The Human Genome Project

You Shall Know The Truth
And The Truth Will Make You Free

Vicky Davis
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The Human Genome Project

The *Human Genome Project*[1] formally began in 1990 as a joint effort between the Department of Energy (DOE) and the National Institutes of Health (NIH). The goals of the project were:

- *identify* all the approximately 20,000-25,000 genes in human DNA,
- *determine* the sequences of the 3 billion chemical base pairs that make up human DNA,
- *store* this information in databases,
- *improve* tools for data analysis,
- *transfer* related technologies to the private sector, and
- *address* the ethical, legal, and social issues (ELSI) that may arise from the project.

DNA is the instruction set for life.[2] The variety of life forms and the variety within species is the result of the organization and functioning of DNA within our cells. Unlocking the secrets of DNA is the holy grail of the biological sciences and actually, of mankind itself.

Genesis

By the mid to late 80's knowledge and technology had reached the point where it was possible to make giant leaps forward in discovering the secrets of DNA but it would require massive funding and research cross-cutting many diverse areas of science so in 1988, a report was prepared for Congress by the Office of Technology Assessment (OTA). It was titled, "Mapping Our Genes--Genome Projects: How Big? How Fast?"[3] It's a 200 page report that attempts to identify the logistical and political considerations that would have to be addressed to go forward with a Manhattan Project for genetic research.

> "Construction of maps of DNA markers was undertaken in the early 1980s, The two largest collections of markers were developed by the Howard Hughes Medical Institute (HHMI), a private philanthropy, and Collaborative Research, Inc., a private corporation. Dozens of university researchers and other private firms also contributed to this kind of genetic map.
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> In 1985, DOE began planning the Human Genome Initiative to develop research tools for molecular genetics…DOE considered the initiative an extension of its ongoing work in molecular biology-largely focused on detecting mutations and other biological effects of radiation and energy production-that would take advantage of research staff and instruments located at the national laboratories, which are funded by DOE, DOE held several public meetings to discuss the technical possibilities. The first of these was a workshop held in March 1986 in Santa Fe, New Mexico." Page 12

The principle organizations involved in Genome research were the National Institutes of Health, the Department of Energy, the National Science Foundation and the Howard Hughes Medical Institute in Salt Lake City. In 1987, the bulk of NSF's $32.7 million budget was being spent on "the research infrastructure".

> *The blueprint for the National Science Foundation (NSF) grew from the report Science—The Endless* ***Frontier,*** *written by Vannevar Bush in 1945 (2). The original ideas for NSF, as propounded by Bush and Senator Harley Kilgore, were modified by postwar events and eventually led to legislation creating the foundation in 1950. The principal purpose of the NSF was to continue the Federal Government's role in sponsoring basic research, a role that developed during World War II (9,14). Biology at NSF is supported through its Directorate of Biological, Behavioral, and Social Sciences. In fiscal year 1987, NSF spent an estimated $32.7 million on research related to gene mapping and sequencing. Of this amount, only $200,000 went for focused projects on gene mapping and sequencing of nonhuman organisms; the bulk was for basic research ($13.7 million) and for the research infrastructure, such as development of methods, new scientific instruments, databases, and repositories and support of instrumentation centers ($19 million). Page 104*

But it was also noted that the military health care and medical researchers would have an interest in participating and they could provide valuable "resources" to the project.

> The Armed Forces Institute of Pathology (AFIP) is an international treasure house of tissue samples and microscopic slides spanning the full range of human disease. Its tissue collection is used by pathologists and biomedical researchers throughout the world. AFIP began as the Army Medical Museum in 1862. It became the AFIP in 1949, when the Navy and Air Force joined with the Army in support of it, and the role of the institute has expanded steadily since then. Today AFIP constitutes the largest organization of research and diagnostic pathologists in the world, The institute has received more than 2.2 million cases (tissue or slides from patients) from over 50,000 pathologists affiliated with more than 19,000 hospitals and clinical facilities.
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> The military biomedical research community would have an interest in map and sequence data because investigations of the effects of chemical and biological weapons would include the study of genes that are particularly vulnerable to attack and the construction of vaccines or other defensive measures. Pg 106

Although the official date is listed as 1990, the date the Human Genome Project actually began was in 1988 with the signing of a Memorandum of Understanding between the DOE and NIH.[4]

> "Because both DOE and NIH have major research interests in the Human Genome Project and because of the need for centralized planning and coordination of the 15-year project, NIH and DOE signed a formal Memorandum of Understanding in the fall of 1988 "to foster interagency cooperation that will enhance the human genome research capabilities of both agencies."
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> The document, which provides the foundation for NIH-DOE collaboration to achieve the goals of the U.S. Human Genome Project, calls for regular meetings of the Joint NIH-

DOE Subcommittee on the Human Genome. The subcommittee is made up of members of the NIH Program Advisory Committee on the Human Genome and the DOE Health and Environmental Research Advisory Committee."

The report included reference to a debate concerning the scope of the Human Genome Project - whether it would be limited to a few genes or whether the project should have the goal of mapping the entire structure of DNA.

The Cold Spring Harbor discussion was followed by a series of meetings held by HHMI, NIH, DOE, NRC, OTA, and others, Plans for special research initiatives by NIH, DOE, and HHMI have resulted from these and other discussions. A few private corporations have also been established (or are being established) to perform DNA sequencing and to develop research resources. Page 12

Cold Spring Harbor

Cold Spring Harbor is a biological research laboratory on Long Island, New York. It has been in continuous operation since the turn of the century. In 1904, it became a major player in the Eugenics movement funded by the Carnegie Institute[5]:

"Eugenics would have been so much bizarre parlor talk had it not been for extensive financing by corporate philanthropies, specifically the Carnegie Institution, the Rockefeller Foundation and the Harriman railroad fortune. They were all in league with some of America's most respected scientists from such prestigious universities as Stanford, Yale, Harvard and Princeton. These academicians espoused race theory and race science, and then faked and twisted data to serve eugenics' racist aims.

Stanford President David Starr Jordan originated the notion of "race and blood" in his 1902 racial epistle "Blood of a Nation," in which the university scholar declared that human qualities and conditions such as talent and poverty were passed through the blood. In 1904, the Carnegie Institution established a laboratory complex at Cold Spring Harbor on Long Island that stockpiled millions of index cards on ordinary Americans, as researchers carefully plotted the removal of families, bloodlines and whole peoples. From Cold Spring Harbor, eugenics advocates agitated in the legislatures of America, as well as the nation's social service agencies and associations.

The Harriman railroad fortune paid local charities, such as the New York Bureau of Industries and Immigration, to seek out Jewish, Italian and other immigrants in New York and other crowded cities and subject them to deportation, confinement or forced sterilization.

