

# Health Technology, Quality, Law, and Ethics

## ABSTRACT

Ethics and law in public health reflect societal values in keeping with social, economic, demographic, epidemiological, and political changes, while facing new health challenges and new technologies. Technology assessment helps in determining health policy and priorities as technological change is rapid and vital for progress. Health ethics needed to be redefined in the light of medical participation in twentieth century genocides in the name of racial purity and the industrialized murder of millions in World War II. The Nuremberg Trials redefined the ethics of health research and bioethics. Public health works to protect the population from illness and premature death, often with restrictions such as banning cigarette advertisements. Failure to act in the protection of public health can be unethical by denying best practices. Quality is promoted by professional standards, accreditation by state authorities for health provider institutions and public health departments, and educational programs for public health.

## SUPPORT MATERIAL

### Student Competencies: Transferable Knowledge and Skills

The following are points of emphasis highlighting key principles that public health graduates are expected to understand and apply in practice. The key points arise from this chapter and other studies in specialized courses, seminars, readings during public health education, and continuing education. The selected skills and knowledge are divided into two parts. The first consists of core questions pertaining to immediate student requirements, while the second refers to competencies essential for successful public health practitioners. These include competencies recommended by the American Public Health Association in 2007, as well as those of the European Association of Schools of Public Health and the Public Health Agency of Canada's 2008 Report on Core Competencies. For more detailed competencies please consult the Association of Schools of Public Health website at: <http://www.asph.org/document.cfm?page=851>

#### Part I: Core Questions

1. What is the responsibility of government in assuring quality of health care?
2. What is the responsibility of government in assuring quality of health products?

3. What is the liability of a manufacturer for the quality of its products?
4. What are the benefits and drawbacks to technological innovation in medicine?
5. Define the concept of appropriate technology.
6. Define the concepts of total quality management and continuous quality improvement.
7. Describe technology assessment in regard to "hi-tech" and "lo-tech" innovations in health care.
8. What are the legal responsibilities of a health provider and of a health system for a patient, member, and beneficiary?
9. What ethical conflicts occur in the following situations:
  - (a) renal transplantation in a 79-year-old diabetic
  - (b) fluoridation of community water to benefit children's teeth
  - (c) financing a CT scan in an area already served by such a machine, while access to basic primary care is weak
  - (d) training more doctors than can be employed in a health system with inadequate standards of basic and clinical training
  - (e) medical treatment for uninsured people?

10. Discuss the interaction of technology assessment, quality improvement, and legal and ethical standards in the New Public Health.

#### Part II: Knowledge and Skills

1. Describe the factors involved in quality assurance and organization of care.
2. Describe ethical issues in public health and in medical research.
3. Describe issues of public health law in national health systems.
4. Discuss an integrated approach to quality assurance, legal aspects, and ethical standards in the organization of care and technology.
5. Apply the principles of total quality management and continuous quality improvement.
6. Demonstrate knowledge of legal considerations in the regulation and responsibilities of health providers and the health system, including patient's rights and health care directives.
7. Describe and discuss the interaction of technological assessment, quality improvement, and legal and ethical standards for a minimum of two community programs (e.g., renal transplantation, community food fortification) in the context of the New Public Health and with regard to population-based resource limitations.

### Topics for Student Review

1. What is the responsibility of government in assuring quality of health care?
2. What is the responsibility of government in assuring quality of health products?
3. What is the liability of a manufacturer for the quality of his products?
4. What are the benefits and drawbacks to technological innovation in medicine?
5. Define the concept of appropriate technology.
6. Define the concepts of Total Quality Management and Continuous Quality Improvement.
7. Describe technology assessment in regard to "hi-tech" and "lo-tech" innovations in health care.
8. What are the legal responsibilities of a health provider and of a health system for a patient, member, and beneficiary?
9. What ethical conflicts occur in the following situation?
  - a. Renal transplantation in a 79-year-old diabetic
  - b. Fluoridation of community water to benefit children's teeth
  - c. Financing a CT scan in an area already served by such a machine, while access to basic primary care is weak
  - d. Training more doctors than can be employed in a health system with inadequate standards of basic and clinical training
  - e. Medical treatment for uninsured persons
10. Discuss the interaction of technology assessment, quality improvement, legal and ethical standards in the New Public Health.

## BIBLIOGRAPHY

### Recommended Reading

- American Academy of Pediatrics. Available at: <http://www.aap.org> (accessed 13.04.14).
- Centers for Disease Control and Prevention, 2011. Ten great public health achievements – United States, 2001–2010. MMWR Morb. Mortal. Wkly. Rep. 60, 619–623. Available at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6019a5.htm> (accessed 13.04.14).
- Centers for Disease Control and Prevention. The Community Guide. Available at: <http://www.thecommunityguide.org/> (accessed 13.04.14).
- Gostin, L.O., Sapsin, J.W., Teret, S.P., Burris, S., Mair, J.S., Hodge, J.G., et al., 2002. The Model State Emergency Health Powers Act. JAMA 288, 622–628.
- Jamison, D.T., Breman, J.G., Measham, A.R., Alleyne, G., Claeson, M., Evans, D.B. (Eds.), 2006. Disease Control Priorities in Developing Countries. second ed. World Bank, Washington, DC. Disease control priorities project.
- Martin, D.K., Giacomini, M., Singer, P., 2002. Fairness, accountability for reasonableness and the views of priority setting decision makers. Health Policy 61, 279–290.
- Mehta, D.K., Ryan, R.S.M., Hogerzeil, H. (Eds.), 2004. WHO Model Formulary 2004. WHO, Geneva.
- National Cancer Institute. Available at: <http://www.cancer.gov> (accessed 13.04.14).

Olsen, L.A., Aisner, D., McGinnis, J.M. (Eds.), 2007. *The Learning Healthcare System: Workshop Summary of IOM Roundtable on Evidence-Based Medicine*. Institute of Medicine of the National Academies of Science. National Academies Press, Washington, DC.

US National Library of Medicine. National Information Center on Health Services Research and Health Care Technology (NICHSR). Available at: <http://www.nlm.nih.gov/nichsr/> (accessed 13.04.14).

Wolfson, L.J., Gasse, F., Lee-Martin, S.P., Lydon, C., Magan, A., Tibouti, A., et al., 2008. Estimating the costs of achieving the WHO–UNICEF global immunization vision and strategy, 2006–2015. Bull. World Health Organ. 86, 27–39. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/18235887> (accessed 13.04.14).

World Medical Association. Available at: <http://www.wma.net> (accessed 13.04.14).

