

# Planning and Managing Health Systems

## ABSTRACT

Health systems are complex organizations. They are often the largest single employer in a country, with expenditures of public and private money of 4-17% of gross domestic product. Overall and individual facility management requires mission statements, objectives, targets, budgets, activities planning, human interaction, services delivery, and quality assurance. Health organization involves a vast complex of stakeholders and participants, suppliers and purchasers, regulators and direct providers, and individual patients, and their decision making. These include pyramidal and network organizations and ethical decision making based on public interest, resource allocations, priority selection, and assurance of certain codes of law and ethical conduct. This chapter discusses how complex organizations work, with potential for application in health, and the motivations of workers and of the population being served. Organization theory helps in devising methods to integrate relevant factors to become more effective in defining and achieving goals and missions.

## 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 into 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. Define management theory in relation to health systems management in the following:
  - (a) Hawthorne effect
  - (b) Hierarchy of needs

(c) Theory X–Theory Y

(d) Management by objective

(e) Total quality management

(f) Empowerment.

2. Why is management training important in the New Public Health?
3. Discuss pyramidal and network organizations in the health field. Give examples.
4. How do organizational structure and function affect each other in a health care organization?
5. What is an appropriate role for the hospital in a comprehensive health program for a community, district, or enrolled population?
6. How may hospital services be integrated with home care and care of the chronically ill in the community?

#### Part II: Knowledge and Skills

1. Aware of different organizational structures and their effect on the functionality of an institution.
2. Recognize the elements of human behavior such as knowledge and attitudes when training, recruiting, and managing public health professionals.

## BIBLIOGRAPHY

### Electronic Resources

- Academy of Managed Care Pharmacy, 2013. Glossary of Managed Care Terms. Available at: <http://www.amcp.org/ManagedCareTerms/> (accessed 13.04.14).
- Agency for Healthcare Research and Quality. Available at: <http://www.ahrq.gov/> (accessed 09.04.14).
- American College of Healthcare Executives. Available at: <http://www.ache.org/> (accessed 09.04.14).
- American College of Medical Quality. Available at: <http://www.acmq.org/> (accessed 09.04.14).
- American Hospital Association. Available at: <http://www.aha.org/> (accessed 09.04.14).
- Center for Medicare and Medicaid Services. CMS.gov. Glossary. Available at: <http://www.cms.gov/apps/glossary/default.asp?Language=English&Letter=A> (accessed 13.04.14).
- Centers for Disease Control and Prevention, Management and Analysis Services Office. <http://www.cdc.gov/maso/> (accessed 09.04.14).
- Joint Commission. Updated 27 December 2012 at: Available at: <http://www.jointcommission.org/> (accessed 09.04.14).
- National Association of Public Hospitals and Health Systems. Available at: <http://www.naph.org/> (accessed 09.04.14).
- National Center for Health Statistics, Centers for Disease Control and Prevention. Available at: <http://www.cdc.gov/nchs/> (accessed 09.04.14).

World Health Organization. The Health Manager's Website. Available at: <http://www.who.int/management/en/> (accessed 09.04.14).