The Rockefeller Foundation helped found the German eugenics program and even funded the program that Josef Mengele worked in before he went to Auschwitz." Edwin Black

Howard Hughes Medical Institute

The Howard Hughes Medical Institute has been involved in genetics research since it was founded with money from the Hughes estate. According to the history of the Howard

Hughes Medical Institute,[6] Howard Hughes wrote a will before his first marriage that provided for the creation of an institute for medical research. In 1947 following his recovery from a plane crash, Hughes sought the advice of professionals on how best to do that:

> Mr. Hughes begins discussions that continue for several years with Dr. Mason, Alan Gregg, M.D., of the Rockefeller Foundation, and Hugh Morgan, M.D.,[7] of Vanderbilt University (above), to seek advice on how best to support medical science.
>
> As Dr. Morgan later recalled, a conversation takes place in an airplane hangar in which Mr. Hughes describes his objective for a medical research organization: "He said he wanted to set up a Research Institute and operation in the field of medical sciences -- *he emphasized that he was interested in basic research, in probing into the genesis of life itself.*

Between 1951 and 1953 Hughes funded a number of Research Fellows and then in 1953, the Howard Hughes Medical Institute was chartered in Delaware to engage in genetics research.

Research Infrastructure and Environment

> *At this point, it must be said that we recognize the fact that there were and are many good people involved in the Human Genome Project who have the best of intentions for mankind however, the size and nature of the project and the dispersion of the knowledge and technology provided tremendous opportunities for corruption, profit, and malevolence. It is the intent of this paper to focus on that dark side because the benefits of Human Genome research needs no exposure.*

The simple description of the Human Genome project as a scientific effort to map human genetic structures fails to convey the true size and scope of the effort. From reading the 1988 OTA report, it isn't clear that the OTA fully comprehended the magnitude of it either.

> The Human Genome Project conjures up images of large scale projects such as the Manhattan Project to build the first atomic bomb, the Apollo Project for a manned Moon landing, the space station, or the superconducting supercollider. Genome projects do not belong in this category. Page 16

And perhaps they were right about the mapping itself but it is in the application of the genome knowledge where the project goes supernova. There are many projects since the inception in 1988 that with the benefit of hindsight can be linked to the Human Genome Project that would not necessarily be understood as such except by those at the very top of the pyramid of project knowledge and planning. That is especially true of the programs involving children.

High Tech Tools for Research

Mapping of the genome and the potentialities cut across all disciplines, all government agencies, all committees of Congress. Universities, government and private sector researchers all over the world were working on it - and still others were working on technical ways to facilitate the research: Excerpts:

> Interpreting genome maps will require the combined efforts of individuals with expertise in structural biology, cell biology, population biology, biochemistry, genetics, computer science, and other fields. Page 59

> The new technologies for genetics research will also help in the assessment of public health needs. Techniques for sequencing DNA rapidly, for example, should permit the detection of mutations following exposure to radiation or environmental agents. Susceptibilities to environmental and work place toxins might be identified as more detailed genetic linkage maps are developed, and special methods of surveillance can be used to monitor individuals at risk. By providing tools for determining the presence or absence of pathogens (e.g., bacteria and viruses) in large numbers of individuals as well as identifying genetic factors that render some human beings more susceptible to infection than others, genome projects might also yield methods for tracking epidemics through populations. Pg 60

> Population biologists study populations by analyzing many individuals. They are interested in similarities and differences among individuals, among groups, among varieties, and among species. To address such questions as how geography and environment affect inheritance patterns of certain traits, a physical map and a complete sequence of a single reference genome are not particularly valuable. It would be more useful to have corresponding sequence information from widely diverse geographical areas, from various religious and ethnic subgroups, and from all races (9). Pg 76

On a technical level, the effort to map genetic structures promised to generate massive amounts of data that could not be easily shared without a central repository - a data warehouse that could be accessed by all researchers.

> The flow of information from molecular biology is overwhelming the resources devoted to handling it. Federal agencies, HHMI, and other interested groups are acting to manage the deluge. Research dedicated to improving databases, maps, repositories, and research methods premises to increase efficiency overall by being once systematically what would otherwise be duplicated by many groups using more primitive technologies. Page 16

The Genome Data Base

The Genome Data Base (GDB)[8] was built at Johns Hopkins University in 1989 with a grant from the Howard Hughes Medical Institute. It was completed in 1990 and in 1991, it was selected to become the Human Genome Project Central repository. Beginning on 9/1/1991, the DOE and NIH took over funding and use of the database was "transformed":

- The primary mission shifted from supporting annual Human Gene Mapping workshops to supporting the international Human Genome Project (HGP).
- The database itself changed from a stand-alone system to a component of the information infrastructure of the HGP.
- Continuous data entry from sites around the world has replaced annual data entry at large meetings.
- Annual publications, such as the HGM reports and the HGML plot books have been replaced with publication on demand.

- A single GDB product has been replaced with a family of services, as ISQL backends, ftp, gopher, and WAIS servers have been added.
- Full graphical user interfaces are replacing simple terminal emulation. Dial-up telephone access at 1200 baud has been replaced with direct network connection. GDB now even has its own internet domain, GDB. ORG.
- A monolithic software system is being replaced with a modular design.
- And all of this has been accompanied with exponential growth in the amount of data being managed.

A major component of the research infrastructure was the NSFNET[9] - what we call the Internet today. Originally, commercial traffic on the NSFNET was prohibited to ensure adequate bandwidth for researchers. The prohibition led to the proliferation of parallel commercial networks.

> "In recognition of the fact that the network was growing beyond its research focus, in March, 1991, the NSFNET officially ushered in the next wave of Internet growth by modifying its Acceptable Use Policy to allow commercial use by "research arms of for-profit firms when engaged in open scholarly communication and research". Between growing connections to research networks and increasing commercial traffic, the growth of the NSFNET over the next few years was rapid…"
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> Starting in 1990, over the next few years the NSF conducted a series of workshops and studies to plan for transition of the NSFNET to private industry. The vehicle that evolved to support this new architecture was a set of *Network Access Points* that acted as connection points for the commercial backbones so that the network would remain connected at the top level once the NSFNET was retired. In February, 1994, the NSF awarded contracts for establishment of four NAPs operating at 155 Mbps -- one in New York operated by Sprint, one in Washington, D.C. operated by MFS, one in Chicago operated by Ameritech, and one in California operated by Pacific Bell.

So the decision was made to allow public access to the Internet only because open access was needed to facilitate the information sharing requirements of HGP researchers both during the basic research mapping phase and following. That assertion is confirmed by examining the history related to health care and education.