### Health Technology

Agosti, J.M., Goldie, S.J., 2007. Introducing HPV vaccine in developing countries – key challenges and issues. N. Engl. J. Med. 356, 1908–1910.

Bell, J.A., Hyland, S., DePellegrin, T., Upshur, R.E., Bernstein, M., Martin, D.K., 2004. SARS and hospital priority setting: a qualitative case study and evaluation. BMC Health Serv. Res. 4, 36.

Brenzel, L., Wolfson, L.J., Fox-Rushby, J., Miller, M., Halsey, N.A., 2006. Vaccine-preventable diseases. In: Jamison, D.T., Breman, J.G., Measham, A.R., Alleyne, G., Claeson, M., Evans, D.B. (Eds.), *Disease Control Priorities in Developing Countries*, second ed. World Bank, Washington, DC. Available at: <http://www.ncbi.nlm.nih.gov/books/NBK11768/> (accessed 13.04.14).

Campbell, B., 2013. Regulation and safe adoption of new medical devices and procedures. Br. Med. Bull. 1–14. doi: [10.1093/bmb/ldt022](https://doi.org/10.1093/bmb/ldt022) (Advance access 29.07.13).

Canadian Council of Health Services Accreditation. Available at: <http://www.cchsa.ca> (accessed 13.04.14).

Canadian Medical Association. Handbook on Clinical Practice Guidelines. Available at: [http://www.cma.ca/index.cfm/ci\\_id/54316/la\\_id/1.htm](http://www.cma.ca/index.cfm/ci_id/54316/la_id/1.htm) (accessed 13.04.14).

Castellsagué, X., Bosch, F.X., Muñoz, N., Meijer, C.J., Shah, K.V., de Sanjose, S., et al., 2002. International Agency for Research on Cancer Multicenter Cervical Cancer Study Group. Male circumcision, penile human papillomavirus infection, and cervical cancer in female partners. N. Engl. J. Med. 346, 1105–1112.

Centers for Disease Control and Prevention, Healthcare Associated Infections (HAI) [updated 5 October 2012]. Available at: <http://www.cdc.gov/hai/> (accessed 13.04.14).

Centers for Disease Control and Prevention. National Nosocomial Infection Surveillance System. Available at: <http://www.cdc.gov/HAI/surveillance/index.html> (accessed 13.04.14).

Centers for Disease Control and Prevention, 2009. The Direct Medical Costs of Healthcare-Associated Infections in US Hospitals and the Benefits of Prevention. CDC, Atlanta, GA. Available at: [http://www.cdc.gov/HAI/pdfs/hai/Scott\\_CostPaper.pdf](http://www.cdc.gov/HAI/pdfs/hai/Scott_CostPaper.pdf) (accessed 13.04.14).

Centers for Disease Control and Prevention. Vaccine Price List. Available at: <http://www.cdc.gov/vaccines/programs/vfc/awardees/vaccine-management/price-list/index.html> (accessed 13.04.14).

Cutler, D.M., McClellan, M., 2001. Is technological change in medicine worth it? Health Aff. 20, 11–29.

Danish Centre for Health Technology Assessment, 2007. *Health Technology Assessment Handbook*, second ed. National Board of Health. Published 2008, Available at: <http://sundhedsstyrelsen.dk/~media/C0ED-080616D7410E8B6020B903AD0339.ashx> (accessed 13.04.14).

