Social, Economic, and Political Considerations in 
Health Technology Assessment
Tamar Wolinsky, B.A.
Northwestern University, Illinois, USA.

Since the 1970s a rapidly growing gap between demand for health services and available resources has created a critical need for Health Technology Assessment (HTA). HTA involves a multidisciplinary policy analysis of the medical, economic, social and ethical implications of the development, diffusion and use of health technologies. Its aim is to provide a comprehensive factual basis for both clinical decision making, and health care policy making. Health Technology Assessment and Management is becoming an increasingly important part of health policy decision-making in Israel and around the world.

The goal of HTA is to offer an unbiased set of considerations for prioritizing health technologies, and for determining the clinical effectiveness of products. Especially when trying to prioritize new technologies, HTA often includes complicated ethical, legal, economic, social, and political issues. Although these issues are closely interconnected, this chapter focuses on the social, economic, and political issues impacting HTA. When evaluating how society influences HTA, it is also pertinent to look at the economic considerations in prioritizing health technologies. The rising costs of health-care technologies have increased health care expenditures in many countries. Coupled with budget constrains, these high expenditures have led decision makers to focus on the best use of scarce resources by incorporating economic evaluation in their HTAs. In analyzing these economic evaluations, we find that they directly reflect social values by incorporating public preferences into calculations.

In considering social and political aspects of Health Technology Management (HTM) it is important to look at the main trends in the development of Health Technology Assessment, the specific challenges involved, and the HTA process itself. The application of HTA in decision-making regarding health policy has expanded rapidly
in many Western countries. As HTA becomes more widely used, there is a movement towards the internationalization and collaboration of HTAs around the world, especially within Europe. Moreover, as HTA’s role in health policy continues to grow, its decision-making process is coming under greater public scrutiny, especially by various stakeholders. These parties are exerting increasing pressure to make the processes used by HTA institutions more transparent. While it seems inevitable that HTA will have to become more open in order to gain public trust and support, there are social and political issues that HTA faces in opening up their decision making process and involving the public and various stakeholders.

Some of the most significant political and social factors impacting HTA stem from the different regulatory agencies and organizations within each country. The structure of government and design of the healthcare system in each country fundamentally affect its HTA network. In different countries, various players including government agencies, private institutions, non-for profit public organizations, and academic groups provide HTA. In the United States, the health care system is based on a combination of private and public medical insurance. During the 1970s the federal government tried unsuccessfully to establish an HTA system.⁵ While the opposition to a federal HTA system argued that federal HTA system would threaten the independence of organized medicine, various private-sector institutions, such as insurers and pharmaceutical companies, were performing health technology assessments.⁵ Since the U.S. healthcare system is highly decentralized, each private institution creates their own HTA system to best serve their specific needs. The two federally funded healthcare programs, which serve the elderly (Medicare) and low-income families (Medicaid) are run by the Center for Medicaid and Medicare Services (CMS). CMS also has an HTA process to manage technologies available to people served by these specific programs. However, majority of Americans have private medical insurance.

Unlike the United States, Israel’s healthcare system is highly regulated by the government. The 1995 National Health Insurance Law (NHIL) created mandatory health insurance coverage for all residents of Israel. Four main health care programs are
available in Israel- Kupat Holim Clalit and Kupat Holim Maccabi serve the majority of the population, while Kupat Holim Meuhedet and Kupat Holim Leumit serve a much smaller proportion of the Israeli public. The 1995 National Health Insurance Law also established a list of services (NLHS: National List of Health Services) that all health insurance programs are required to provide to every Israeli citizen. The list is updated every year in accordance with the national budget allocated for new health technologies and based on the results of health technology assessments by the Israeli Center for Technology Assessment in Health Care at the Danek Gertner Center for Public Health Policy. This Center integrates clinical, epidemiologic, and economic factors as well as legal, ethical, social and political considerations when evaluating a technology. The Public National Advisory Committee (PNAC), which is composed of professionals in the medical field as well as public representatives, makes the final decision on which health technologies to publicly fund and put on the National List of Health Services (NLHS). In addition to the mandatory NLHS that must be provided by the four main health management organizations, healthcare programs can provide other technologies. Decisions regarding other technologies offered by these healthcare plans are private and not necessarily affected by the federal HTA, however, the mandatory NLHS that must be provided by the four main health management organizations is often a direct result of HTA. In comparing the United States and Israeli healthcare systems, we can see how the HTA system in each country reflects its regulatory structure. Israel’s more centralized government and healthcare system has created a more centralized HTA process that collaborates directly with one decision making body in the government, while in the United States, HTA is privatized, reflecting a highly decentralized system.

