

Poster Supplemental Handout

James SD Jr., Livet, M, Lazenby, JL, Khan, K, & McClurg, FL Jr. (2008). Creation of a hybrid quality improvement framework tailored to the needs of a national breast and cervical cancer screening program. Annual American Public Health Association Meeting: San Diego, California.

National Breast and Cervical Cancer Early Detection Program (NBCCEDP)

For more information on the NBCCEDP, see http://www.cdc.gov/cancer/nbccedp/.

Source Frameworks

Clinical Microsystems

See http://dms.dartmouth.edu/cms/ or the relevant references below for more information about the Clinical Microsystems model.

Malcolm Baldrige National Quality Program (MBNQP)

See http://www.quality.nist.gov/ or the relevant references below for more information about the Malcolm Baldrige Program and model.

Additional Methodological Information

Abstraction of papers

Information from articles was abstracted into a data collection tool (Microsoft Excel spreadsheet) containing a number of categories: citation information, brief article description, QI framework name, theoretical basis, brief framework description, associated strategies/principles and tools/best practices, facilitators and barriers of implementation, framework adaptability, and resources needed for implementation, among others.

Literature review quality assurance

The data collection tool was reviewed by a senior manager for completion and consistency across categories. Those categories for which information was not available were marked as "not reported." If data were abstracted incorrectly or placed under an incorrect category, the article was reviewed again and appropriate corrections were made.

Table 1. Literature search terms and syntax

This table presents all literature search terms employed, dates the searches were performed, total number of "hits," or total articles resulting from each search, and number of relevant articles retained for abstraction. All searches were performed in the PubMed database

Search terms	Date	Number of Hits	Number of articles retained
Clinical Microsystems Website	11/6/07	13	13
"Clinical Microsystems" [Text Word] AND English [lang] AND "1998" [PDAT] : "2007" [PDAT]	11/6/07	12	11 (8 duplicates from Clinical Microsystems website); 3 new articles
"Clinical Microsystem" [Text Word] AND English [lang]	11/14/07	8	6 (4 duplicates from previous search); 2 new



Search terms	Date	Number of Hits	Number of articles retained
AND "1998"[PDAT] :			articles
"2007"[PDAT]			
"Microsystem" [Text Word]	11/14/07	25	13 (11 duplicates from
AND "Clinical" [Text Word]			previous searches); 2
AND English [lang] AND			new articles
"1998"[PDAT] : "2007"[PDAT]			
"Baldrige" [Text Word] AND	11/15/07	54	10 (1 duplicate from
English [lang] AND			previous searches); 9
"1998"[PDAT] :			new articles
"2007"[PDAT]			
"MBNQA" [Text Word] AND	11/16/07	3	1 (duplicate from
English [lang] AND			previous searches); no
"1998"[PDAT] :			new articles
"2007"[PDAT]			
"BNQP" [Text Word] AND	11/16/07	1	1 (duplicate from
English [lang] AND			previous searches); no
"1998"[PDAT] :			new articles
"2007"[PDAT]			
"Six Sigma" [Text Word] AND	11/16/07	132	10 (1 duplicate from
English [lang] AND			previous searches); 9
"1998"[PDAT] :			new articles
"2007"[PDAT]			
"Lean Six Sigma" [Text Word]	11/21/07	4	2 (1 duplicate from
AND English [lang] AND			previous searches); 1
"1998"[PDAT] :			new article
"2007"[PDAT]			
"Lean Sigma" [Text Word]	11/21/07	1	1 (duplicate from
AND English [lang] AND			previous searches); no
"1998"[PDAT] :			new articles
"2007"[PDAT]			

Grantee Site Visit Questions

List of questions used to guide the discussion during the NBCCEDP grantee site visit:

- What is the current understanding of QI at this grantee location?
- What are the current QI processes in place to ensure provision of quality care?
 - o Random chart audits/reviews (frequency/number?)
 - o Monitoring tool?
 - o Corrective action plans and letters for providers?
- How were these processes developed? From where (or whom) did they come?
- What are the biggest obstacles to implementing these established QI protocols?
- What are some of the facilitators to implementing these established QI protocols?
- Have any other QI measures been implemented or considered in the past? What were these (if any)? Why were they discontinued?



- How are problems with quality of care identified?
- What are some of the major problems/issues in providing quality care?
- What factors need to be addressed to better enable you to provide quality care? Any restrictions/limitations imposed by virtue of CDC funding that are an issue?
- What tools/resources/capacities would be useful in the effort to provide high quality care?