- Deyo, R.A., 2002. Cascade effects of medical technology. *Annu. Rev. Public Health* 23, 23–44.
- Dye, C., Floyd, K., 2006. Tuberculosis. In: Jamison, D.T., Breman, J.G., Measham, A.R., Alleyne, G., Claeson, M., Evans, D.B. (Eds.), *Disease Control Priorities in Developing Countries*. second ed. World Bank, Washington, DC. Available at: <http://www.ncbi.nlm.nih.gov/books/NBK11724/> (accessed 13.04.14).
- Fitzpatrick, C., Floyd, K., 2012. A systematic review of the cost and cost effectiveness of treatment for multidrug-resistant tuberculosis. *Pharmacoeconomics* 30, 63–80. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/22070215> (accessed 13.04.14).
- Forslund, O., Hansson, B.G., Rylander, E., Dillner, J., 2007. Human papillomavirus and Papanicolaou tests to screen for cervical cancer. *N. Engl. J. Med.* 357, 1589–1597.
- GAVI Alliance, 2011. GAVI Alliance Secures Lower Price for Rotavirus Vaccine. Available at: <http://www.gavialliance.org/library/news/press-releases/2012/gavi-secures-lower-price-rotavirus-vaccine/> (accessed 13.04.14).
- GAVI Alliance. GAVI Welcomes Lower Prices for Life-Saving Vaccines. Manufacturer Commitments Will Help GAVI Vaccinate Millions of Children in Least-Developed Countries. Available at: <http://www.gavialliance.org/library/news/press-releases/2011/gavi-welcomes-lower-prices-for-life-saving-vaccines/> (accessed 13.04.14).
- GAVI Alliance, 2012. Human Papillomavirus Vaccine Support. Available at: <http://www.gavialliance.org/support/nvs/human-papillomavirus-vaccine-support/> (accessed 13.04.14).
- GAVI Alliance, March 2006. Saving 10 Million More Lives through Immunization. Available at: [http://www.who.int/immunization/givs/GAVI\\_Imm\\_Forum\\_piece.pdf](http://www.who.int/immunization/givs/GAVI_Imm_Forum_piece.pdf) (accessed 13.04.14).
- Goodman CS. Introduction to Health Technology Assessment. Available at: <http://www.nlm.nih.gov/nichsr/hta101/hta101.pdf> (accessed 13.04.14).
- Greenberg, M.R., 2007. The diffusion of public health innovations. *Am. J. Public Health* 96, 209–210.
- Harris, R.P., Helfand, M., Woolf, S.H., Lohr, K.N., Mulrow, C.D., Teutsch, S.M., et al., 2001. Current Methods of the US Preventive Services Task Force. A review of the process. *Am. J. Prev. Med.* 20, 21–35.
- Health Services/Technology Assessment (HSTAT). Available at: <http://www.ncbi.nlm.nih.gov/books/NBK16710/> (accessed 13.04.14).
- Institute of Medicine, 1985. *Assessing Medical Technologies*. National Academies Press, Washington, DC.
- International Network of Agencies for Health Technology Assessment (INAHTA). Available at: <http://www.inahta.org/> (accessed 13.04.14).
- Joint Commission on Accreditation of Health Care Organizations. Available at: <http://www.jointcommission.org/> (accessed 13.04.14).
- Lancet, 2011. Financing HPV vaccination in developing countries. *Lancet* 377, 1544. Available at: [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(11\)60622-3/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(11)60622-3/fulltext) (accessed 13.04.14).
- Larson, E.L., Quiros, D., Lin, S.X., 2007. Dissemination of the CDC's hand hygiene guideline and impact on infection rates. *Am. J. Infect. Control* 35, 666–675.
- Lehoux, P., Tailliez, S., Denis, J.L., Hivon, M., 2004. Redefining health technology assessment in Canada: diversification of products and contextualization of findings. *Int. J. Technol. Assess.* 20, 325–336.
- Levin, A., Burgess, C., Garrison, L.P., Bauch, C., Babigumira, J., Simons, E., Dabbagh, A., 2011. Global eradication of measles: an epidemiologic and economic evaluation. *J. Infect. Dis.* 204 (Suppl. 1), S98–106. Available at: [http://jid.oxfordjournals.org/content/204/suppl\\_1/S98.long](http://jid.oxfordjournals.org/content/204/suppl_1/S98.long) (accessed 13.04.14).
- Lindvall, O., Kokaia, Z., Martinez-Serrano, A., 2004. Stem cell therapy for human neurodegenerative disorders – how to make it work. *Neurodegeneration Nat. Med.* 10 (Suppl.), S42–S50. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/15272269> (accessed 13.04.14).
- Manchikanti, L., Parr, A.T., Singh, V., Fellows, B., 2011. Ambulatory surgery centers and interventional techniques: a look at long-term survival. *Pain Physician* 14, E177–E215.
- Martelli, F., La Torre, G., Di Ghionno, E., Neroni, M., Cicchetti, A., Von Bremen, K., et al., 2007. Health technology assessment agencies: an international overview of organizational aspects. *Int. J. Technol. Assess.* 23, 414–424.
- May, T., 2005. Public communication, risk perception, and the viability of preventive vaccination against communicable diseases. *Bioethics* 19, 407–421.
- McClellan, M., Kessler, D., For the TECH Investigators, 1999. A global analysis of technological change in health care: the case of heart attacks. *Health Aff.* 18, 250–255.
- McCormack, K., Wake, B., Perez, J., Fraser, C., Cook, J., McIntosh, E., et al., 2005. Laparoscopic surgery for inguinal hernia repair: systematic review of effectiveness and economic evaluation. *Health Technol. Assess.* 9, 1–203.
- Murray, A., Lourenco, T., de Verteuil, R., Hernandez, R., Fraser, C., McKinley, A., et al., 2006. Clinical effectiveness and cost-effectiveness of laparoscopic surgery for colo-rectal cancer: systematic reviews and economic evaluation. *Health Technol. Assess.* 10, 1–141.
- National Center for Health Statistics, 2010. *Health, United States, 2009: With Special Feature on Medical Technology*. National Center for Health Statistics, Hyattsville, MD.
- National Library of Medicine, National Information Center on Health Services Research & Health Care Technology, 2007. Etext Health Technology Assessment (HTA) Information Resource. Available at: <http://www.nlm.nih.gov/archive/20060905/nichsr/ehta.html> (accessed 13.04.14).
- National Patient Safety Foundation. Available at: <http://www.npsf.org/au/> (accessed 13.04.14).
- Nguyen, A., Datta, S.D., Schwalbe, N., Summers, D., Adlide, G., GAVI Alliance, 2011. Working towards Affordable Pricing for HPV Vaccines for Developing Countries: The Role of GAVI. GTF. CCC working paper background series No. 3. Harvard Global Equity Initiative.
- Nixon, J., Stoykova, B., Glanville, J., Christie, J., Drummond, M., Kleijnen, J., 2000. The UK NHS economic evaluation database. Economic issues in evaluations of health technology. *Int. J. Technol. Assess.* 16, 731–742.
- Noorani, H.Z., Husereau, D.R., Boudreau, R., Skidmore, B., 2007. Priority setting for health technology assessments: a systematic review of current practical approaches. *Int. J. Technol. Assess.* 23, 310–315.
- Olson, O., Gotzsche, P.C., 2001. Cochrane review on screening for breast cancer with mammography. *Lancet* 358, 1340–1342.
- Organisation for Economic Co-operation and Development. *Health Policies and Data: OECD Health Data – 2013 Data; frequently requested data*. Available at: <http://www.oecd.org/health/> (accessed 13.04.14).
- Pinson, N., Thielke, A., King, V., 2011. Health Technology Assessment [rapid review]. Center for Evidence-Based Policy, Portland, OR. Available at: [http://www.ohsu.edu/xd/research/centers-institutes/evidence-based-policy-center/med/upload/Health-Technology-Assessment\\_Public\\_RR\\_Final\\_08\\_18\\_2011.pdf](http://www.ohsu.edu/xd/research/centers-institutes/evidence-based-policy-center/med/upload/Health-Technology-Assessment_Public_RR_Final_08_18_2011.pdf) (accessed 13.04.14).
- Poland, G.A., Tosh, P., Jacobson, R.M., 2005. Requiring influenza vaccinations for healthcare workers: seven truths we must accept. *Vaccine* 23, 2251–2255.