"Captive Populations for Medical Research"

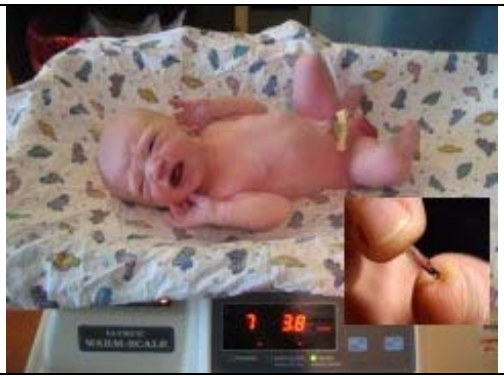
Flashback to the eugenics movement in California in the early 20th century:

> California was considered an epicenter of the American eugenics movement. During the 20th century's first decades, California's eugenicists included potent but little-known race scientists, such as Army venereal disease specialist Dr. Paul Popenoe, citrus magnate

Paul Gosney, Sacramento banker Charles Goethe, as well as members of the California state Board of Charities and Corrections and the University of California Board of Regents.[10]

As it was then, so it is now - schools, prisons and the military provide a target rich environment for medical researchers. In the early days of genetics research, index cards were used to keep track of the alleged genetically inferior to be used and disposed of in whatever way the planners decided. In Germany, prior to World War II, IBM assisted the Nazis by keeping the records on punch cards with the targeted populations being assigned numbers tatooed on their arms. When their number was selected, they were rounded up and placed in camps.

The difference now is that penning up the subjects in camps is no longer a requirement for medical research. New technologies allow for logical selection of "subjects" with surveillance and control of their movements using remote tracking "collars" - also known as Radio Frequency Identification Chips (RFID). And the capacity exists for massive storage of information - including the tracking data generated by RFID chips, remote sensing and data transmission equipment. And this all occurs at nearly the speed of light using fiber optic cables and satellites.

Image of cell towers - satellite and tracking people with chips	

With that as the background, we can now look at the planning for the applied science phase of the Human Genome Project.

Logistics for Genomics Applied Science

In 1990, Senator John Glenn, Chairman of the Governmental Affairs Committee made a request of the GAO to study the potential benefits of automation of medical records and the factors that would inhibit the implementation. In January of 1991, the GAO presented the results of their study to the Committee[11]:

Dear Mr. Chairman:

In response to your request of December 4, 1990, we are reporting to you the results of our review of automated medical records. The report discusses the potential benefits that automation could make to the quality of patient care and the. factors that impede its use. We are making recommendations to the Secretary of Health and Human Services to support automated medical records as part of the Department's mandate to conduct research on outcomes of health care services.

In 1991, Senator Al Gore sponsored and successfully ushered through the Congress, the High Performance Computing Act of 1991 opening up the nation's telecommunications system to the public for open use.

High-Performance Computing Act of 1991 - Title I: High-Performance Computing and the National Research and Education Network - Directs the President to implement the National High-Performance Computing Program.

Sets forth Program requirements, including: (1) setting goals and priorities for Federal high-performance computing research, development, and networking; (2) providing for interagency coordination; (3) providing for oversight of the operation and evolution of the National Research and Education Network provided for in this Act; (4) improving software; (5) acceleration of high-performance computer system development; (6) technical support and research and development of software and hardware needed to address fundamental problems in science and engineering (Grand Challenges); (7) educating undergraduate and graduate students; and (8) providing for security.

Establishes an advisory committee on high-performance computing.

On October 19, 1992, Health and Human Services Secretary Louis W. Sullivan, issued a press release[12] announcing:

*HHS Secretary Louis W. Sullivan, M.D., today announced a series of new steps toward **creating a nationwide electronic health care information network**. He said major elements of the new system could be in place for Medicare and Medicaid within 15 months, producing significant savings in health costs.*

In the new system, health care insurance and billing will be handled by computer networks, eliminating most paperwork. When fully implemented, Americans would carry a single "health card," similar to bank and credit cards, enabling access to their own insurance coverage information. Billing would be performed electronically, and consumers as well as health care providers would no longer have to complete extensive paper forms.

Ultimately, most patient records could also be maintained electronically and accessed with the patient's permission through the card and a PIN (personal identification number).

Notice the difference between the reason given for the initial study in 1990 and the reason given in 1992. Between those three years, you see the beginning of a cover up of the real reason for "The System" - and the making of an official myth that the national electronic medical records system was intended to save money and increase efficiency by eliminating claims paperwork. This is Government Mythology in the making. It serves the purpose of spinning yarns for lawmakers to sell to their constituents and to each other.

In January of 1993 when Clinton announced the formation of his Task Force on National Health Care Reform[13], the GAO was already in the process of preparing another report for the Chairman of the Senate Government Affairs Committee. The report titled, Automated Medical Records: Leadership Needed to Expedite Standards Development"[14] was published in April of 1993.

Of course everybody remembers that Hillary Clinton headed up the committee because it was unprecedented for a first lady to actively engage in the business of government and they tried to do it behind closed doors. But the real project lead was Ira Magaziner. And what he was doing was redesigning the U.S. Health Care system to utilize the capabilities of the Internet to facilitate the "Postgenomics World" of applied genetics research.

Brief Biography of Ira C. Magaziner[15]

Ira C. Magaziner currently the chairman of the Clinton Climate Initiative and the Clinton Foundation HIV/AIDS Initiative.

From 1993 through 1998, he served as Senior Advisor to President Clinton for Policy Development at the White House. In this capacity, he supervised the development and implementation of the administration's policy for commercialization of the Internet and worked with First Lady Hillary Rodham Clinton on the development of the President's Health Reform Initiative. Mr. Magaziner also chaired a joint National Economic Council/National Security Council Initiative to increase US exports and served as a member of the National Domestic Policy Council.

Prior to his White House appointment, Mr. Magaziner earned respect as one of America's most successful corporate strategists, building two successful corporate strategy consulting firms and assisting major corporations in developing their business strategies. Prior to forming his own companies, he worked in Boston, London and Tokyo for the Boston Consulting Group.

He also served as co-chairman of the National Commission on Skills of the American Workforce with former Labor Secretaries Bill Brock and Ray Marshall, co-authoring the landmark report "America's Choice - High Skills or Low Wages." Mr. Magaziner graduated in 1969 as valedictorian from Brown University and attended Balliol College, Oxford as a Rhodes Scholar. He has received honorary doctorate degrees from Brown University, the University of Rhode Island, the University of Maryland and the New England Institute of Technology.

Mr. Magaziner has served on the boards of numerous charitable and educational organizations nationally and in his home state of Rhode Island.