Although different countries’ have distinct political structures that affect the HTA process, there still appears to be a growing trend in internationalization, or globalization, of the HTA process. There is a movement, especially in Europe, to increase health policy collaboration and perhaps create a European wide HTA. Some researchers suggest this could save important resources, increase efficiency, and create more uniformity across the European Union. The European common market, based on open and free trade among
the member countries, can help to facilitate technology transfer. Therefore, if a specific health technology is made available in one of these countries, it would be available to all member countries.

Several projects over the past couple of decades demonstrate the trend of globalization within Europe. The 1993 EUR-ASSESS was the first major international collaboration proposal. Funded by the European Commission, it recruited 100 people involved in HTA throughout Europe and focused on researching four important issues: priority setting, methods of HTA, implementation of HTA, and health insurance coverage and HTA. The main recommendation of those involved in the project was that the European Commission should foster and fund collaboration between HTAs throughout Europe. The leaders of the EUR-ASSESS project continued to explore international coordination and proceeded to found the HTA Europe Project. This project was another cooperative undertaking, which studied the relationship between HTA and the healthcare system of all countries in the European Union (EU). The leaders of the HTA Europe Project also deemed that an established system of collaboration for HTA at the European level would be valuable for EU countries. The following project was the European Commission Health Technology Assessment (ECHTA) Project which took place over 1997-1999 and was led by the same group of experts. Similar to the EUR-ASSESS project, it gathered HTA authorities from the EU countries and brought them together to discuss ways to coordinate findings and resources and share information on health technology assessment.

In response to a demand for increased communication and international cooperation over HTA, the EUnetHTA project was implemented in 2008 with the purpose of connecting public HTA agencies and research institutions, and facilitating the exchange of information. Headed by the HTA agency DACEHTA in Denmark, in 2010 there were 64 organizations from 33 countries participating, and membership continues to grow. EUnetHTA is a database which HTA institutions can use to exchange knowledge about their research. The EUnetHTA project can be seen as an important step in the internationalization of HTA. However, there is a significant difference between sharing
data and sharing methodology. Creating an “HTA core model” to guide future assessments is incredibly difficult due to the distinct differences between countries. Although European countries may be in close proximity, and there are certainly similarities among many western European countries, it is difficult to conform to a core model because each country’s HTA system is shaped by their unique social problems, healthcare needs, values, culture, ethics, and economic limitations.

While political and social issues such as government structure, healthcare system, and globalization have an important affect on HTA, decisions about prioritizing health technology ultimately revolve around economic considerations. Whether a new technology is funded relies on the budget available and how beneficial the new technology will be to the unique society of that country. Since countries’ healthcare needs and financial capabilities vary significantly, examining the economic aspects of HTA is critical for understanding the HTA process. Today, a growing number of countries require proof of cost-effectiveness, affordability, and other benefits of new technologies before national health services or insurance systems provide coverage. Economic analyses provide important knowledge on the efficacy of new technologies and are crucial to the decision making system. While economic processes are often thought of as technical or mathematical, when incorporating economic evaluation into the health technology assessment process, social values play a significant and influential role.

There are two major forms of economic evaluation in health care: cost effectiveness analysis and benefit to cost analysis. A subtype of cost effectiveness analysis is cost utility analysis, which translates clinical effectiveness into quality of life measures. Health related quality of life measures are based on population or patient perception of a specific health state. Both the cost utility analysis and the cost benefit analysis incorporate preferences that reflect social values in their approaches.

Cost benefit analysis examines the costs and benefits of implementing a new intervention or replacing a current technology with a new one. The goal of this analysis is to achieve the greatest net benefit under a budget. If the net benefit is positive, that is if the benefits exceed the costs, then the goal of cost-benefit analysis has been met. Perhaps
the best way to place a value on the benefits of the intervention is by using a measure of willingness to pay.\textsuperscript{9}

Willingness to pay (WTP) is the maximum cost a patient would be willing to pay for a therapy or health technology that will allow them to recover from an illness. Anything above this amount would cause a financial loss too high for the payment to be considered beneficial to the individual.\textsuperscript{10} It is very important to try to gauge the social value of certain interventions when making policy decisions about new health technologies.\textsuperscript{11} Research on WTP tries to evaluate the monetary value society puts on life and well-being, and studies the effects on both the individual and society as a whole. WTP research examines the willingness to pay of both patient and public populations using survey methodology in regards to societal (or altruistic), patient, and private (or option value) benefits.\textsuperscript{10} From the social perspective, benefits from some new drug are applicable to both patients and non patients. Patients benefits are direct benefits to those with the disease. Option value benefits refer to people who are at risk to develop the disease, and altruistic values deal with how individuals in society may benefit because others are allowed access to some new and beneficial technology. Thus the total societal benefits consist of the combination of patient (actual) values, potential values, and altruistic values.\textsuperscript{10}

WTP differs significantly among people with varying incomes and preferences. Indeed some researchers and practitioners assert that willingness to pay should not be taken into consideration because the use of willingness to pay in cost-benefit analysis implicitly incorporates income or wealth into decision making, which could distort allocation of healthcare resources towards the wealthy. Furthermore, many people are uncomfortable with valuing length and quality of life in monetary terms. This criticism has lead to greater reliance on social rather than individual objectives.