- Sassi, F., 2003. Setting priorities for the evaluation of health interventions: when theory does not meet practice. *Health Policy* 63, 141–154.
- Shaffer, N., 1999. Short course zidovudine for perinatal HIV-1 transmission in Bangkok, Thailand: transmission study group. *Lancet* 354, 156–158.
- Siebzehner, M., Shemer, J., 1995. Regulating medical technology in Israel. In: Shemer, J., Schersten, T. (Eds.), *Technology Assessment in Health Care: From Theory to Practice*. Gefen, Jerusalem.
- Singer, S.J., Berghold, L.A., 2001. Prospects for improved decision making about medical necessity. *Health Aff.* 20, 200–206.
- Slavin, S., Nagler, A., Naparstek, E., Kapelushnik, Y., Aker, M., Cividalli, G., et al., 1998. Nonmyeloablative stem cell transplantation and cell therapy as an alternative to conventional bone marrow transplantation with lethal cytoreduction for the treatment of malignant and nonmalignant hematologic diseases. *Blood* 91, 756–763.
- Soto, J., 2002. Health economic evaluations using decision analytic modeling. Principles and practices – utilization of a checklist to their development and appraisal. *Int. J. Technol. Assess.* 18, 94–111.
- Stoykova, B., Drummond, M., Barbieri, M., Kleijnen, J., 2003. The lag between effectiveness and cost-effectiveness evidence of new drugs. Implications for decision-making in health care. *Eur. J. Health Econ.* 4, 313–318.
- Sullivan, S.D., Watkins, J., Sweet, B., Ramsey, S.D., 2009. Health technology assessment in health-care decisions in the United States. *Value Health* 12, S39–44. Available at: <http://www.sciencedirect.com/science/journal/10983015/12/supp/S2> (accessed 13.04.14).
- Tu, H.-A.T., Woerdenbag, H.J., Kane, S., Rozenbaum, M.H., Li, S.C., Postma, M.J., 2011. Economic evaluations of rotavirus immunization for developing countries: a review of the literature. *Expert Rev. Vaccines* 10, 1037–1051. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/21806398> (accessed 13.04.14).
- Upshur, R.E.G., 2002. *Principles for the justification of public health interventions*. *Can. J. Public Health* 93, 101–103.
- US Department of Health and Human Services. Centers for Medicare and Medicaid Services. Office of Clinical Standards and Quality, 2008. Available at: [http://www.cms.gov/About-CMS/Agency-information/CMSLeadership/index.html?redirect=/CMSLeadership/11\\_Office\\_OCSQ.asp#TopOfPage](http://www.cms.gov/About-CMS/Agency-information/CMSLeadership/index.html?redirect=/CMSLeadership/11_Office_OCSQ.asp#TopOfPage) (accessed 13.04.14).
- US Food and Drug Administration. Department of Health and Human Services, 2007. Revision of the requirements for live vaccine processing. *Direct final rule*. *Fed. Regist.* 72, 59000–59003.
- US National Library of Medicine. National Institute of Medicine. National Information Center on Health Services Research and Health Care Technology (NICHSR). Etext on Health Technology Assessment (HTA) Information Resources. Available at: <http://www.nlm.nih.gov/archive//20060905/nichsr/ehta/ehta.html> (accessed 13.04.14).
- US Preventive Services Task Force, 2002. Screening for prostate cancer: Recommendations and rationale. *Ann. Intern. Med.* 137, 915–916.
- Velasco-Garrido, M., Busse, R., 2005. Policy Brief: Health Technology Assessment: An Introduction to Objectives, Role of Evidence, and Structure in Europe. WHO on behalf of the European Observatory on Health Systems and Policies, Geneva. Available at: [http://www.euro.who.int/\\_data/assets/pdf\\_file/0018/90432/E87866.pdf](http://www.euro.who.int/_data/assets/pdf_file/0018/90432/E87866.pdf) (accessed 13.04.14).
- Williams, I., Bryan, S., McIver, S., 2007. How should cost-effectiveness analysis be used in health technology coverage decisions? Evidence from the National Institute for Health and Clinical Excellence Approach. *J. Health Serv. Res. Policy* 12, 73–79.
- Woods, K., 2002. Health technology assessment for the NHS in England and Wales. *Int. J. Technol. Assess.* 18, 161–165.
- World Bank, 1993. *World Development Report. Investing in Health*. Oxford University Press, New York.
- World Health Organization. Department of Immunization, Vaccines and Biologicals, 2005. The Cost of Immunization Programmes in the Next 10 Years. Available at: [http://www.unicef.org/socialpolicy/files/cost\\_of\\_immunization\\_in\\_the\\_next\\_10\\_years.pdf](http://www.unicef.org/socialpolicy/files/cost_of_immunization_in_the_next_10_years.pdf) and [http://www.who.int/immunization/newsroom/Costing\\_FINAL.pdf](http://www.who.int/immunization/newsroom/Costing_FINAL.pdf) (accessed 13.04.14).
- World Health Organization Media Center: Cancer fact sheet N°297 Updated February 2014. Available at: <http://www.who.int/mediacentre/factsheets/fs297/en/> (accessed 06.05.14).
- World Health Organization, 2006. *Preparing for the Introduction of HPV Vaccine*. WHO, Geneva.
- World Health Organization, 2009. *World Health Report*. WHO, Geneva.

## Quality

- Agency for Healthcare Research and Quality, 2003. Nominations of topics for evidence-based practice centers (EPCs). *Fed. Regist.* 68, 4213–4216.
- Agency for Healthcare Research and Quality. Available at: <http://www.ahrq.gov/> (accessed 13.04.14).
- Agency for Healthcare Research and Quality. Definitions Manual for All-Payer Severity-Adjusted DRG (APS-DRGs®) Assignment. Public Use Version 20.0.2003. Available at: <http://www.hcup-us.ahrq.gov/db/nation/nis/APS-DRGsV20DefinitionsManual.pdf> (accessed 13.04.14).
- American College of Cardiology (ACC). Available at: <http://www.cardiosource.org/science-and-quality.aspx> (accessed 13.04.14).
- American College of Obstetricians and Gynecologists, 2001. Committee on Obstetric Practice. ACOG committee opinion. Circumcision. *Obstet. Gynecol.* 98, 707–708.
- American Congress of Obstetrics and Gynecology, 14 March 2012. New Cervical Cancer Screening Recommendations from the US Preventive Services Task Force and the American Cancer Society/American Society for Colposcopy and Cervical Pathology/American Society for Clinical Pathology. Available at: <http://www.acog.org/About%20ACOG/Announcements/New%20Cervical%20Cancer%20Screening%20Recommendations.aspx> (accessed 13.04.14).
- Balk, E.M., Bonis, P.A., Moskowitz, H., Schmid, C.H., Ioannidis, J.P., Wang, C., et al., 2002. Correlation of quality measures with estimates of treatment effect in meta-analyses of randomized controlled trials. *JAMA* 287, 2973–2982.
- Busse, R., Schreyogg, J., Smith, P.C., 2006. Editorial: hospital case payment systems in Europe. *Health Care Manage. Sci.* 9, 211–213. Available at: <http://dx.doi.org/10.1007/s10729-006-9039-7> (accessed 13.04.14).
- Canadian Cardiovascular Research Outcomes Team. Available at: <http://www.ccort.ca/> (accessed 13.04.14).
- Cancer Research UK, October 2012. Breast Cancer Screening. Available at: <http://www.cancerresearchuk.org/cancer-help/type/breast-cancer/about/screening/who-is-screened-for-breast-cancer> (accessed 13.04.14).
- Center for Evidence-Based Medicine (CEBM). Available at: <http://www.cebm.net/> (accessed 13.04.14).
- Centers for Disease Control and Prevention, 2000. Monitoring hospital-acquired infections to promote patient safety. United States, 1990–1999. *MMWR Morb. Mortal. Wkly. Rep.* 49, 149–153.
- Centers for Disease Control and Prevention, 2013. QuickStats: Percentage of Women Aged 50–64 Years Who Reported Receiving a Mammogram in the Past 2 Years, by Health Insurance Status — National Health Interview Survey United States, 1993–2010. Available at: [http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6232a5.htm?cid=mm6232a5\\_w](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6232a5.htm?cid=mm6232a5_w) (accessed 06.05.14).