The project team produced a 1342 page conceptual design document. In an article titled "A Guide to the Clinton Health Care Plan"[16], Robert E. Moffit, Ph.D of Heritage Foundation wrote the following:

Every aspect of the health care system would be affected by the legislation. Hundreds of pages of tightly written paragraphs detail sweeping government control of the health

insurance industry: precise benefits that must be assured; insurance requirements for firms; a "national quality management program" to oversee the quality of health care services; medical education, and the training of physicians; the creation of model information systems; new public health initiatives; the establishment of new federal loans and guaranty and solvency funds; new assessments and taxes; rural health programs; a new long-term care program; malpractice reform; antitrust reform; new penalties to combat fraud and abuse; major changes in the Medicare program, including a prescription drug benefit and coverage of state and local government workers; billions of dollars in tax subsidies; new panels, advisory boards, and commissions; coordination of worker's compensation and auto insurance with the new standard benefits package; and dozens of other fundamental changes…

In essence, it was nationalization of the health insurance system with provisions to provide health care coverage to all - Health Care for All. The magnitude of it was overwhelming and as a result, political pressure from both sides of the aisle caused the project to be halted - or so people thought.

But the cease and desist orders from the public didn't really stop anything. Large scale conversions like Ira Magaziner defined have to be broken up into phases anyway. Some pieces of the design take 3 years to implement. Some pieces might take 5 years. Some pieces might take 1 year. And a project of this scale isn't just one project, it's many projects running parallel with project leaders coordinating at the interface points (where one system intersects with another).

On June 26, 2000:

PRESIDENT CLINTON ANNOUNCES THE COMPLETION OF THE FIRST SURVEY OF THE ENTIRE HUMAN GENOME

Hails Public and Private Efforts Leading to This Historic Achievement

Today, at a historic White House event with British Prime Minister Tony Blair, President Clinton announced that the international Human Genome Project and Celera Genomics Corporation have both completed an initial sequencing of the human genome -- the genetic blueprint for human beings.

He congratulated the scientists working in both the public and private sectors on this landmark achievement, which promises to lead to a new era of molecular medicine, an era that will bring new ways to prevent, diagnose, treat and cure disease. The President pledged to continue and accelerate the United States' commitment to helping translate this blueprint into novel healthcare strategies and therapies. He will underscore that this genetic information must never be used to stigmatize or discriminate against any individual or group. Our scientific advances must always incorporate our most cherished values, and the privacy of this new information must be protected.

Changing of the Guard

On January 20, 2001, George W. Bush took office as the 43rd President of the United States. On April 1, 2001, the COMMUNIST Chinese captured one of our surveillance aircraft loaded with state of the art communications and monitoring equipment. On September 11, 2001, two airplanes allegedly flew into the World Trade Center Towers 1 and 2 causing the buildings to collapse into their own footprints due to fire and structural failure and World Trade Center Building 7 simply fell down in perfect demolition symmetry later in the day, the Pentagon was hit by an airplane, and an airplane was shot down over Pennsylvania leaving only a small hole and scattered debris for 8 miles. Or so the Government and Media Mythologists told us.

On October 4, 2001 Florida officials announced that the first case of Anthrax was diagnosed followed by anthrax letters mailed to politicians and mainstream media people.

And on February 11, 2002, George Bush showed up in Milwaukee, Wisconsin with a facial injury and a ridiculous story about having choked on a pretzel. The purpose of his visit to the Medical College of Wisconsin was to unveil "his" proposal for "Health Security".

2003, Medicare Prescription Drug Improvement and Modernization Act
- Included "disease management programs"
- Preventative Screenings
- Immunizations
- E-Prescribing

2004, Health IT - "Virtual Medicine"
2004, Bioshield
2004, Bush Signs Freedom Initiative
2005, Pandemic Strategies, Roles and Responsibilities
2005, Nationwide Health Information Network - "Network of Networks"
2006, Executive Order 13410, Nationwide interoperable HIT Infrastructure
2008, Patient Centered, Market-Based Health Care

Setting aside the whole "Terror, Terror, Terror" campaign, if you mapped out the major components of the systems that were designed and implemented, you'd probably end up with about 1342 pages of tightly written paragraphs, huge new subsidies, new panels, advisory boards, and commissions; etc. There may be some relatively minor changes because there always are between conception and implementation of a big systems project - but the essential components are demonstrably the same.

The Bush Administration announcements of programs came virtually simultaneously with functioning systems. The only way that's possible is if the development occurred during the ostensible end of the Magaziner project and the Bush announcements. Development takes time and what a "lucky break" it was for the Human Genome Manhattan Project that we had a dual WMD attack - airplanes and anthrax - to accelerate the funding, the necessary legislation and the cooperation from the government and health care community.

The point is, there is virtually a straight line of systems planning, development and implementation that can be mapped out that will correspond to Ira Magaziner's design and which will ultimately serve the purposes of the Human Genome Project.

The diagram on the following page is a crude depiction of the elements of the Clinton-Magaziner plan compared to the legislation passed during the Bush Administration.

Diagram of Programs - Clinton and Bush

Pandora's Box

In 1996, Johns-Hopkins opened Pandora's Box:[18]

> The National Human Genome Research Institute (NHGRI) was originally established as the National Center for Human Genome Research (NCHGR) in 1989. Its primary mission was to lead the National Institutes of Health (NIH) contribution to the Human Genome Project - an international research effort to determine the location of all human genes and to read the entire set of genetic instructions encoded in human DNA….
>
> **Scientific leaders of the Human Genome Project also made an important decision in 1996 - to deposit sequence in public databases within 24 hours of its assembly, with no restrictions on its use or redistribution. This defining moment in the HGP made**

the sequence immediately available to anyone with an Internet connection, ensuring that the sequence would ultimately benefit the public by empowering all the world's best minds.

In 1998, the funding for the Genome Data Base at Johns-Hopkins was cut and the project was to be shut down but the Hospital for Sick Children in Toronto Canada was able to find funding "from various sources" (another article said anonymous sources) to keep the project going. The following are the notes from a 1999 conference in Brisbane, AU:[19]

> The genome database, (**GDB**) was reported by Dr Jamie Cutticchia. As we all know, GDB had announced its termination but now has guaranteed funding for 4-5 years from various philanthropic sources and is able to continue its work. Operations have now moved from Johns Hopkins University (JHU) in Baltimore, to the Hospital for Sick Children (HSC) in Toronto.
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> It is proposed that HUGO serves as an advisory board for GDB and that. GDB is now more science focused than informatics focused as it was in the past and aims to working with the community on the acquisition and integration of information rather than developing the database itself.
>
> GDB is hoped to become more federated, i.e. work with other databases e.g. searching the CF database with GDB tools is now possible. GDB would like to prepare a shell and provide assistance to those curating mutation information and wishes to work with the gene advisory committee to curate the appropriate information and give up those parts that can be better curated elsewhere. GDB also wishes to work with other databases e.g. GeneBank to define better relationships and linkages.

In 1999, the Toronto Sick Children's Hospital opened the Bioinformatics Supercomputing Center (BiSC) when the IBM donated an SP supercomputer. The Genome Data Base was then moved to Canada.