One approach to cost effectiveness analysis that avoids the individual wealth considerations is cost utility analysis. In looking at the monetary cost of implementing new technology and its benefits, cost utility analysis uses non-monetary units of benefit called Quality Adjusted Life Years (QALYs).\textsuperscript{11} The goal of this analysis is to maximize
QALYs for a designated cost. QALY is a measure of how society values life in that it represents an actual value equal to years of life gained due to medical intervention, and multiplied by people’s preferences for different health states. Earlier on, preferences used to be asked only of doctors and patients, but more recently general public opinion has become an increasingly important component in health policy decisions. Public attitudes are especially significant in public policy on societal resource allocation because the general public may hold a less biased evaluation of health conditions. These preferences of society, or the value assigned by respondents to a description of a specific health state, are called utilities.

Utility weights are calculated in a few different ways. Some approaches, such as Standard Gamble (SG) and Time Trade Off (TTO) are direct measures based on what people say they would sacrifice to avoid a specific health problem. A visual analog scale is another widely used technique that simply asks people to assign a value to a health state. Indirect methods often ask professionals or patients to describe their health profile. The European Quality of Life 5 Dimensions (EQ5D), for example, presents respondents with five elements of health related quality of life and 3 levels of descriptions for each element (severe, moderate, low), creating 243 different profiles. These profiles can then be matched to a value, or utility, assigned by the public through SG or TTO to a description that is similar to one of these profiles. These values are the utility or preference value in the QALY measurement. Since both cost effectiveness analysis and benefit to cost analysis are based on social considerations, the HTA process incorporates social values through economic analysis. Indeed economic analysis is a key element of the HTA process, often second only to safety considerations.

As HTA becomes an integral part of health policy, there is public demand to increase the transparency of the health technology assessment process. Stakeholders and the public have argued that they have a legitimate right to be directly involved in health policy making process in general and in HTA more specifically. While public opinion has often been taken into account through economic evaluation, its impact and importance in the process have changed over time.
The Oregon Health Plan of 1993 is perhaps one of the earliest instances of public involvement in health policy decision-making. The initiative for this controversial plan emerged following the death of a poor, seven-year old boy named Coby Howard, for whom Medicaid in Oregon refused to cover bone marrow transplant. John Kitzhaber, the president of the Oregon Senate at the time and a medical doctor, knew from experience in both politics and medicine that in order to help more people, he needed to change the structure of the Medicaid program. Kitzhaber initiated an important change in Medicaid’s benefit package, reducing the level of coverage in order to allow broader participation. In order to change the level of coverage the Oregon Health Services Commission was asked to generate a priority list of healthcare services. For more than three years, eleven commissioners carefully crafted this prioritized list. Throughout the process, the public was invited to provide direct input. The Oregon Health Services Commission created community forums that lead to an unprecedented open dialogue with the public. The public forums that took place for much of the three-year process revolutionized the level and quality of public participation and social impact on health technology assessment and management. These forums represent one of the first instances of health care systems actively reaching out to society.

In recent years, the idea of public consultation in health policy decisions, including health technology assessment, spread to Canada, Europe, and Asia, with different countries using unique methods to involve the public in health care policy decisions. Denmark, for example, utilizes the practice of consensus conferences, an idea that originated in the United States but adopted in Denmark for the evaluation of health technologies among the public. These consensus conferences foster dialogue among policymakers, experts, and citizens. They consist of a citizen panel, composed of ordinary citizens who are asked to learn about a specific topic and then create questions to be answered by an expert panel in a meeting open to the public and media. The UK uses an evaluation method called citizens juries (emulating models used in Germany and the U.S.) to engage people in health policy decisions. Citizen juries are the most common method used to consult the public. In 2001 the UK Parliament passed legislation that
required all health authorities to make arrangements to involve and consult patients and the public in service planning, operation, and development of proposals for changes\(^\text{15}\). In these juries, 12 to 16 citizens gather for a week to learn about a topic and hear “expert testimonies”. The “jury” then reaches a “verdict” by the end of the week and presents it\(^\text{15}\). Many European countries, as well as Australia, use deliberative polling to assess public attitudes on healthcare policy. Using this technique, a representative sample of the public is chosen and brought together to have discussions with experts on certain topics in health policy. The participants are polled on their thoughts before and after the deliberation.