- Cochrane Reviews. <http://www.cochrane.org/cochrane-reviews> (accessed 13.04.14).
- Dannenberg, A.L., Bhatia, R., Cole, B.L., Dora, C., Fielding, J.E., Kraft, K., et al., 2006. Growing the field of health impact assessment: an agenda for research and practice. *Am. J. Public Health* 96, 262–270.
- Deeks, J.J., 2001. Systematic reviews in health care: systematic reviews of evaluations of diagnostic and screening tests. *BMJ* 323, 157–162.
- Donabedian, A., 2003. *An Introduction to Quality Assurance in Health Care*. Oxford University Press, New York.
- Epstein, A.J., Polksky, D., Yang, F., Yang, L., Groeneveld, P.W., 2011. Coronary revascularization trends in the United States, 2001–2008. *JAMA* 305, 1769–1776. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/21540420> (accessed 13.04.14).
- European Society of Cardiology. Guidelines. Available at: <http://www.escardio.org/GUIDELINES-SURVEYS/ESC-GUIDELINES/Pages/GuidelinesList.aspx> (accessed 13.04.14).
- Fattal-Valevski, A., Kesler, A., Sela, B.A., Nitzan-Kaluski, D., Rotstein, M., Mesterman, R., et al., 2005. Outbreak of life-threatening thiamine deficiency in infants in Israel caused by a defective soy-based formula. *Pediatrics* 115, 233–238.
- Food and Drug Administration. Melamine Contamination in China [updated 5 January 2009]. Available at: <http://www.fda.gov/NewsEvents/PublicHealthFocus/ucm179005.htm> (accessed 13.04.14).
- Grenier, D., Ugnat, A.-M., McCourt, C., Scott, J., Thibodeau, M.L., Davis, M.A., Dickson, N.P., 2009. Can active surveillance provide a rapid response to an emerging child health issue? The melamine example. *Paediatr. Child Health* 14, 285–286 PMCID: PMC2706625.
- Institute of Medicine, 2001. Committee on Quality of Health Care in America. *Crossing the Quality Chasm: A New Health System for the 21st Century*. National Academies Press, Washington, DC.
- Institute of Medicine, 2007. *Advancing Quality Improvement Research: Challenges and Opportunities*. Workshop Summary. Forum on the Science of Health Care Quality Improvement and Implementation. Board of Health Care Services. Institute of Medicine of the National Academies of Science. National Academies Press, Washington, DC.
- Institute of Medicine, 2007. *State of Quality Improvement and Implementation Research: Expert Views*. Workshop Summary. Institute of Medicine of the National Academies of Science. National Academies Press, Washington, DC.
- International Guideline Network Library. Available at: <http://www.g-i-n.net/library/international-guidelines-library/> (accessed 13.04.14).
- Kohn, L.T., Corrigan, J.M., Donaldson, M. (Eds.), 1999. *Institute of Medicine, Committee on Quality of Health Care in America. To Err Is Human: Building a Safer Health System*. National Academies Press, Washington, DC.
- McDonald, I.G., 2000. Quality assurance and technology assessment: pieces of a larger puzzle. *J. Qual. Clin. Pract.* 20, 87–94.
- McGlynn, E.A., Asch, S.M., Adams, J., Keesey, J., Hicks, J., DeCristofaro, A., et al., 2003. The quality of health care delivered to adults in the United States. *N. Engl. J. Med.* 26 (348), 2635–2645.
- McNeil, B.J., 2001. Shattuck Lecture. Hidden barriers to improvement in the quality of care. *N. Engl. J. Med.* 345, 1612–1620.
- Medicare Learning Network. Acute Care Hospital Inpatient Prospective Payment System. Available at: <http://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/AcutePaymtSysfctsht.pdf> (accessed 13.04.14).
- National Council for Quality Assurance. <https://www.ncqa.org/> (accessed 13.04.14).
- National Institute for Health and Care Excellence (NICE), UK. Available at: <http://www.nice.org.uk/> (accessed 13.04.14).
- National Institute for Health and Care Excellence, UK. National Practices Review: Recommendation Reminders. Available at: <http://www.nice.org.uk/usingguidance/optimalpracticereviewrecommendationreminders/> (accessed 13.04.14).
- Neumann, P.J., Claxton, K., Weinstein, M.C., 2000. The FDA's regulation of health economic information. *Health Aff.* 19, 129–137.
- Parry, J.M., Kemm, J.R., 2005. Evaluation of health impact assessment workshop. Criteria for use in the evaluation of health impact assessments. *Public Health* 119, 1122–1129.
- Saarni, S.I., Gylling, H.A., 2004. Evidence-based medicine guidelines: a solution to rationing or politics disguised as science. *J. Med. Ethics* 30, 171–175.
- Schoenbaum, S.C., Holmgren, A.L., 2006. *The State of Health Care Quality: 2006*. National Committee for Quality Assurance's: Commonwealth Fund, Washington, DC.
- Shekelle, P.G., Ortiz, E., Rhodes, S., Morton, S.C., Eccles, M.P., Grimshaw, J.M., et al., 2001. Validity of the Agency for Healthcare Research and Quality Clinical Practice Guidelines: how quickly do guidelines become outdated? *JAMA* 286, 1461–1467.
- Shortell, S.M., Gillies, R., Wu, F., 2010. United States innovations in health care delivery. *Public Health Rev.* 32, 190–212. Available at: <http://www.publichealthreviews.eu/show/f/26> (accessed 13.04.14).
- Steele, D.A., Neuzil, K.M., Parashar, U.D., 2012. Rotavirus vaccines for children in developing countries. *Vaccine* 30 (Suppl. 1), A1–A196.
- Sterne, J.A., Egger, M., Smith, G.D., 2001. Systematic reviews in health care: investigating and dealing with publication and other biases in meta-analysis. *BMJ* 323, 101–105.
- Stroup, D.F., Berlin, J.A., Morton, S.C., Olkin, I., Williamson, G.D., Rennie, D., et al., 2000. Meta-analysis of observational studies in epidemiology. A proposal for reporting. Meta-analysis of Observational Studies in Epidemiology (MOOSE) group. *JAMA* 283, 2008–2012.
- Tenke, P., Kovacs, B., Bjerklund-Johansen, T.E., Matsumoto, T., Tambayah, P.A., Naber, K.G., 2007. European and Asian guidelines on management and prevention of catheter-associated urinary tract infections. *Int. J. Antimicrob. Agents* 31, S68–S78.
- United Health Foundation. Available at: <http://www.unitedhealthfoundation.org> (accessed 13.04.14).
- US Department of Health and Human Services. Healthy People. Available at: <http://www.healthypeople.gov/2020/default.aspx> (accessed 13.04.14).
- US Department of Health and Human Services. Office of Inspector General, August 2008. Adverse Events Hospitals: Overview Key Issue. Available at: <http://oig.hhs.gov/oei/reports/oei-06-07-00470.pdf> (accessed 13.04.14).
- US Food and Drug Administration. Available at: [www.fda.org](http://www.fda.org) (accessed 13.04.14).
- US Food and Drug Administration, Department of Health and Human Services, 2007. Amendment to the current good manufacturing practice regulations for finished pharmaceuticals. Direct final rule. *Fed. Regist.* 72, 68064–68070. Available at: <http://www.gpo.gov/fdsys/pkg/FR-2007-12-04/html/E7-23294.htm> (accessed 13.04.14).
- US National Library of Medicine. National Information Center on Health Services Research. US Preventive Services Task Force. Guide to Preventive Services. Report of the US Preventive Services Task Force (USPSTF). Available at: <http://www.ahrq.gov/professionals/clinicians-providers/guidelines-recommendations/guide/> (accessed 13.04.14).

