

WM087-15 Quality and Productivity in Health Service Systems

25/26

Department

WMG

Level

Taught Postgraduate Level

Module leader

Sudakshina Lahiri

Credit value

15

Module duration

4 weeks

Assessment

100% coursework

Study location

University of Warwick main campus, Coventry

Description

Introductory description

This module focuses on current challenges facing healthcare quality & productivity. It will familiarize students with the urgent need to apply approaches from diverse disciplines for patient safety, quality, and productivity improvement in health service from a systems perspective. Students will learn to apply systematic approaches in the analysis of data & information for quality and efficiency. Module will examine current techniques used for quality & productivity improvement in healthcare such as lean, Six Sigma, loss functions, etc. Service improvement strategies will also be examined in the context of regulatory, patient safety and economic factors that are unique to healthcare and what information is necessary for sustained improvement.

Module aims

The module aims to provide students with fundamental data analysis skills that are necessary for the development of evidence based quality improvement initiatives. Through a combination of lectures and lab sessions, this module will provide students with statistical skills and knowledge that are needed for integrating data which originate from different parts of the healthcare system.

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

1. Theories and concepts involving quality and productivity in healthcare including CQI, TQM, lean, six sigma, etc.
2. Metrics and measures of healthcare quality and productivity.
3. Techniques used to model health care processes for service redesign and improvement.
4. Use of statistical tools and analysis of health care data to generate improvements.
5. Incentivizing health care processes for quality and productivity improvement.
6. Factors necessary for sustained quality and productivity management.

Learning outcomes

By the end of the module, students should be able to:

- Critique tools and approaches used by health care organizations to assess quality risks and failures.
- Synthesize evidence involving efficiency, effectiveness and return on investment in the context of health services.
- Comprehensively understand ways to engage patients and other stakeholders in quality and productivity improvement.
- Systematically analyze health care data and information, interpret results and meaningfully draw conclusions.
- Critique methodologies of quality and productivity improvement studies in healthcare.

Indicative reading list

Introduction to Quality Health Care Management, Patrice Spath, 2013, 2nd Edition, Health Administration Press, Chicago, Illinois. SBN-13: 978-1567935936 ISBN-10: 1567935931

Donabedian, A. (1978). The Quality of Medical Care. *Science*, 200(4344): 856-864.

Normand, S.L. T., & Shahian, D. M. (2007). Statistical and Clinical Aspects of Hospital Outcomes Profiling. *Statistical Science*, 22(2): 206-226.

van Dishoeck, A.-M., Lingsma, H. F., Mackenbach, J. P., & Steyerberg, E. W. (2011). Random variation and rankability of hospitals using outcome indicators. *BMJ Qual Saf*, 20(10), 869-874.

Neuhauser, D., Provost, L., & Bergman, B. (2011). The meaning of variation to healthcare managers, clinical and health-services researchers, and individual patients. *BMJ Qual Saf* 2011;20:i36-i40 doi:10.1136/bmjqs.2010.046334

Morrow, E., Robert, G., Maben, J., & Griffiths, P. (2012). Implementing large-scale quality improvement: lessons from the productive ward: releasing time to care. *International Journal of Health Care Quality Assurance*, 25(4): 237-253.

Frist, William H., Connected Health & Rise Of the Patient-Consumer, *Health Affairs*, 33: 2:191-

193. Liberatore Matthew J., (2013). Six sigma in healthcare delivery. *International Journal of Health Care Quality Assurance*, Vol. 26:7: 601 - 626

Lighter, D. E. (2011). *Advanced Performance Improvement in Health Care-Principles and Methods*. Jones and Bartlett Publishers, ISBN: 13:

978-0-7637-6449-4 Meltze, David O. & Chung, J. W. (2014). The Population Value Of Quality Indicator Reporting: A Framework For Prioritizing Health Care Performance Measures. *Health Affairs* (33): 1: 132–139. Roland, M., and Campbell, S. (2014). Successes and failures of pay for performance in the United Kingdom, *New England Journal of Medicine*, Vol. 370: 20:1944-1949. Solecito, Wi. A., and Johnson, J.K. (2013). *McLaughlin and Kaluzny's Continuous Quality Improvement in Healthcare*, 4th Edition, Copyright 2013, Jones and Bartlett Publication, Massachusetts; ISBN 13: 978-0-7637-8154-5 Hollingsworth, B. (2008). The measurement of efficiency and productivity of health care delivery. DOI: 10.1002/hec.1391 Campbell, S.M., Reeves, D., Kontopantelis, E., Sibbald, B., and Roland, M. (2009). Effects of pay for performance on the quality of primary care in England. *New England Journal of Medicine*, Vol. 361: 368-378. DOI: 10.1056/NEJMsa0807651 Lakhani, A., Coles, J., Eayres, D., Spence, C., & Ratchet, B. (2005). Creative use of existing clinical and health outcomes data to assess NHS performance in England: Part 1—performance indicators closely linked to clinical care. *British Medical Journal*, Vol. 330: 1426. Auerbach Andrew D., M.D., M.P.H., The Tension between Needing to Improve Care and Knowing How to Do It *N Engl J Med*, 357;6, August 9, 2007 Benneyan J C, Statistical Process Control as a Tool for Research and Healthcare Improvement, *Quality and Safety in Health Care* 2003;12:458–464 Blumenthal David (1996). Quality of Care – What is it? – Part I. *The New England Journal of Medicine*, vol. 335:12: 891-894 Dlugacz, Yosef D., Alice Greenwood, Andrea Restifo *The Quality Handbook for Health Care Organizations: A Manager's Guide to Tools and Programs* ISBN: 0787969214 Pub. Date: March 2004 Series: J-B AHA Press, #131 Ellen Nolte and C Martin McKee, Measuring the health of nations: Updating an earlier analysis, *Health Affairs*, Volume 27, 58-71, 2008. Gruen, R.L., Pearson, S.D., and Brennan, T.A. (2004). Physicians-Citizens-Public Roles and Professional Obligations. *Journal of the American Medical Association*, Vol. 291: 94-98

[View reading list on Talis Aspire](#)

Research element

The module incorporates elements of research design, steps in the process of research, identifying problems and questions contextualized to a given healthcare quality problems, specifying a purpose for quality improvement, reviewing current evidence and issues of ethics and regulations when investigating /examining quality problems.

Interdisciplinary

Healthcare operational management is a new emerging discipline that combines health science methodologies with engineering, statistics, quantitative elements of management with data science for quality and productivity improvement in the healthcare sector. This module focusses on familiarizing students with quality assurance underpinned data modelling and analysis.

Subject specific skills

- mathematical and data analysis skills
- understanding metrics and measures
- awareness of evidence based practices

Transferable skills

- critical thinking
 - problem solving
 - data and information literacy
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Study

Study time

Type	Required
Lectures	15 sessions of 1 hour (10%)
Seminars	(0%)
Tutorials	15 sessions of 1 hour (10%)
Online learning (independent)	5 sessions of 1 hour (3%)
Other activity	20 hours (13%)
Private study	35 hours (23%)
Assessment	60 hours (40%)
Total	150 hours

Private study description

Further reading on topics related to healthcare quality and productivity improvement.

Other activity description

Self-directed activities for preparation towards class work. Guidance for these activities will be provided to students in class

Costs

No further costs have been identified for this module.

Assessment

You must pass all assessment components to pass the module.

Assessment group A3

	Weighting	Study time	Eligible for self-certification
Written Assessment-1 Critique extant evidence involving effectiveness and efficiency in the health sector. Word count 3000.	65%	35 hours	Yes (extension)
Written Assessment-2 Analyze healthcare data and systematically present the results, their interpretation and draw conclusions. Word count 1000.	35%	25 hours	Yes (extension)

Feedback on assessment

Written feedback.

Availability

Courses

This module is Core optional for:

- Year 1 of TWMS-H1S5 Postgraduate Healthcare Operational Management (Full-time)