## Recommended Reading

- Agency for Healthcare Research and Quality, 2012. Pay for Performance (P4P): AHRQ Resources. AHRQ, Rockville, MD. Available at: <http://www.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/pay4per/index.html> (accessed 09.04.14).
- Aguayo, R., 1990. Dr. Deming: The American Who Taught the Japanese about Quality. Simon & Schuster, New York.
- American College of Physicians, Health and Public Policy Committee, 2008. Achieving a high performance health care system with universal access: what the United States can learn from other countries. *Ann. Intern. Med.* 148, 55–75.
- Bar-Yam, Y., 2006. Improving the effectiveness of health care and public health: a multi-scale complex systems analysis. *Am. J. Public Health* 96, 459–466.
- Centers for Disease Control and Prevention, 12 September 2012. A Framework for Program Evaluation. Office of the Associate Director for Program – Program Evaluation. CDC, Atlanta, GA. Available at: <http://www.cdc.gov/eval/framework/index.htm> (accessed 09.04.14).
- Centers for Disease Control and Prevention, 2000. Biological and chemical terrorism: strategic plan for preparedness and response. Recommendations of the CDC strategic planning workgroup. MMWR Recomm. Rep. 49 (RR-04), 1–14. Available at: <http://www.cdc.gov/mmwr/pdf/rr/rr4904.pdf> (accessed 09.04.14).
- Centers for Disease Control and Prevention, 1999. Framework for program evaluation in public health. MMWR Recomm. Rep. 48 (RR-11), 1–40. Available at: <ftp://ftp.cdc.gov/pub/Publications/mmwr/rr/rr4811.pdf> (accessed 09.04.14).
- CEO Online. Developing Leadership Skills. Available at: [http://www.ceoonline.com/expert\\_talk/leadership\\_management/leadership\\_skill.aspx](http://www.ceoonline.com/expert_talk/leadership_management/leadership_skill.aspx) (accessed 09.04.14).
- Dutton, D.B., 1979. Patterns of ambulatory health care in five different delivery systems. *Med. Care* 17, 221–243.
- Ettelt, S., Nolte, E., Thomson, S., Mays, N., 2008. Capacity Planning in Health Care: A Review of the International Experience. WHO, on behalf of the European Observatory on Health Systems and Policies, Copenhagen. Available at: [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0003/108966/E91193.pdf](http://www.euro.who.int/__data/assets/pdf_file/0003/108966/E91193.pdf) (accessed 09.04.14).
- Ginter, P.M., Duncan, W.J.P., Swayne, L.E., 2013. Strategic Management of Health Care Organizations, Seventh ed. Jossey-Bass-Wiley, Hoboken NJ, 2013.
- Institute of Medicine, 2012. Best Care at Lower Cost: The Path to Continuously Learning Health Care in America. National Academies Press, Washington, DC. Available at: [http://www.nap.edu/download.php?record\\_id=13444](http://www.nap.edu/download.php?record_id=13444) (accessed 09.04.14).
- Institute of Medicine, 2001. Crossing the Quality Chasm: A New Health System for the Twenty-First Century. National Academies Press, Washington, DC.
- Institute of Medicine, 2003. Future of the Public's Health in the 21st Century. National Academies Press, Washington, DC.
- Johnson, W.D., Diaz, R.M., Flanders, W.D., Goodman, M., Hill, A.N., Holtgrave, D., et al., 2008. Behavioral interventions to reduce risk for sexual transmission of HIV among men who have sex with men. *Cochrane Database Syst. Rev.* (3), CD001230.
- Katzenbach, J.R., Smith, D.K., 2003. The Wisdom of Teams: Creating the High-Performance Organization. Reprint edition with Harvard Business School Press by Harper Business Essentials, Harper Collins. Available at: <http://www.amazon.com/The-Wisdom-Teams-High-Performance-Organization/dp/0060522003> (accessed 09.04.14).
- Lee, N., Kotler, P., 2011. Social Marketing: Influencing Behaviours for Good, fourth ed. Sage Publications, Thousand Oaks, CA.
- Lied, T.R., Kazandjian, V.A., 1998. A Hawthorne strategy: implications for performance measurement and improvement. *Clin. Perform. Qual. Health Care* 6, 201–204.
- Loeffel, G., Blumenthal, D., 1989. The case for using industrial quality management science in health care organizations. *JAMA* 262, 2869–2873.
- Maynard, A., 2012. The powers and pitfalls of the payment for performance. *Health Econ.* 21, 3–12.
- Molinsky, A.L., Davenport, T.H., Iyer, B., Davidson, C., January–February 2012. Three skills every 21st-century manager needs. *Harv. Bus. Rev.* Available at: <http://hbr.org/2012/01/three-skills-every-21st-century-manager-needs> (accessed 09.04.14).
- Powell, T.C., 1995. Total quality management as competitive advantage: a review and empirical study. *Strateg. Manage. J.* 16, 15–37.
- Ryan, A., Blustein, J., 2012. Making the best of hospital pay for performance. *N. Engl. J. Med.* 366, 1557–1559.
- Satcher, D., Higginbotham, E.J., 2008. The public health approach to eliminating disparities in health. *Am. J. Public Health* 98, 400–403.
- Shortell, S.M., Gillies, R., Wu, F., 2011. United States innovations in healthcare delivery. *Public Health Rev.* 32, 190–212. Available at: <http://www.publichealthreviews.eu/show/f/26> (accessed 09.04.14).
- Smith, J.M., Topol, E., 2013. A call to action: lowering the cost of health care. *Am. J. Prev. Med.* 44 (1S1), S54–S57.
- Sutton, M., Nikolova, S., Boaden, R., Lester, H., McDonald, R., Roland, M., 2012. Reduced mortality with hospital pay for performance in England. *N. Engl. J. Med.* 367, 1821–1828.
- Trochim, W.M., Cabrera, D.A., Milstein, B., Gallagher, R.S., Leischow, S.L., 2006. Practical challenges of systems thinking and modeling in public health. *Am. J. Public Health* 96, 538–546.
- Turnock, B.J., 2012. Public Health: Essentials of Public Health, second ed. Jones and Bartlett, Sudbury, MA.
- US Department of Health and Human Services, 2011. Health United States, 2011, with Chartbook on Trends in the Health of Americans. DHHS, Washington, DC.

