

# WM085-15 Operational Management and Clinical Systems Improvement

**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

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## Description

### Introductory description

This module goes beyond current approaches that are used to address challenges involving health system performance and management. It will familiarize students with systematic approaches in the analysis and design of health service systems for effective operational management leading to clinical systems improvement. Module materials will focus on areas such as managing patient flow, capacity, and resource utilization. Materials will also examine tool and techniques that are applied to monitor quality and service design including clinical guidelines quality benchmarks, thresholds and outcomes. Students will have the opportunity to review a range of quality improvement initiatives and techniques that have been used across various health systems in order to improve patient safety, efficiency, equity, effectiveness and person-centered care.

### Module aims

The module aims to provide students with fundamental knowledge and analysis skills, quantitative and qualitative, that are required for addressing unnecessary variation involving a given healthcare system. Through a combination of lectures and lab sessions, this module will help to examine factors that contribute to variability in the quality of care and how system performance can be

improved by reducing such variability.

## 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. Operational and managerial systems in health service delivery
2. Developing informed clinical systems improvement initiatives
3. Reducing variability in health service
4. Use of data and information for to design improvement projects
5. Analysis and assessment of targets and outcomes and their role in clinical systems improvement
6. Use and applications of statistical tools with health care data to design improvement projects

## Learning outcomes

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

- Critically examine and distinguish factors that drive the need for clinical systems improvement
- Demonstrate in-depth understanding of the type of improvement needed along with underlying principles, and concepts necessary when developing a service improvement initiative
- Integrate various theories/framework, methods and tools in order to design and implement a quality improvement project.
- Critique designs for quality improvement initiatives through application of the rules of evidence to the published literature.
- Systematically analyze data and interpret results for clinical system improvement

## Indicative reading list

Sample bibliography:

Textbook: Ransom, E., Joshi, M., Nash, S. J., Nash, D.b., and Ransom, S.B. (2008). The Healthcare

Quality Handbook, Second Edition, ISBN-13: 978-1567933017 ISBN-10: 1567933017 .

Hines, P. and Rich, N., The seven value stream mapping tools. International Journal of Operations and Production Management 1997. 16: p. 46-65.

Dickson, E.W., Singh, S., Cheung D.S., Wyatt, C.C., Nugent, A.S. (2009). Application of Lean Manufacturing Techniques in the Emergency Department. The Journal of Emergency Medicine, Vol. (37):2:177-182.

Eitel, D.R., Rudkin, S.E., Mavehy, A., Killeen, J.P., Pines, J.M. (2010). Improving Service Quality by

Understanding Emergency Department Flow: A White Paper and Position Statement Prepared for the American Academy of Emergency Medicine. The Journal of Emergency Medicine, Vol. (38): 1:70–79.

- Holden, R.J. (2010). Lean Thinking in Emergency Departments: A Critical Review. *Annals of Emergency Medicine*, Vol. (57):3: 265-278.
- King, D.L., Ben-Tovim, D.I., & Bassham, J. (2006). Redesigning emergency department patient flows: application of Lean Thinking to health care. *Emergency Medicine Australasia*, Vol. (18):391-7.
- Mould, G., Bowers, J. & Ghattas, M. (2010). The evolution of the pathway and its role in improving patient care. *BMJ Quality & Safety in Healthcare*, Vol. 19(5): 1 – 6.
- Rath, F. (2008). Tools for developing a quality management program: proactive tools (process mapping, value stream mapping, fault tree analysis, and failure mode and effects analysis). *International Journal of Radiation Oncology Biology Physics*, Vol. (71), (suppl):S187-90.
- Treble, T.M., Hansi, N., Hydes, T., Smith, M.A. & Baker, M. (2010). Process mapping the patient journey: an introduction. *BMJ* 2010; 341:c4078 (13 August 2010).
- 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
- 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

[View reading list on Talis Aspire](#)

## Research element

This module incorporates elements of quantitative and qualitative data along with critique of extant evidence and applying these for healthcare quality improvement.

## 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 drawing techniques from these disciplines to help address unnecessary variation for clinical systems improvement.

## Subject specific skills

- data and information literacy
- mathematical and statistical skills
- application of best practices around healthcare quality improvement

## Transferable skills

- problem solving
- critical thinking
- ethical values

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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%)
Practical classes	(0%)
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.

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## Assessment

You must pass all assessment components to pass the module.

### Assessment group A2

	Weighting	Study time	Eligible for self-certification
Written assessment-1	50%	30 hours	Yes (extension)
Map and analyze a given care scenario using process engineering approach. Word count: 2500.			
Written assessment-2	50%	30 hours	Yes (extension)

**Weighting****Study time****Eligible for self-certification**

Conduct statistical analysis with a set of data and present the results, their interpretation and draw conclusions. Word count 1500.

**Feedback on assessment**

Written feedback.

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**Availability****Courses**

This module is Core optional for:

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