One of the most innovative methods of public consultation took place in Israel in 2003. The “Israeli Health Parliament” model was initiated by the Basket Committee, a group of experts in the health field that submit a list of prioritized health technologies to the Ministry of Health\(^\text{16}\). A representative sample of 132 Israeli citizens were recruited to participate in the “Israeli Health Parliament”, a process that included 6 regional meetings, as well as an opening and closing meeting with the Minister of Health, and discuss specific dilemmas that health policy decision makers are faced with.\(^\text{16}\) The participants were given extensive material to read and had discussions amongst themselves and with experts about the given topics. At the end of the process each region presented their ideas to Minister of Health and the Basket Committee.\(^\text{16}\) All of these instances, from the Oregon Plan to the Israeli Health Parliament, demonstrate the movement toward greater public involvement and transparency.

Health care decision making used to be a very centralized process that was mostly dependent on the input of doctors and medical experts. As the public becomes more informed through the media, the internet, and personal experience, they feel they have credible knowledge and want to be involved in decisions that could have a life or death impact on them. In the United States, several celebrities have become associated with campaigns to cure certain diseases that they have had personal experiences with. After battling several different kinds of cancer, Lance Armstrong (the famous cyclist known for winning the Tour de France seven consecutive times) created a now widely know
foundation called LIVESTRONG that raises money for cancer research*. Shortly after Michael J. Fox, a popular actor, was diagnosed with Parkinson’s, he became an active advocate for finding a cure for the disease. He founded the Michael J. Fox Foundation in 2000, which raises funds for Parkinsons research16. Actress and model Brook Shields experienced postpartum depression and shared her experience publically in order to raise awareness. Jenny McCarthy, another actress and model, who has an autistic son, voiced her opposition to vaccines, claiming they increase the likelihood autism in children. This last example raises many concerns, since scientific research does not support the link between vaccines and autism. Some are concerned that McCarthy’s public presence may cause parents to prevent their children from receiving important vaccines. These public figures’ immense influence on public opinion can be beneficial, but also risky, when unwarranted claims are made. In addition to the media, the internet is a rapidly growing source of information open to many around the world. As the public gains more information through these and others channels, whether or not the sources are legitimate, people feel they posses credible insight into the medical field, and that they have a legitimate right to offer input into the health policy making process. Some of the ways the public creates social pressure on the health technology assessment process is through political lobbying and social movements.

Lobbying is one of the most popular ways for various stakeholders to influence healthcare policy. In the U.S., health care lobbying expenditures are often higher than any other sector. Some studies have shown that the political influence of doctors and other health professionals is declining.17 Pharmaceutical companies, however, continue to make sure their voices are heard and often spent approximately twice the amount spent by doctors on lobbying.17 Looking at the history of different technologies and diseases, there are many examples of the political power of the billion dollar pharmaceutical industry in the U.S. and internationally. The AIDS epidemic in America that emerged during the 1980s exemplifies the power of pharmaceutical companies on the assessment

* Lance Armstrong has dissociated himself from the LIVESTRONG organization after being stripped of his medals due to drug use.
process of new medical technologies. When drug testing was being done on new medications dealing with AIDS, some patients who had the disease were becoming impatient waiting for the Federal Drug Administration (FDA) to approve new drugs, so they began to procure the drugs illegally, mostly from other countries in Central or South America. Pharmaceutical companies wanted to profit from selling AIDS medications in the U.S. rather than having patients acquire the medicine elsewhere. The immense pressure put on the FDA by the pharmaceutical companies, as well as the people involved in the AIDS movement, caused the FDA to approve certain technologies more quickly. While this paper mostly explores the efforts of the HTA as well as the government to include the public in their healthcare evaluations, the public also attempts to reach these institutions. When people assemble to protest for changes in connection to healthcare, the issues often revolve around funding allocation. For example, in 2006, colon cancer patients in Israel went on a hunger strike when the government decided to allocate less money to the fund for NLHS and left them without reimbursement for expensive drug treatments.

In conclusion, some of the most important changes in health care policy making in recent years has been the growing role of Health Technology Assessment, and the increasing level of public participation in the process. Public input is growing through both certain types of economic analysis, as well as in the political and social realms. Although healthcare systems tend to be fairly stable and sometimes difficult to change, occasionally, significant changes do occur. For example, Israel changed healthcare provisions to include an equal set of services and technologies to all citizens in 2001. In the U.S., The Patient Protection and Affordable Care Act (commonly known as ObamaCare) changed key elements of the healthcare system including increasing competition among insurers and the provision of health care insurance to almost all citizens. The role of HTA is likely to increase under changing systems because it incorporates two important elements: greater economic efficiency and integration of social and moral aspects. Economic, social, and political issues play an important role in informing the decision making process in Health Technology Assessment, and the
transparency of this process continues to increase due to both government efforts and public desire to participate in the decision making process.


16 Guttman, Nurit. What should be given a priority – costly medications for relatively few people or inexpensive ones for many? The Health Parliament public consultation initiative in Israel. Health Expectations, 11, pp.177–188