## Further References

- Adler, P.S., January–February 1993. Time-and-motion regained. *Harv. Bus. Rev.*, 97–108.
- Arias, D., Koop, C.E., 2008. The nation's health conscience. *Am. J. Public Health* 98, 396–399.
- Auerbach, D., Kellermann, A., 2011. A decade of health care cost growth has wiped out real income gains for an average US family. *Health Aff.* 30, 1630–1636.
- Bagley, C.E., Lairson, D.R., Morgan, R.O., Rowan, P.J., Balkrishnan, R., 2013. Evaluating the Medical Care System: Effectiveness, Efficiency, and Equity, fourth ed. Health Administration Press, Ann Arbor, MI.
- Bar-Yam, Y., 1997. Dynamics of Complex Systems. Perseus Press, Cambridge, MA.
- Barron, W.M., Krsek, C., Weber, D., Cerese, J., 2005. Critical success factors for performance improvement programs. *Jt. Comm. J. Qual. Patient Saf.* 31, 220–226.
- Bobak, M., Murphy, M., Rose, R., Marmot, M., 2007. Societal characteristics and health in the former communist countries of Central and Eastern Europe and the former Soviet Union: a multilevel analysis. *J. Epidemiol. Community Health* 61, 990–996.

- Bradley, E.H., Pallas, S., Bashyal, C., Curry, L., Berman, P., June 2010. Developing Strategies for Improving Health Care Delivery: A User's Guide to Concepts, Determinants, Measurement, and Intervention Design. Health, Nutrition and Population (HNP) Discussion Paper. Available at: <http://siteresources.worldbank.org/HEALTHNUTRITIONANDPOPULATION/Resources/281627-1095698140167/DevelopingStrategiesforImprovingHealthCareDelivery.pdf> (accessed 09.04.14).
- Business Dictionary.com. Hawthorne Effect. Available at: <http://www.businessdictionary.com/definition/Hawthorne-effect.html> (accessed 09.04.14).
- Centers for Medicare & Medicaid Services, 4 November 2012. National Health Expenditures Fact Sheet. CMS, Baltimore, MD. Available at: <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.html?redirect=/nationalhealthexpenddata/> (accessed 09.04.14).
- Cohen, J., 1990. Health policy, management and economics. In: Lambo, T., Day, S.B. (Eds.), *Issues in Contemporary International Health*. Plenum, New York.
- Daft, R.L., 2004. *Organization Theory and Design*, eighth ed. South-Western, Cincinnati, OH.
- Darr, K., Rakich, J.S., 1989. *Hospital Organization and Management*, fourth ed. National Health Publishing, Owings Mills, MD.
- Donabedian, A., 1976. *Aspects of Medical Care Administration: Specifying Requirements for Health Care*. Harvard University Press, Boston, MA.
- Drucker, P.F., 1999. *Management Challenges of the 21st Century*. Harper Business, New York.
- Epstein, A.M., 2012. Will pay for performance improve quality of care? The answer is in the details. *N. Engl. J. Med.* 367, 1852–1853.
- Ettelt, S., McKee, M., Nolte, E., Mays, N., Thomson, S., 2009. Planning health care capacity: whose responsibility? In: Rechel, B., Wright, S., Edwards, N., Dowdeswel, B., McKee, M. (Eds.), *Investing in Hospitals of the Future*. World Health Organization, on behalf of the European Observatory on Health Systems and Policies, Copenhagen.
- Etzioni, A., 1964. *Modern Organizations*. Prentice Hall, Englewood Cliffs, NJ.
- Fajans, P., Simmons, R., Ghiron, L., 2006. Helping public health systems innovate: the strategic approach to strengthening reproductive health policies and programs. *Am. J. Public Health* 96, 435–440.
- Fernald, D.H., Coombs, L., DeAlleume, L., West, D., Parnes, B., 2012. An assessment of the Hawthorne effect in practice-based research. *Am. Board. Fam. Med.* 25, 83–86.
- Fleming, S.T., 2008. *Managerial Epidemiology: Concepts and Cases*, second ed. Health Administration Press, Arlington, VA.
- Ghaffar, A., Tran, N., Kiely, M.-P., Etienne, C., 2012. Putting health policy and systems research on the map. *Bull. World Health Organ.* 90 797–797A.
- Gibson, J.L., Donnelly, J.H., Konopaske, R., Ivancevich, J., 2011. *Organizations: Behavior, Structure, Processes*, fourteenth ed. Irwin/McGraw-Hill, Boston, MA.