> **Global Genome Database** [20]
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> "Sick Kids has been an undisputed leader in human gene mapping within Canada," explains Dr. Cuticchia. "Given the relationship between bioinformatics and the genome program it is only natural that we build on that excellence and expand into this new area. **At Sick Kids the hosting of the Canadian site of the GDB is just one of several steps underway to demonstrate our commitment to bioinformatics."**
>
> Due to funding cuts, maintenance of the Johns Hopkins site will be discontinued at the end of January 1999. HSC is considering taking over the management of the entire GDB.
>
> The Hospital for Sick Children is Canada's premier health research facility and one of the world's leading centres for genetics research. Through its **Centre for Applied Genomics** it offers scientists from HSC and across Canada such services as DNA sequencing and synthesis, gene and chromosome mapping, gene identification, and **bioinformatics**.

Just to recap where we are in this project and in general, we have scientists who have mapped the code to our genetic make-up, they don't respond to government authority, the knowledge of the genome is distributed to scientists throughout the world - friend and foe alike, we have "free trade" agreements that allow anybody from anyplace in the world to just come set up shop to sell to the public - or to import products like contaminated Heparin from China and - that's the least of our worries on imports.

We have a population that is living in a bubble of delusion because our primary information outlets are corporate controlled and for the most part, the only people making money in this country today - are those who are engaged either directly or indirectly in aiding and abetting "The Project".

And the icing on the cake is that we have the design for a new health care system that is being implemented that will enable genetics researchers to study and use the entire population of the United States as lab rats once the components of the system are fully implemented.

The evidence of that is not only the research and the systems implemented so far, but also in the legislation that addresses ethical issues. All references are from the Genome Project Timeline:[21]

Bioethics Legislation

1996	DOE and NCHGR issue guidelines on use of human subjects for large-scale sequencing projects.
	Health Care Portability and Accountability Act prohibits use of genetic information in certain health-insurance eligibility decisions, requires DHHS to enforce health-information privacy provisions.
1997	UNESCO adopts *Universal Declaration on the Human Genome and Human Rights* 2000
2000	President Clinton signs executive order prohibiting federal departments and agencies from using genetic information in hiring or promoting workers.
2008	Genetic Information Nondiscrimination Act (GINA) Becomes Law, May 2008

Considering the government's performance to date on the issue of ethics, one has to consider any ethics legislation and spokesperson rhetoric as merely smoke and mirrors. Ethics are judged by actions - not verbalizations and in this regard, the government fails. Private sector genetics research has been unleashed on the American public with no oversight and with the government computer systems designed to facilitate that research on an unsuspecting population.

We're in a fix.

Population Pools

The system of mandatory health insurance either through a private insurer or public system ensures that the entire population will be included. To be blunt, it also serves the purpose of segregating people by income and status in life. People who have private insurance count - people in public programs of insurance don't. Private insurance is not entirely a shield, but it will affect the risk management models for selection of subjects for research. People who have Medicare, Medicaid or who receive subsidized (free to minimal charges) care are most at risk for being test subjects as was demonstrated recently by the Texas Medicaid Algorithm Project (TMAP).

Texas Medicaid Algorithm Project

TMAP was a "project partnership" between the state of Texas and the drug companies. It was recently in the news when a lawsuit against Eli Lilly & Company was settled for $1.42 billion.[22] The case was handled as Medicaid billing fraud completely ignoring what the drug companies were actually doing. The media focus on "greed" as opposed to a more sinister motive is apparent from this video of a Fox News Story [23] on the settlement. However, with a deeper understanding of the TMAP project itself, the conclusion on the Eli Lilly settlement would have to be that Eli Lilly took the fall on this one so that the real project could continue.

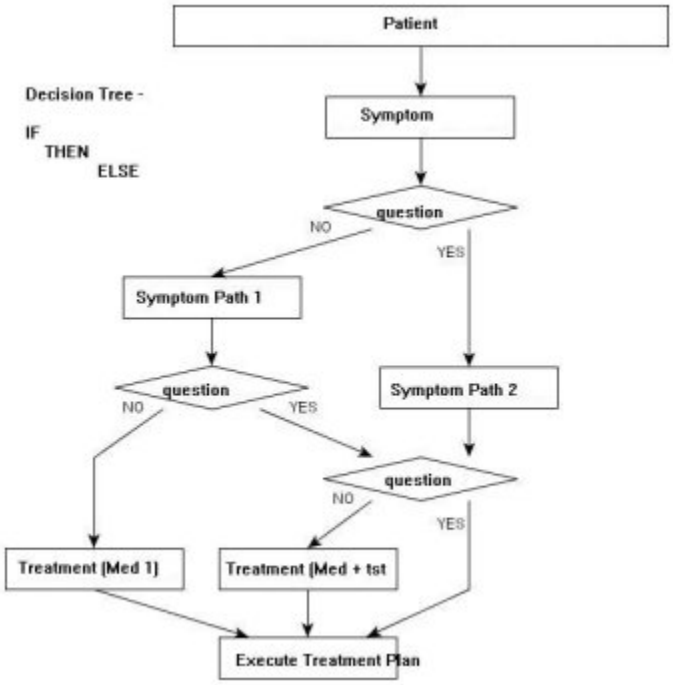
There were about 5 drug companies involved in TMAP all doing the same thing as Eli Lilly and with complete cooperation of the state of Texas. Since this is the second major case in which states have sued and benefited from the lawsuit, one has to wonder if perhaps the lawsuit isn't simply becoming a wink and a nod way of transferring funds to the states for corporate projects. In essence a "dead peasant" payout to the state for using their official capacity to enable the research. Of course the dead and injured peasants get nothing.

In the case of TMAP, the particular drug and drug company is not the issue. The Medicaid billing is not the issue. The issue is the development of the 'Algorithm System'. It is a critical component in the larger, long term plan for population-wide genetics research and eugenics. To understand how it will work, one must look at the nature and purpose of the TMAP system itself.

The Algorithm System is a knowledge base - decision support system. The purpose of it is to aid health care providers in the decision-making process for prescribing drugs by using all factors of the medical record to select and suggest a particular medication for the patient. Decision support systems are also called 'Expert Systems'. The concept of an Expert System is that it has the intelligence necessary - through it's knowledge base - to replace real experts with clerical staff - or in the case of health care, with lesser qualified health care providers.

