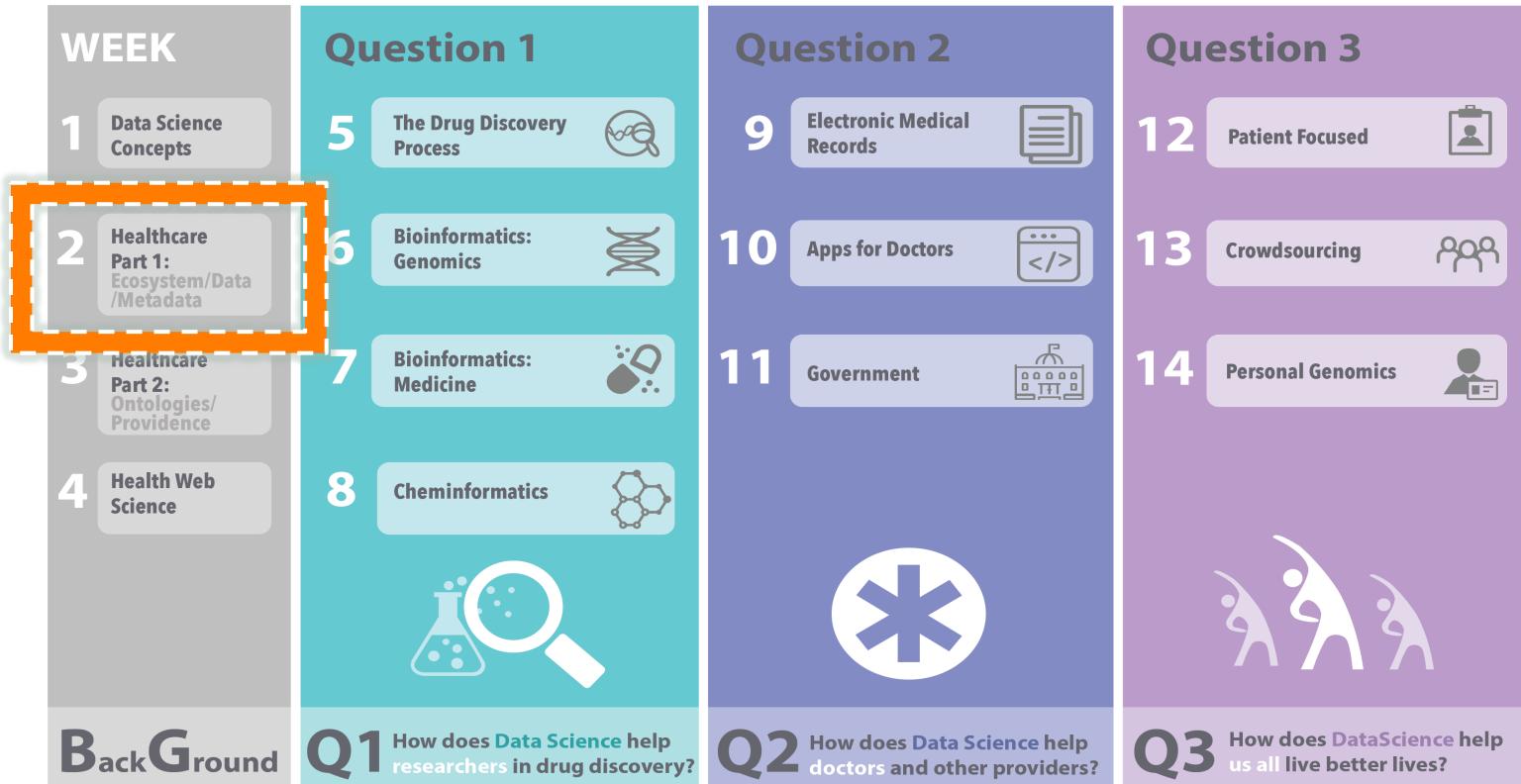
Data Science for Drug Discovery, Health & Translational Medicine

Joanne S. Luciano <https://www.linkedin.com/in/joanneluciano>
Visiting Associate Professor
Indiana University School of Informatics and Computing



DATA SCIENCE FOR DRUG DISCOVERY, HEALTH AND TRANSLATIONAL MEDICINE

Module 2: Healthcare Part 1



SCHOOL OF INFORMATICS
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Data Science for Drug Discovery,
Health and Translational Medicine

Module 2: Healthcare Part 1

Topics:

Healthcare History United States

Healthcare Ecosystem

Healthcare Issues



Learning Objectives: Students will be able to:

- Understand the basics of the U.S. health care system.
- Be able to outline the major components of the health care system.
- Identify healthcare challenges

Healthcare History in the United States

Learning objectives

- The student will be able to identify significant milestones of
 - medicine and medical education
 - hospital systems
 - public health
- The student will be able to explain the difference between primary, secondary, and tertiary prevention
- The student will be able to explain the concept of the iron triangle as it applies to healthcare



Milestones in Medicine and Medical Education

- Research History
- of Healthcare in US
- Make note of:
- Medical Education
- Organized Medicine
- Change in fees
- Advances in science
- Fear of socialism
- Medicine and health becoming businesses



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Virtual Mentor. May 2008, Volume 10, Number 5: 324-331.