- Herzberg, F., Mausner, B., Snyderman, B.B., 1959. *The Motivation to Work*. Wiley, New York. Transaction Publishers; Reprint edition (January 1, 1993).
- Institute of Medicine, 1989. *The Future of Public Health*. National Academies Press, Washington, DC.
- Jex, S.M., Britt, W., 2008. *Organizational Psychology: A Scientist-Practitioner Approach*. John Wiley & Sons, New York.
- Joffe, M., Mindell, J., 2006. Complex causal process diagrams for analyzing the health impacts of policy interventions. *Am. J. Public Health* 96, 480–487.
- Johnson, K., 12 September 2012. Portland approves fluoridation by '14. New York Time. Available at: [http://www.nytimes.com/2012/09/13/us/portland-approves-adding-fluoride-to-water-by-14.html?\\_r=0](http://www.nytimes.com/2012/09/13/us/portland-approves-adding-fluoride-to-water-by-14.html?_r=0) (accessed 09.04.14).
- Katz, R., September–October 1974. Skills of an effective administrator. *Harv. Bus. Rev.*, 90–101.
- LaPelle, N.R., Zapka, J., Ockene, J.K., 2006. Sustainability of public health programs: the example of tobacco treatment services in Massachusetts. *Am. J. Public Health* 96, 1363–1369.
- Last, J.M., 2007. *A Dictionary of Public Health*. Oxford University Press, New York.
- Law, S., 21 May 2013. Portland voters reject water fluoridation. Portland Tribune. Available at: <http://portlandtribune.com/pt/9-news/152986-portland-voters-reject-water-fluoridation> (accessed 09.04.14).
- Lazarevik, V., Kasapinov, B., 2012. Medical doctors' attitudes towards pay-for-reporting in Macedonia: a web-based cross-sectional survey. *Maced. J. Med. Sci.* 5, 437–443. Available at: <http://dx.doi.org/10.3889/MJMS.1857-5773.2012.0246> (accessed 09.04.14).
- Marmot, M., 2007. Commission on social determinants of health. Achieving health equity: from root causes to fair outcomes. *Lancet* 370, 1153–1163.
- Maslow, A.H., 1997. Motivation and Personality. In: with Frager, R.D., Fadiman, J. (Eds.), third ed. Pearson, New York.
- Mayo, E., 1933. *The Human Problem of Industrial Civilization*. Macmillan, New York. Reprinted by Boston, MA: Graduate School of Business Administration, Harvard University; 1945. Available at: <https://archive.org/details/socialproblemsof00mayo> (accessed 09.04.14).
- McGlynn, E.A., Asch, S.M., Adams, J., Keesey, J., Hicks, J., DeCristofaro, A., Kerr, E.A., 2003. The quality of health care delivered to adults in the United States. *N. Engl. J. Med.* 348, 2635–2645.
- McGregor, D., 2006. *The Human Side of Enterprise*, Annotated Edition. McGraw Hill Company, New York.
- McMahon, R., Barton, E., Piot, M., Gelina, N., Ross, F., 1992. *On Being in Charge: A Guide to Management in Primary Health Care*, second ed. WHO, Geneva.
- Midgley, G., 2006. Systemic intervention for public health. *Am. J. Public Health* 96, 466–472.
- Mintzberg, H., January–February 1994. The fall and rise of strategic planning. *Harv. Bus. Rev.*, 107–114. Available at: <http://hbr.org/1994/01/the-fall-and-rise-of-strategic-planning/ar/1> (accessed 09.04.14).
- Mintzberg, H., 1973. *The Nature of Managerial Work*. Harper and Row, New York.
- Mosby's Medical Dictionary, eighth ed. 2009. The Hawthorne Effect. Available at: <http://medical-dictionary.thefreedictionary.com/Hawthorne+effect> (accessed 09.04.14).
- National Center for Health Statistics, 2012. *Health, United States, 2011: With Special Feature on Socioeconomic Status and Health*. NCHS, Hyattsville, MD.
- Oleske, D.M. (Ed.), 2010. *Epidemiology and the Delivery of Health Care Services: Methods and Applications*, third edition. Springer, New York.
- Parsons, H.M., 1974. What happened at Hawthorne? New evidence suggests the Hawthorne effect resulted from operant reinforcement contingencies. *Science*, 183–193. Abstract available at: <http://www.ncbi.nlm.nih.gov/pubmed/17756742> (accessed 28.12.12).
- Plotkin, S.A., Orenstein, W.O., Offit, P. (Eds.), 2012. *Vaccines*, sixth ed. WB Saunders, Philadelphia, PA.