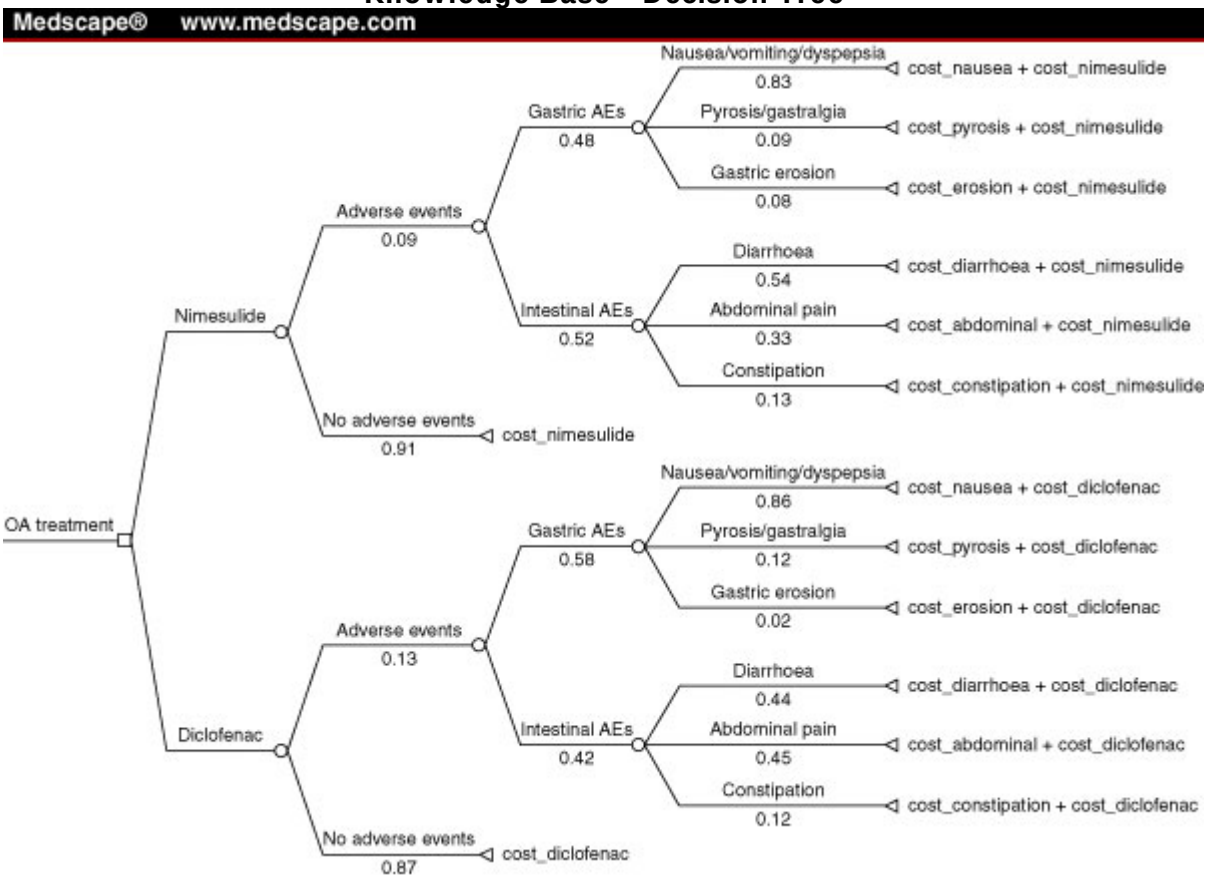
Expert systems use decision tree logic - which is a simple, YES-NO test. This is a simplified decision tree to show the essence of an expert system.

Expert System Logic Flowchart



This diagram is an actual decision tree for a gastric condition using test results as a factor in the decision tree model. You can begin to get the idea of the complexity involved in prescribing decisions made by computer just by looking at it:

Knowledge Base - Decision Tree



This diagram should make clear the fact that while the Algorithm Project in Texas involved psychotropic drugs, the pharmaceutical companies as a consortium are building a knowledge base for prescribing assistance for all drugs for all conditions. Ultimately, the idea will be to use a person's body chemistry and genetic factors to prospectively prescribe medications to prevent the development of conditions that we now treat retrospectively - and in many cases after the damage is done. Nobel goal - but it's in how they get there that's the problem.

The Algorithm Project in Texas wasn't the only state where "The System" was being used. Pennsylvania was one of the other states where it was implemented and the investigation of it cost Pennsylvania OIG Inspector Allen Jones his career. The following are excerpts from Inspector Jones' testimony[24] followed by comments on the significance:

Page 1

TMAP is a Trojan horse embedded with the pharmaceutical industry's newest and most expensive mental health drugs. Through TMAP, the drug industry methodically ***compromised the decision making of elected and appointed public officials to gain access to captive population of mentally ill individuals in prisons and state mental health hospitals***.

TMAP applied to drugs prescribed to mental patients in the "public health care system" - using the population of people who don't count. The officials of the state of Texas - and in particular, the medically trained officials had to be aware of the nature of the project but they went ahead anyway.

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"Expert Consensus Guidelines"

This consortium sought to "legitimize" the medications recommended in the model program's "drug menus". The group elected to utilize "Expert Consensus Guidelines", rather than clinical studies or drug trials to form these recommendations.

Essentially, TMAP opted to "establish" new drugs as the best drugs for various illnesses by surveying the opinions of doctors and psychiatrists of TMAP's own choosing**. No hard science, no patients, no study review, and no clinical trials** – just the "Expert Opinions" of persons TMAP elected to survey.

The "Expert Consensus" process became TMAP's standard mechanism for creating the *appearance* of superiority for certain drugs and it was employed repeatedly from 1996 to 2003.

Saving the cost and time of performing clinical trials in the traditional way is secondary to the real purpose of "Consensus of Experts" system. The "Consensus Process" establishes an after the fact review of the decisions made by the TMAP system - so what they were actually doing was testing the computer system - the decisions made by the computer system using the knowledge base they were building. That's the reason why they need to have lesser qualifed health care providers doing the face-to-face patient contact and using the computer system for prescribing. A real physician would make his own decisions on medications. The lesser qualified people will do what the computer system tells them to do because they don't have the personal knowledge to question the computer.

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With the doors of the Texas prisons and mental hospitals open to TMAP, TMAP personnel were free to "mine" patient records in a process called "Retrospective Analysis." Essentially they could research files of those patients who had previously been treated with the newer medications and report on those cases that offered favorable results. Additionally, TMAP personnel were responsible for monitoring the usage of the drugs, gathering raw data, analyzing data and formulating reports. (In Pennsylvania this included experimentation with dosage levels and new symptoms.)

With the nationalized medical records system, the drug company personnel and "Expert Teams" will be able to select their target populations through "Prospective Analysis". They will have the full health record and they will be able to set up queries to run through the entire networked database looking for people who meet the criteria for their study (experimentation).

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…Guardian that the drug's potential to cause suicidal thinking needs to be investigated.

Last month the Journal of the American Medical Association published results from two trials of children treated with Pfizer's antidepressant drug Lustral, known in the US as Zoloft.