HISTORY OF MEDICINE



The U.S. Health Care Non-System, 1908-2008

George B. Moseley III, JD, MBA

Call for Images of Healing and Learning

Traces the development of the systems for delivery and reimbursement of health care in the U.S. from the unregulated free-market state in 1908 to the complex, highly managed state in which it exists in 2008.



History of Medicine and Healthcare in the US

1900s	1910s	1920s	1930s	1940s	1950s	1960s	1970s	1980s	1990s	2000s	
American Medical Association (AMA) becomes a powerful national force. In 1901, AMA reorganizes as the national organization of state and local associations. Membership increases from about 8,000 physicians in 1900 to 70,000 in 1910 -- half the physicians in the country. This period is the beginning of "organized medicine." Surgery is now common, especially for removing tumors, infected tonsils, appendectomies, and gynecological operations. Doctors are no longer expected to provide free services to all hospital patients. America lags behind European countries in finding value in insuring against the costs of sickness. Railroads are the leading industry to develop extensive employee medical programs.	American hospitals are now modern scientific institutions, valuing antiseptics and cleanliness, and using medications for the relief of pain. American Association for Labor Legislation (AALL) organizes first national conference on "social insurance". Progressive reformers argue for health insurance, seems to be gaining support. Opposition from physicians and other interest groups, and the entry of the US into the war in 1917 undermine reform effort.	Consistent with the general mood of political complacency, there is no strong effort to change health insurance. Reformers now emphasize the cost of medical care instead of wages lost to sickness - the relatively higher cost of medical care is a new and dramatic development, especially for the middle class. Growing cultural influence of the medical profession - physicians' incomes are higher and prestige is established. Rural health facilities are clearly inadequate.	The Depression changes priorities, with greater emphasis on unemployment insurance and "old age" benefits. Social Security Act is passed, omitting health insurance. Push for health insurance within the Roosevelt Administration, but politics begins to be influenced by internal government conflicts over priorities. Against the advice of insurance professionals, Blue Cross begins offering private coverage for hospital care in dozens of states.	Penicillin comes into use. Prepaid group healthcare begins, seen as radical. During the 2nd World War, wage and price controls are placed on American employers. To compete for workers, companies begin to offer health benefits, giving rise to the employer-based system in place today. President Roosevelt asks Congress for "economic bill of rights," including right to adequate medical care.	At the start of the decade, national health care expenditures are 4.5 percent of the Gross National Product. Attention turns to Korea and away from health reform; America will have a system of private insurance for those who can afford it and welfare services for the poor. Federal responsibility for the sick poor is firmly established.	In the 1950s, the price of hospital care doubled. Now in the early 1960s, those outside the workplace, especially the elderly, have difficulty affording insurance. Over 700 insurance companies selling health insurance.	President Richard Nixon renames prepaid group health care plans as health maintenance organizations (HMOs), with legislation that provides federal endorsement, certification, and assistance. Healthcare costs are escalating rapidly, partially due to unexpectedly high Medicare expenditures, rapid inflation in the economy, expansion of hospital expenses and profits, and changes in medical care including greater use of technology, medications, and conservative approaches to treatment. President Lyndon Johnson signs Medicare and Medicaid into law.	Corporations begin to integrate the hospital system (previously a decentralized structure), enter many other healthcare-related businesses, and consolidate control. Overall, there is a shift toward privatization and corporatization of healthcare. Under President Reagan, Medicare shifts to payment by diagnosis (DRG) instead of by treatment. Private plans quickly follow suit.	Health care costs rise at double the rate of inflation. Expansion of managed care helps to moderate increases in health care costs. Federal health care reform legislation fails again to pass in the U.S. Congress. By the end of the decade there are 44 million Americans, 16 % of the nation, with no health insurance at all.	Medicare is viewed by some as unsustainable under the present structure and must be "rescued". Changing demographics of the workplace lead many to believe the employer-based system of insurance can't last.	Human Genome Project to identify all of the more than 100,000 genes in human DNA is expected to be completed a full two years ahead of schedule, in 2003. Direct-to-consumer advertising for pharmaceuticals and medical devices is on the rise.
				President Truman offers national health program plan, proposing a single system that would include all of American society. Truman's plan is denounced by the American Medical Association (AMA), and is called a Communist plot by a House subcommittee.	Many more medications are available now to treat a range of diseases, including infections, glaucoma, and arthritis, and new vaccines become available that prevent dreaded childhood diseases, including polio. The first successful organ transplant is performed..	"Compulsory Health Insurance" advocates are no longer optimistic'. The number of doctors reporting themselves as full-time specialists grows from 55% in 1960 to 69%.	President Nixon's plan for national health insurance rejected by liberals & labor unions, but his "War on Cancer" centralizes research at the NIH. "Capitation" payments to doctors become more common.				
						The number of women entering the medical profession rises dramatically. In 1970, 9% of medical students are women; by the end of the decade, the proportion exceeds 25%.	World Health				

History of the US Healthcare System



A screenshot of a PDF document titled "Chapter 1". The title is displayed in a large, bold, black font within a light blue rectangular box. Above the title, the URL "http://samples.jbpub.com/9781284120134/Chapter1.pdf" is visible at the top of the page. The PDF interface shows various navigation icons and links at the top, including "Angelene", "Joanne Zoom", "Indiana U Hangout", "AmazonSmile", "IU Courses", "Indiana University", "Inbox (1,548) - jluc...", "Calendar", and "En".

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