US Preventive Services Task Force. Pocket Guide to Clinical Preventive Services 2007. Electronic Selective Services Selector. Available at: <http://www.ahrq.gov/professionals/clinicians-providers/guidelines-recommendations/guide/index.html> (accessed 13.04.14).

## Law

- Annas, G., 1998. Human rights and health – the universal declaration of human rights at 50. *N. Engl. J. Med.* 339, 1778–1781.
- Centers for Disease Control and Prevention, Collaborating Center for the Law and the Public's Health. Available at: <http://www.publichealthlaw.net/> (accessed 13.04.14).
- Coleman, H., Bouësseau, M.C., Reis, A., Capron, A.M., 2007. How should ethics be incorporated into public health policy and practice? *Bull. World Health Organ.* 85, 501–568.
- College of Physicians and Surgeons of Philadelphia, 2013. The History of Vaccine: Vaccine Injury Compensation Programs. Available at: <http://www.historyofvaccines.org/content/articles/vaccine-injury-compensation-programs> (accessed 13.04.14).
- Dawson, A., 2006. Commentary on the limits of the law in the protection of public health and the role of public health ethics. *Public Health* 120, 77–80.
- European Patients Forum. Patients' Rights in the European Union. Available at: [http://www.eu-patient.eu/Documents/Projects/Valueplus/Patients\\_Rights.pdf](http://www.eu-patient.eu/Documents/Projects/Valueplus/Patients_Rights.pdf) (accessed 13.04.14).
- Fielding, J.E., Briss, P.A., 2006. Promoting evidence-based public health policy: can we have better evidence and more action? *Health Aff.* 25, 969–978.
- Fox, D., Kramer, M., Standish, M., 2003. From public health to population health: how can law redefine the playing field? *J. Law Med. Ethics* 31, 21–29.
- Goodman, R.A., Moulton, A., Matthews, G., Shaw, F., Kocher, P., Mensah, G., et al., 2006. Law and public health at CDC. *MMWR Morb. Mortal. Wkly. Rep.* 55, 29–33.
- Gostin, L.O., 2000. Public health law in a new century. Part II: public health powers and limits. *JAMA* 283, 2979–2984.
- Gostin, L.O., 2000. Public health law in a new century: Part III: public health regulation: a systematic evaluation. *JAMA* 283, 3118–3122.
- Grad, F.P., 1990. The Public Health Law Manual, second ed. American Public Health Association, Washington, DC.
- Martin, R., 2006. The limits of the law in the protection of public health and the role of public health ethics. *Public Health* 120, 71–77.
- Montgomery, J., 2002. Health Care Law, second ed. Oxford University Press, Oxford.
- Reich, M.R., Hershey, J.H., Hardy Jr, G.E., Childress, J.F., Bernheim, R.G., 2003. Workshop on public health law and ethics I & II: the challenge of public/private partnerships. *J. Law Med. Ethics* 31, 90–93.
- Ruhl, S., Stephens, M., Locke, P., 2005. The role of NGOs in public health law. *J. Law Med. Ethics* 31, 76–77.
- Speakman, J., Gonzalez-Martin, F., Perez, T., 2003. Quarantine in SARS and other emerging infectious diseases. *J. Law Med. Ethics* 31, 63–64.
- Sterman, J.D., 2006. Learning from evidence in a complex world. *Am. J. Public Health* 96, 505–514.
- Thiel, K.S., 2003. New developments in public health case law. *J. Law Med. Ethics* 31, 86–87.
- UN General Assembly. Universal Declaration of Human Rights. Available at: <http://www.un.org/en/documents/udhr/> (accessed 13.04.14).
- Zasa, S., Clymer, J., Upmeyer, L., Thacker, S., 2003. Using science-based guidelines to shape public health law. *J. Law Med. Ethics* 31, 65–67.