Seventeen children who were given the drug were pulled out of the trial because of side effects, compared with five who were given a placebo. Only 10% more children improved on the drug than improved on a placebo.

The researchers nonetheless concluded "the results of this pooled analysis demonstrate that sertraline (Lustral) is an effective and well-tolerated short-term treatment for children and adolescents with major depressive disorder".

In a project like TMAP where the true objective is different than the stated objective, you can't know what they were actually testing. Since they were developing a decision support system - a computer system - making prescribing decisions, you don't know the criteria was for a successful test. The fact that children were pulled out of the trial might be the success they were looking for because the TMAP system decided to pull them out based on the side effects or the prediction of side effects based on the patients chemistry that did manifest proving the system correct.

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The centerpiece of this model is a set of algorithms that, together with text guidelines, guide a clinician in prescribing medications to schizophrenic patients and in changing or adjusting medications. Algorithms are basically flow charts, or graphs, that illustrate step-by-step movements in a process….

The centerpiece of the algorithms is a formulary of approved and required medications. A formulary is like a menu in a restaurant, but it lists medications instead of food. It is a list of what medications a doctor may choose from. If a drug is not on the menu, it cannot be used.

The menu also stipulates the order in which classifications of drugs can be used. To carry the restaurant analogy further, the "appetizer menu" must be used first. In the drug formularies, "the appetizer menu" is that list of drugs that must be used first, second and often third, before moving on.

The above paragraph is the key that reveals what the TMAP project was really about. The algorithm is for formulaic medicine - medical decisions made by computers using a knowledge base.

The TMAP project was using the Texas captive and vulnerable populations as the test subjects for development of the knowledge base which is demonstrative of the ethical compass of the genetics researchers and state officials.

The decision support system is being developed to assist lesser qualified people - Physician's Assistants and Nurse Practitioners to practice medicine as if they were doctors. This is a necessary feature of the "new" health care system as it pertains

to genetic research and especially once they begin the real gene modification research on a large scale. Real doctors have too much knowledge and stature and some would blow the whistle on the failures. The voices PA's and NA's won't be heard in the circles that matter.

In 2005 and 2006, the Science, Technology and Innovation subcommittee of the Senate Committee on Commerce, Science and Transportation held a couple of hearings[25] on the health care system and "reforms". These hearings not only have useful information concerning the plans for health care, they also give an idea of attitudes and thinking of the people involved in the "transformation".

June 30, 2005 Health Information Technology
June 21, 2006 Accelerating the Adoption of Health Care Technology

One of the witnesses in the 2005 hearing, John Glaser, Vice President and CIO of Partners HealthCare in Boston is quite open about the new paradigm for health care in select circles. And although this article doesn't mention the TMAP decision support system and the PA-NP's, it does describe the planned new paradigm - the electronic health records and the integration of genetic research into the health care system.

"**Partners HealthCare CIO touts integration of genetics and electronic health records",**[26] reporter Joe Vanden Plas

"The integration of genetics and electronic health records" - therein lies the reason for removing real physicians from front line contact with the target populations. A real physician would recognize the experimental nature of the computer suggested treatments. The lesser trained Physicians Assistants and Nurse Practitioners would not. However, with a little psychological ego pumping, they can be made to think that in the techno-tronic era - with computer-aided decision support, they can.

See Robert Wood Johnson, Edge Runner - Raise the Voice Video[27]

The "Wellness System"

There are several components to health care reform that are designed to facilitate covert research. First, the "transformation" of the health care system is to be a "wellness system"[28] - giving doctors performance incentives for healthy patients. Obviously this will cause doctors to offload their chronically ill patients to "chronic disease management centers". This is a means to segregate the target populations and to direct them to research centers - with the term research applied both to medical research and to computer science research for the purpose of building the knowledge base for drugs and for the decision tables themselves.

The concept of chemistry-based medicine is being marketed as "personalized medicine". That makes it sound very attractive. What it actually is - is modification of your DNA - your genes, your personal - or your family's basic body chemistry.[29] The fact of their dishonesty in marketing the nature of the "New Medicine" is reason enough to have the utmost concern regarding all of the changes to the health care system that are being implemented.

The plans also call for rural health clinics for the poor. These clinics offer free or almost free health care. The patients in these clinics will no doubt be used in various ways - for

example as control populations, populations used for the training of health care providers, and "for other purposes" as yet unspecified.

Golden Parachuting Doctors

The transformation of the U.S. health care system for systemic genetic research depends upon easing out well trained physicians except those who are willing to be genetics researchers for the cause of science. To accomplish that, doctors are being given the bum's rush on technology - "Techno-Dazzle" which they will soon find out is costing them more than it's worth to them; facilitation and peer pressure for 'group think' - Best Practices in preparation for the "Expert Consensus" team approach to medicine which is conditioning for hands off medicine - review of an electronic medical record in place of face-to-face patient care. The new paradigm of payment for "wellness" means giving doctors money for nothing but wearing the white coat and performing triage - healthy ones here - sick ones there.

Effectively, the 'New Medicine' is the Golden Parachute buy out for physicians to enable the degradation of the health care system to the point where the real genetic experimentation can begin.

Telemedicine

As each aspect of the new health care system is examined, the strategies for the genomics research becomes apparent if one is aware of the dual use of technologies and the larger Blueprint for health care "transformation". Telemedicine is one such technology. It was promoted by former Surgeon General Richard Carmona who was an EMT turned physician (allegedly).

Telemedicine will be the tool that is used for communication between the physician-researcher and the hands-on provider Nurse Practitioner or Physician's Assistant. In some settings, it could be the best thing that every happened to health care - in third world countries that don't have a health care infrastructure for example. In other settings like the United States, the opposite is true - it's the worst thing that could happen to health care.

In the course of gathering information for this paper, an NIH website containing videos on various subjects was found. On March 13, 2001, there was a presentation titled, "Telemedicine and Telecommunications: Options for the New Century".[30] It's worth the time to watch it because the presentors give the history and the arguments for it and the various issues around the use of it - and other technologies such a electronic medical records and the use thereof.

EMS Telemedicine Previewed [31]

Surgeon General Witnesses EMS Telemedicine Preview at "Eagles" Meeting

On February 18, 2005, participants at the prestigious "Gathering of Eagles" Conference (www.gatheringofeagles.us)in Dallas, Texas previewed an advanced EMS Telemedicine system in which real-time video images, digital voice communications and physiologic data were sent from a specially equipped Garland Fire Department ambulance…

Dr. Richard Carmona, the Surgeon General of the United States, observes the Rosetta VC 'live' video/data transmission from Garland Texas Fire Department, 20 miles away.

Dr. Fowler (www.biotel.ws) presented a series of slides highlighting several key applications for the technology as well as the need for open architecture in EMS communications and data management systems.

