Government and Health Care: The History of Investment in the Evidence Base for Clinical Practice

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May 18, 2011

Last month I recounted some of the long history of government involvement in health care. After a brief reflection on history in other times and places, I proceeded to discuss some elements of the history of U.S. state and federal government involvement in health care. I started with the history of regulation of the health professions in the U.S., government efforts in public health, and the history of government-run health care facilities. I will now discuss the history of U.S. public investments in the sciences that guide clinical practice.

By the end of the 19th Century extensive advances in chemistry, biology, and physics not only improved the understanding of human illness, but provided powerful tools for accurate diagnosis, as well as, in some cases, impressively effective medical and surgical treatments. The progressive era of early 20th Century American politics saw an enthusiastic embrace of science in many spheres including medicine. At the turn of the century U.S. medical education was highly variable, with some institutions offering rigorous scientific instruction led by physician scholars and others little more than loosely structured apprenticeships with old-style practitioners. The Council of Medical Education of the AMA recognized this problem and solicited the Carnegie Foundation for the Advancement of Teaching to conduct a formal survey of U.S. medical education. (1) The resulting Flexner Report (named after the Foundation staff member Abraham Flexner who led this effort) documented these widespread problems and stimulated a reformation of U.S. medical education embracing the new sciences as the basis for medical education and practice.

As Ludmerer writes in Time to Heal, “The social mission of the Flexnerian revolution was to ensure …that the best possible scientific training be made available to every person studying medicine.” (2) Following this report, Flexner joined the Association of American Medical Colleges and the AMA Council of Medical Education in advocating that state medical licensing boards demand candidates have rigorous, scientific medical education. (1) The medical and other health professions have embraced this commitment to science-based education and clinical practice in their professional codes and in advocacy for professional regulation, as well as support for public investments in the health sciences as a public good.

Another reflection of the Progressive era’s embrace of science (as well as of market regulation) was the 1906 Pure Food and Drugs Act. (3) This law established the basis for the modern regulatory functions that later became known as the Food and Drug Administration (FDA). The 1906 act prohibited interstate commerce in adulterated and misbranded food and drugs. The authority of the FDA has been regularly updated by Congress since then. Just in the past 20 years patient advocacy groups in partnership with health professional advocates supported a change in law to stimulate industry interest in developing “orphan drugs” for rare diseases; such coalitions have also encouraged development of accelerated techniques for drug approval at the FDA, beginning with drugs for AIDS. Congress has passed laws to extend patent terms to account for extra time in the drug approval process, but also facilitated the approval of generic drugs to offer a lower-cost alternative. Congress has also instituted procedures for industry to reimburse the FDA for speedy review of the evidence regarding new drugs and biologics, and for the monitoring of accuracy of advertising claims made by drug manufacturers regarding the effectiveness of their products. (3)

The principal source of U.S. government investment in the science to guide clinical practice has been through the National Institutes of Health (NIH). The NIH has its origin in the same Marine Service Act that established the Public Health Service. In 1887 a laboratory was created within the Marine Hospital Service to aid in the evaluation of arriving shipboard passengers and crew for infectious illnesses. (4) In 1901 Congress authorized $35,000 for construction of a new building in Washington, D.C. where the laboratory could study “infectious and contagious diseases and matters pertaining to the public health.” Under the 1930 Randsell Act, the name of the Hygienic Laboratory was changed to National Institute of Health; the Act also authorized fellowships for relevant biological and medical research. In 1937 the National Cancer Institute (NCI) was established and its facilities were constructed on the developing campus of the NIH in Bethesda, Maryland. Of consequence for the future of academic health sciences centers, NCI was authorized to award extramural grants to nonfederal scientists for research on cancer. The outbreak of World War II saw an expansion in funding directed toward war related issues of biological and medical science. (4)

The 1944 Public Health Service Act expanded the extramural grants program from the NCI to other NIH units and set the stage for the growth of the NIH to the nearly $30 billion extramural grants program it administers today, through its 27 Institutes and Centers. The large research grants programs administrated by the NIH and the smaller health science research programs administrated by the Agency for Health Care Research and Quality (AHRQ), the Veterans
Administration, and the CDC, are all scrupulous in their reliance on scientific merit as judged by research peers. The budgets for each NIH Institute and Center, as well as these other agencies, are set through the annual Congressional appropriations process, creating considerable opportunity for professional association and patient group advocacy for research on specific topics. Recent years have also seen the development of specific Congressional “earmarks”, legislative language promoted by specific organizations or institutions to direct public funds to certain research programs or academic institutions. Nonetheless the large majority of federal health science research funding is distributed according to scientific merit as judged by an independent panel of representative scientific experts (the “peer review process”).

The recently passed Affordable Care Act establishes a new Patient Centered Outcomes Research Institute with a focus on comparative effectiveness research. I have previously written about this new entity which is still in the process of establishing its priorities and funding processes. (5) As it develops, more can be learned through the PCORI website. (6)


3. FDA History. http://www.fda.gov/AboutFDA/WhatWeDo/History/default.htm
4. A Short History of the National Institutes of Health http://history.nih.gov/exhibits/history/

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