## Ethics

- Aceijas, C., 2012. The ethics in substitution treatment and harm reduction: an analytical review. *Public Health Rev.* 34 (1). Available at: [http://www.publichealthreviews.eu/upload/pdf\\_files/11/00\\_Aceijas.pdf](http://www.publichealthreviews.eu/upload/pdf_files/11/00_Aceijas.pdf) (accessed 13.04.14).
- Aceijas, C., Brall, C., Schröder-Bäck, P., Otok, R., Maeckelberghe, E., Stjernberg, L., et al., 2012. Teaching ethics in schools of public health in the European Region: findings from a screening survey. *Public Health Rev.* 34. [http://www.publichealthreviews.eu/upload/pdf\\_files/11/00\\_Aceijas\\_et.al.pdf](http://www.publichealthreviews.eu/upload/pdf_files/11/00_Aceijas_et.al.pdf) (accessed 13.04.14).
- Active Citizenship Network. European Charter of Patient Rights. Preamble Rome 2002. Available at: [http://ec.europa.eu/health/ph\\_overview/co\\_operation/mobility/docs/health\\_services\\_co108\\_en.pdf](http://ec.europa.eu/health/ph_overview/co_operation/mobility/docs/health_services_co108_en.pdf) (accessed 13.04.14).
- American College of Epidemiology, 2000. Ethics guidelines. *Ann. Epidemiol.* 10, 487–497.
- American Public Health Association. Principles of the Ethical Practice of Public Health. Available at: <http://www.apha.org/NR/rdonlyres/1CED3CEA-287E-4185-9CBD-BD405FC60856/0/ethicsbrochure.pdf> (accessed 13.04.14).
- Bachrach, S., 2004. In the name of public health – Nazi racial hygiene. *N. Engl. J. Med.* 351, 417–420. Available at: <http://www.nejm.org/doi/full/10.1056/NEJMp048136> (accessed 13.04.14).
- Bayer, R., Fairchild, A., 2004. The genesis of public health ethics. *Bioethics* 18, 473–492.
- Birn, A.E., Molina, N., 2005. In the name of public health. *Am. J. Public Health* 95, 1095–1097.
- Callahan, D., Jennings, B., 2002. Ethics and public health: forging a strong relationship. *Am. J. Public Health* 92, 169–176.
- Carter, S.M., Cribb, A., Allegrante, J.P., 2012. How to think about health promotion ethics. *Public Health Rev.* 34. Epub ahead of print. Available at: [http://www.publichealthreviews.eu/upload/pdf\\_files/11/00\\_Carter.pdf](http://www.publichealthreviews.eu/upload/pdf_files/11/00_Carter.pdf) (accessed 13.04.14).
- Centers for Disease Control and Prevention. CDC and Public Health Ethics. Available at: <http://www.cdc.gov/od/science/integrity/phethics/> (accessed 13.04.14).
- Centers for Disease Control and Prevention. US Public Health Service Syphilis Experiment at Tuskegee. Available at: <http://www.cdc.gov/tuskegee/timeline.htm> (accessed 13.04.14).
- Childress, J., Faden, R.R., Gaare, R.D., Goshin, L.O., Kahn, J., Bonnie, R.J., et al., 2002. Public health ethics: mapping the terrain. *J. Law Med. Ethics* 30, 1073–1105.
- Coleman, C.H., Bouësseau, M.-C., Reis, A., 2008. The contribution of ethics to public health. *Bull. World Health Org.* 86, 578–579.
- Cottam, R., 2005. Public health is coercive health. *Lancet* 366, 1592–1594.
- Coughlin, S., 2006. Hope, ethics, and public health. *J. Epidemiol. Commun. Health* 60, 826–827.
- Coughlin, S.S., 2006. Ethical issues in epidemiologic research and public health practice. *Emerg. Themes Epidemiol.* 3, 3–16.
- Coughlin, S.S., Barker, A., Dawson, A., 2012. Ethics and scientific integrity in public health, epidemiological and clinical research. *Public Health Rev.* 34 (1). Available at: [http://www.publichealthreviews.eu/upload/pdf\\_files/11/00\\_Coughlin.pdf](http://www.publichealthreviews.eu/upload/pdf_files/11/00_Coughlin.pdf) (accessed 13.04.14).
- Council on Ethical and Judicial Affairs, 1995. Ethical issues in managed care. *JAMA* 273, 330–335.
- Cranach, M., 2003. The killing of psychiatric patients in Nazi Germany between 1939–1945. *Isr. J. Psychiatry Relat. Sci.* 40, 8–18. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/12817666> (accessed 13.04.14).