The subject of replacing face-to-face physician care with lesser qualified providers is a sensitive subject that at this point is not really being discussed opening - but rather it is simply being implemented. In this NIH "dialogue",[32] what they are doing is a subtle form of propaganda to regularize the topic of remote medicine. Near the end of it, is this snippet:

WHY NOT TELEMEDICINE

A physician at **Cedars-Sinai Medical Center** in Los Angeles accurately diagnosed an ill child in **Guam** via live video at a telemedicine conference early. But only after Guam's lieutenant governor, a medical doctor, intervened to keep Guam's Board of Medical Licensure from enforcing a law that prevents off-shore doctors not licensed in Guam from diagnosing patients. In a world of increasingly specialized care it's ridiculous to force Guam residents to fly to Los Angeles if the specialty expertise can come to them. This is but one of thousands of barriers constructed by the medical professions in every state to protect themselves from competition and market entry. Adding billions to the costs of medical care diagnosis and delivery every year.

Who would argue? However, if the locations were reversed and the hospital was in Guam and the patient in Los Angeles, it would be a whole different story - and that's the story you won't see in print - at least until the Health IT system is fully implemented. If that sounds

outrageous, then perhaps you should read the article about a study performed in Northern Idaho.

Randomized Trial of a Telephone Care Management Program for Outpatients Starting Antidepressant Treatment[33]

Excerpts:

> ***OBJECTIVE:*** This study evaluated the effectiveness of a structured telephone-based care management program for patients in a prepaid health plan receiving new antidepressant prescriptions from psychiatrists. ***METHODS:*** Potential participants were identified with computerized medical records and contacted by telephone. Eligible and consenting participants were randomly assigned to continued usual care (N=104) or to a three-session telephone care management program (N=103).
>
> During the past decade, several randomized trials have demonstrated the effectiveness of low-intensity telephone care management programs for primary care patients beginning antidepressant treatment (3,4,5,6). These programs included scheduled telephone outreach, structured assessment, support for treatment adherence, and coordination of care with treating primary care physicians. The Texas Medication Algorithm Project (7) examined the benefits of a more intensive quality improvement program—including physician education, treatment algorithms, and structured clinical assessment by study staff at every visit—in public-sector mental health clinics. That program yielded significant improvements in depressive symptoms and functional impairment. However, a low-intensity care management program has not been tested in psychiatric practice.
>
> We describe here a randomized trial of a telephone-based care management program for patients receiving new antidepressant prescriptions from psychiatrists. A representative sample of patients was randomly assigned to a three-session telephone care management program or continued usual care.
>
> Computerized pharmacy and visit registration data were used to identify potential participants who were aged 18 years or older, received a new antidepressant prescription from a psychiatrist (that is, no antidepressant use in the past 90 days according to computerized pharmacy data), received a visit diagnosis of a depressive disorder in the past 30 days, and had no recorded diagnosis of bipolar disorder or schizophrenia in the past two years. As in usual care, potential participants might or might not be receiving psychotherapy along with antidepressant medication.
>
> **Potential participants received an invitation letter including all elements of informed consent (description of study purpose, study procedures, study risks, potential benefits, and voluntary nature of participation)**.
>
> A documented oral consent procedure included all elements of informed consent: study objectives, description of study procedures, description of potential risks, advice that participation was completely voluntary, and description of procedures for withdrawing consent. **Group Health's human subjects review committee waived the requirement for written documentation of consent because risk was considered minimal and mailing of consent forms would increase the risk of violating confidentiality.**

All care management activities (caseload tracking, structured assessment, adherence to medication algorithms, provider reports, and supervision) were organized and supported by an electronic decision support system.

Care managers were registered nurses with a minimum of five years' experience in inpatient or outpatient mental health practice. Specific training for this study included four hours of didactic instruction and role play followed by completion of at least five observed care manager contacts before any patient contact. Care managers received approximately 30 minutes of supervision each week from a psychiatrist (GS) and a psychologist (EL).

Notice the following elements in the above study:

1. Patients were selected prospectively using their claims history for prescription drugs and doctors visits.

2. The study involved remote medicine - by telephone. This doesn't sound high tech - except with Internet telephone technology, the contact could be face to face even though they say 'telephone'.

3. Case Managers were Nurse Practitioners - only the Nurse Practitioners saw the psychiatrist - to discuss the case from the NP's medical records.

4. Notice the contradiction in the informed consent procedure. They said they mailed the invitation that included all elements of the consent - but that they couldn't mail a consent form due to privacy concerns. What's the difference? An invitation to join a study is by definition an acknowledgement of meeting the criteria for a study which reveals the condition of interest of the study. This is an incredible logic flaw that should have been questioned because what it allowed them to do was to bury their failures - figuratively not literally hopefully.

5. Just like TMAP, they were using these patients to test the algorithms and electronic decision support using lesser qualified health care providers and a remote expert who looked only at the medical record and talked only to the less provider.

Integrated Research and Practice

Because the Group Health Cooperative performing the telephone study above described themselves as a prepaid health plan and the project goals indicated the intent to contribute to the knowledge base of the Texas Medication Algorithm Project:

The Texas Medication Algorithm Project (7) examined the benefits of a more intensive quality improvement program—including physician education, treatment algorithms, and structured clinical assessment by study staff at every visit—in public-sector mental health clinics. That program yielded significant improvements in depressive symptoms and functional impairment. However, a low-intensity care management program has not been tested in psychiatric practice.

An attempt was made to find out who was sponsoring a research project using a private sector health plan provider. The network runs so deep that it would take more pages to document it than the whole of this paper so instead of doing that, I'm just giving the first

three links in the trail and if you following the links from there, through the major connections, you'll end up at the Robert Wood Johnson Foundation and ultimately at the World Health Organization.

Group Health Cooperative

Founded in 1947, Group Health Cooperative is a consumer-governed, nonprofit health care system that coordinates care and coverage. Based in Seattle, Wash., Group Health and its subsidiary health carriers, Group Health Options, Inc. and KPS Health Plans, serve more than half a million residents of Washington state and Idaho.

Center for Health Studies

Research has been a part of Group Health Cooperative's vision since it was founded in 1946. In fact, Group Health's first mission statement said that the organization would "contribute to medical research."

Under Handschin's leadership in the early 1970s, Group Health contributed to projects with major implications for national health policy. Among these were the RAND Health Insurance Experiment and two demonstration projects—the Model Cities Project and Plan 9 Rural Health Project—both designed to improve health care for low-income people.

HMO Research Network

The HMO Research Network is an organization of HMO research programs whose mission is to use our collective scientific capabilities to integrate research and practice for the improvement of health and health care among diverse populations.

Next…. Government Takeover of Parenthood and the "Medicalization of the Schools"

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All links active as of January 28, 2009