- Reinke, W.A. 1988. *Health Planning for Effective Management*. Oxford University Press, New York.
- Robbins, S.P., 1990. *Organization Theory: Structure, Design and Applications*, third ed. Prentice-Hall, Englewood Cliffs, NJ.
- Rosenthal, M.B., Dudley, R., 2007. Pay-for-performance: will the latest payment trend improve care? *JAMA* 297, 740–744.
- Schuster, R.J., Terwoord, N.A., Tasosa, J., 2006. Changing physician behavior to measure and improve clinical outcomes. *Am. J. Clin. Qual.* 21, 394–400.
- Scott, R.W., 2002. *Organizations: Rational, Natural and Open Systems*, fifth ed. Prentice-Hall, Englewood Cliffs, NJ.
- Shortell, S.M., Kazluny, A.D. (Eds.), 2006. *Health Care Management: Organization Design and Behavior*, fifth ed. Delmar, Albany, NY.
- Smith, D., 1972. Organizational theory and the hospital. *J. Nurs. Admin.* 2, 19–24.
- Suba, E.J., Murphy, S.K., Donnelly, A.D., Furia, L.M., Huynh, M.L.D., Raab, S.S., 2006. Systems analysis of real-world obstacles to successful cervical cancer prevention in developing countries. *Am. J. Public Health* 96, 480–487.
- Tarimo, E., 1991. Towards a Health District: Organizing and Managing District Health Systems Based on Primary Health Care. WHO, Geneva.
- Taylor, C.E., 1992. Surveillance for equity in primary care: policy implications from international experience. *Int. J. Epidemiol.* 21, 1043–1049.
- Taylor, F.W., Scientific Management. Dover Publications, 1997. CreateSpace Independent Publishing Platform, 2013. Martino Fine Books, 2014.
- Tulchinsky, T.H., 1982. Evaluation of personal health services: a review with applications for Israel. *Isr. J. Med. Sci.* 18, 197–209.
- US Department of Health and Human Services, 2007. *Health United States, 2007, with Chartbook on Trends in the Health of Americans*. DHHS, Washington, DC.
- US Department of Health and Human Services. National Plan to Address Alzheimer's Disease. Available at: <http://aspe.hhs.gov/daltcp/napa/NatlPlan.pdf> (accessed 09.04.14).
- Vaughn, J.P., Morrow, R.H., 1989. *Manual of Epidemiology for District Health Management*. WHO, Geneva.
- White, K.F., Griffith, J.R., 2010. *The Well-Managed Healthcare Organization*, seventh ed. Health Administration Press, Chicago IL.
- World Health Organization, 1994. *Information Support for New Public Health Action at the District Level: Report of a WHO Expert Committee*. Technical Support Series 845. WHO, Geneva.