

# WM085-15 Operational Management and Clinical Systems Improvement

**22/23**

**Department**

WMG

**Level**

Taught Postgraduate Level

**Module leader**

Sudakshina Lahiri

**Credit value**

15

**Module duration**

1 week

**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 patient safety, 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 associated 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 main aims of this module are to:

1. Examine factors that contribute to variability in the quality of care and service system performance

2. Critically review tools and techniques with respect to clinical systems improvement including the use of Payment by Result, hospital performance rating scores, report cards etc.
3. Understand and apply approaches that go beyond current lean principles for sustained quality and productivity, for e.g. evidence based co-design with patients.
4. Examine the role of operational management in clinical systems improvement including maintaining standards that monitor performance such as best practice guidelines and benchmarks.
5. Critically review different types of data and their function in the context of clinical systems improvement.
6. Develop an in-depth understanding of different models of improvement and their applicability in clinical systems improvement.

## **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
- Describe and apply different principles and techniques for quality improvement in healthcare settings and be able to distinguish the conditions under which these are most applicable.
- Integrate various theories/framework, methods and tools in order to design and implement a quality improvement project.
- Analyse strengths and weaknesses of the designs for quality improvement initiatives through application of the rules of evidence to the published literature.
- Understand and apply statistical tools to a set of data for when developing a clinical system improvement initiative

## **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 Physic, Vol. (71), (suppl):S187-90.

Trebble, 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

## Research element

This module incorporates elements of quantitative research such as maths and statistical techniques to transform data, descriptive statistics, inferential statistics, mixed methods applications, critiquing evidence and applying research in 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.

## Subject specific skills

- Measurements
- Multivariate data analysis
- Variation
  - Philosophy of science
    - Local versus generalizable knowledge
    - High reliability approaches

## Transferable skills

- Quality and efficiency in health systems
  - Mapping complex processes
  - Data analysis
  - Reporting and displaying information
  - Process mapping
  - Complexity and interdependencies
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## Study

### Study time

Type	Required
Lectures	25 sessions of 1 hour (17%)
Seminars	15 sessions of 1 hour (10%)
Practical classes	(0%)
Assessment	110 hours (73%)
Total	150 hours

### Private study description

No private study requirements defined for this module.

### 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 A1

	Weighting	Study time
Written Assignment	100%	110 hours
Single post module assignment comprised of two parts: Part-1 around 3000 words (65%) and Part-2 around 1000 words (35%)		

## Feedback on assessment

Written feedback on post-module assignment.

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## Availability

## Courses

This module is Core optional for:

- Year 1 of TWMS-B9AA Postgraduate Healthcare Operational Management