- Dawson, A., 2004. Vaccination and the prevention problem. *Bioethics* 18, 515–530.
- Dawson, A., Paul, Y., 2006. Mass public health programs and the obligations of sponsoring and participating organizations. *J. Med. Ethics* 32, 580–583.
- Dickens, B.M., 2005. The challenges and opportunities of ethics [editorial]. *Am. J. Public Health* 95, 1094.
- El Amin, A.N., Parra, M.T., Kim-Farley, R., Fielding, J.E., 2012. Ethical issues concerning vaccination requirements. *Public Health Rev.* 34 (1). Available at: [http://www.publichealthreviews.eu/upload/pdf\\_files/11/00\\_El\\_Amin.pdf](http://www.publichealthreviews.eu/upload/pdf_files/11/00_El_Amin.pdf) (accessed 13.04.14).
- European Patients' Forum. Patients' rights in the European Union. Available at: [http://www.eu-patient.eu/Documents/Projects/Valueplus\\_Patients\\_Rights.pdf](http://www.eu-patient.eu/Documents/Projects/Valueplus_Patients_Rights.pdf) (accessed 13.04.14).
- Evans, R.J., 2006. *The Third Reich at War*. Penguin Press, New York.
- Gardiner, P., 2003. A virtue ethics approach to moral dilemmas in medicine. *J. Med. Ethics* 29, 297–302.
- Grill, K., Hanson, S.O., 2005. Epistemic paternalism in public health. *J. Med. Ethics* 31, 648–653.
- Grodin, M., Annas, G.J., 1996. Legacies of Nuremberg: medical ethics and human rights [editorial]. *JAMA* 276, 1682–1683.
- Gruskin, S., Dickens, B., 2006. Human rights and ethics in public health. *Am. J. Public Health* 96, 1903–1905.
- Guttman, N., Salmon, C., 2004. Guilt, fear, stigma, and knowledge gaps: ethical issues in public health communication interventions. *Bioethics* 18, 531–552.
- Jennings, B., Kahn, J., Mastroianni, A., Parker, L.S. (Eds.), 2003. *Ethics and Public Health Model Curriculum*. Association of Schools of Public Health, Washington, DC. Available at: <http://www.aspsh.org/UserFiles/EthicsCurriculum.pdf> (accessed 13.04.14).
- Kass, N., 2001. An ethics framework for public health. *Am. J. Public Health* 91, 1776–1782.
- Kass, N., 2004. Public health ethics: from foundations and frameworks to justice and global public health. *J. Law Med. Ethics* 32, 232–242.
- Kotalik, J., 2005. Preparing for an influenza pandemic: ethical issues. *Bioethics* 19, 422–431.
- Last, J.M. (Ed.), 2000. *Ethical Issues in Public Health Research. A Dictionary of Epidemiology*. Oxford University Press, New York.
- Lee, L.M., 2012. Guest editorial: public health ethics theory: review and path to convergence. *Public Health Rev.* 34 (1). Available at: [http://www.publichealthreviews.eu/upload/pdf\\_files/11/00\\_Lee.pdf](http://www.publichealthreviews.eu/upload/pdf_files/11/00_Lee.pdf) (accessed 13.04.14).
- Lee, L.M., Lo, B., Katz, M.H., 2005. Clinical decision making in public health emergencies: ethical considerations. *Ann. Intern. Med.* 143, 493–498.
- Lynch, H.F., 2012. Ethical evasion or happenstance and hubris? The US Public Health Service STD Inoculation Study. *Hastings Cent. Rep.* 42, 30–38.
- Mackie, P., Sim, F., 2004. The ethics of public health decision making. *Public Health* 118, 311–312.
- Mann, J.M., 1997. Health and human rights: if not now when? *Health Hum. Rights* 2, 113–120.
- Marer, S., Sutija, M., Rajagopalan, S., 2004. Bioterrorism, bioethics and the emergency physician. *Top Emerg. Med.* 26, 44–48.
- Mariner, W.K., 1997. Public confidence in public health research ethics: counterpoint on human subjects research. *Public Health Rep.* 112, 33–36.
- McKeown, R.E., Weed, D.L., 2001. Ethics in epidemiology and public health I. Technical terms. *J. Epidemiol. Commun. Health* 55, 855–857.
- Miettinen, O., 2005. Idealism and ethics of public health practitioners. *Eur. J. Epidemiol.* 20, 805–807.
- Nixon, S., 2006. Critical public health ethics and Canada's role in global health. *Can. J. Public Health* 97, 32–34.
- Nuremberg Code, 1949. Trials of War Criminals before the Nuremberg Military Tribunals under Control Council Law No. 10, vol. 2. US Government Printing Office, Washington, DC, pp. 181–182.
- Organisation for Economic Co-operation and Development, 2007. Global Science Forum. Best practices for ensuring scientific integrity and preventing misconduct. OECD. Available at: <http://www.oecd.org/dataoecd/37/17/40188303.pdf> (accessed 13.04.14).
- Presidential Commission for the Study of Bioethical Issues, 2011. Creation of the Commissions. Available at: <http://bioethics.gov/cms/creation-of-the-commission> (accessed 13.04.14).
- Public Health Leadership Society., 1988. *Principles of the Ethical Practice of Public Health*, Version 2.2; 2002. Adapted from Institute of Medicine, *the Future of Public Health*. National Academies Press, Washington, DC.
- Reverby, S.M., 2012. Ethical failures and history lessons: the US Public Health Service research studies in Tuskegee and Guatemala. *Public Health Rev.* 34. Available at: [http://www.publichealthreviews.eu/upload/pdf\\_files/11/00\\_Reverby.pdf](http://www.publichealthreviews.eu/upload/pdf_files/11/00_Reverby.pdf) (accessed 13.04.14).
- Roberts, M.J., Reich, M.R., 2002. Ethical analysis in public health. *Lancet* 59, 1055–1059.
- Roelcke, V., Maio, G. (Eds.), 2004. *Twentieth Century Ethics of Human Subjects Research. Historical Perspectives on Values, Practices, and Regulations*. Franz Steiner, Stuttgart.
- Rogers, W.A., 2006. Feminism and public health ethics. *J. Med. Ethics* 32, 351–354.
- Rothstein, M., 2012. The future of public health ethics [editorial]. *Am. J. Public Health* 102, 9.
- Sidel, V., 1996. The social responsibilities of health professionals: lessons from their role in Nazi Germany. *JAMA* 276, 1679–1681.
- Sim, J., Dawson, A., 2012. Informed consent and cluster randomized trials. *Am. J. Public Health* 3, 480–485.
- Sindal, C., 2002. Does health promotion need a code of ethics? *Health Promot. Int.* 17, 201–203.
- Stern, A.M., 2005. Sterilized in the name of public health. *Am. J. Public Health* 95, 1128–1138.
- Terris, M., 2006. Concepts of health promotion: dualities in public health theory. *J. Public Health Policy* 13, 267–276.
- Thieren, M., Mauron, A., 2007. Nuremberg code turns 60. *Bull. World Health Organ.* 85, 573.
- Thomas, J.C., Sage, M., Dillenberg, J., Guillory, V.J., 2002. A code of ethics for public health. *Am. J. Public Health* 92, 1057–1060.
- UK Department of Health, 2012. The Handbook to the Constitution: For England. Available at: [http://www.dh.gov.uk/prod\\_consum\\_dh/groups/dh\\_digitalassets/@dh/en/documents/digitalasset/dh\\_132959.pdf](http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/en/documents/digitalasset/dh_132959.pdf) (accessed 13.04.14).
- US Presidential Commission for the Study of Bioethical Issues, September 2011. Ethically Impossible: STD Research in Guatemala from 1946 to 1948. US Presidential Commission for the Study of Bioethical Issues, Washington, DC. Available at: [www.bioethics.gov](http://www.bioethics.gov) (accessed 13.04.14).
- US Presidential Commission on Bioethical Issues, December 2011. Moral Science: Protecting Participants in Human Subjects Research. US Presidential Commission for the Study of Bioethical Issues, Washington, DC. Available at: [www.bioethics.gov](http://www.bioethics.gov) (accessed 13.04.14).

- Varmus, H., Satcher, D., 1997. Ethical complexities of conducting research in developing countries. *N. Engl. J. Med.* 337, 1003–1005.
- Verweij, M., Dawson, A., 2004. Ethical principles for collective immunization programs. *Vaccine* 22, 3122–3126.
- Weed, D.L., McKeown, R.E., 2003. Science, ethics, and professional public health practice. *J. Epidemiol. Commun. Health* 57, 4–5.
- World Health Organization, 2008. Ethics and Health. Available at: <http://www.who.int/bulletin/volumes/86/8/en>; <http://www.who.int/ethics/topics/en/> (accessed 13.04.14).
- World Health Organization, Genomics Resource Centre, 2012. Patients' Rights. Available at: <http://www.who.int/genomics/public/patientrights/en/> (accessed 13.04.14).
- World Medical Association. WMA Declaration of Helsinki - Ethical Principles for Medical Research Involving Human Subjects. Available at: <http://www.wma.net/en/30publications/10policies/b3/> (accessed 13.04.14).
- Yoshida, E.M., 1998. Selecting candidates for liver transplantation: a medical ethics perspective on the microallocation of a scarce and rationed resource. *Can. J. Gastroenterol.* 12, 209–215.
- Zambon, M.C., 2004. Ethics versus evidence in influenza vaccination. *Lancet* 364, 2161–2163.
- Zusman, S.P., 2012. Water fluoridation in Israel, 1968–2012. *Public Health Rev.* 34. Available at: [http://www.publichealthreviews.eu/upload/pdf\\_files/11/00\\_Zusman.pdf](http://www.publichealthreviews.eu/upload/pdf_files/11/00_Zusman.pdf) (accessed 13.04.14).