References

- Ahmed-Jushuf, I., & Griffiths, V. (2007). Identifying hidden capacity through modernization of genitourinary medicine services. *International Journal of STD & AIDS*, 18(5), 297-298.
- Ahmed-Jushuf, I., Griffiths, V., & Six Sigma Study Group. (2007). Reducing follow-ups: An opportunity to increase the capacity of genitourinary medicine services across the UK. *International Journal of STD & AIDS*, 18(5), 305-307.
- Bahensky, J.A., Roe, J., & Bolton, R. (2005). Lean Sigma--will it work for healthcare? *Journal of Healthcare Information Management*, 19(1), 39-44.
- Barach, P., & Johnson, J.K. (2006). Understanding the complexity of redesigning care around the clinical microsystem. *Quality & Safety in Health Care, 15* (Suppl 1), i10-i16.
- Batalden, P.B., Nelson, E.C., Edwards, W.H., Godfrey, M.M., & Mohr, J.J. (2003a). Microsystems in health care: Part 9. Developing small clinical units to attain peak performance. *The Joint Commission Journal on Quality and Safety, 29*(11), 575-585.
- Batalden, P.B., Nelson, E.C., Mohr, J.J., Godfrey, M.M., Huber, T.P., Kosnik, L., et al. (2003b). Microsystems in health care: Part 5. How leaders are leading. *The Joint Commission Journal on Quality and Safety*, 29(6), 297-308.
- Batalden, P.B., & Splaine, M. (2002). What will it take to lead the continual improvement and innovation of health care in the twenty-first century?. *Quality Management in Healthcare, 11*(1), 45-54.
- Benedetto, A.R. (2003). Six Sigma: Not for the faint of heart. *Radiology Management*, 25(2), 40-53.
- Caldwell, C. (2006). Lean-Six Sigma: Tools for rapid cycle cost reduction. *Healthcare Financial Management*, 60(10), 96-98.
- Caramanica L., Maxwell S., & Curry S. (2000). Development of a business plan for women's health services, using Malcolm Baldrige Performance Excellence Criteria. *Seminars for Nurse Managers*, 8(2), 81-85.
- Cochran, C.R., Moseley, C.B., & Peltier, J.W. (2004). Quality improvement in a federally funded community breast and cervical cancer screening program. *Journal of Health and Human Services Administration*, 27(1), 12-33.



- Dann, J.O. (2006). Good, better, best. MGMA Connexion, 6(8), 42-47.
- Disch, J. (2006). Clinical microsystems: The building blocks of patient safety. *Creative Nursing*, 12(3), 13-14.
- Ettinger, W., & Van Kooy, M. (2003). The art and science of winning physician support for Six Sigma change. *Physician Executive*, 29(5), 34-38.
- Foster, T.C., Johnson, J.K., Nelson, E.C., & Batalden, P.B. (2007). Using a Malcolm Baldrige framework to understand high-performing clinical microsystems. *Quality & Safety in Health Care*, 16(5), 334-341.
- Freer, J., & Jackson, S. (1998). Using the business excellence model to effectively manage change within clinical support services. *Health Manpower Management*, 24(2-3): 76-81.
- Godfrey, M.M., Nelson, E.C., Wasson, J.H., Mohr, J.J., & Batalden, P.B. (2003). Microsystems in health care: Part 3. Planning patient-centered services. *The Joint Commission Journal on Quality and Safety*, 29(4), 159-170.
- Goonan, K.J., & Stoltz, P.K. (2004). Leadership and management principles for outcomes-oriented organizations. *Medical Care*, 42(Suppl 4), III31-38.
- Griffiths, V., Ahmed-Jushuf, I., & Six Sigma Study Group. (2007). Releasing capacity in sexual health through modernization. *International Journal of STD & AIDS, 18*(5), 299-304.
- Huber, T.P., Godfrey, M.M., Nelson, E.C., Mohr, J.J., Campbell, C., & Batalden, P.B. (2003). Microsystems in health care: Part 8. Developing people and improving worklife: What front-line staff told us. *The Joint Commission Journal on Quality and Safety*, 29(10), 512-522.
- Kosnik, L.K., & Espinosa, J.A. (2003). Microsystems in health care: Part 7. The microsystem as a platform for merging strategic planning and operations. *The Joint Commission Journal on Quality and Safety, 29*(9), 452-459.
- Loree, A., Maihack, M., & Powell, M. (2003). The path of least resistance: Is there a better route? *Radiology Management*, 25(5), 48-51.
- Mellat-Parast, M., Jones, E.C., & Adams, G. (2007). Six Sigma and Baldrige: A quality alliance. *Quality Progress, Sept*, 45-51.
- Minkman M., Ahaus K., & Huijsman R. (2007). Performance improvement based on integrated quality management models: What evidence do we have? A systematic literature review. *International Journal for Quality in Health Care*, 19(2), 90-104.



- Mohr, J.J., Barach, P., Cravero, J.P., Blike, G.T., Godfrey, M.M., Batalden, P.B., et al. (2003). Microsystems in health care: Part 6. Designing patient safety into the microsystem. *The Joint Commission Journal on Quality and Safety*, 29(8), 401-408.
- Mohr, J.J., & Batalden, P.B. (2002). Improving safety on the front lines: The role of clinical microsystems. *Quality & Safety in Health Care*, 11(1), 45-50.
- Mohr, J., Batalden, P., & Barach, P. (2004). Integrating patient safety into the clinical microsystem. *Quality & Safety in Health Care*, 13(Suppl 2), ii34-ii38.
- Neff, M. (2003). Demystifying "QI". Michigan Health & Hospitals, 39(4), 28.
- Nelson, E.C., Batalden, P.B., Homa, K., Godfrey, M.M., Campbell, C., Headrick, L.A., et al. (2003). Microsystems in health care: Part 2. Creating a rich information environment. *The Joint Commission Journal on Quality and Safety, 29*(1), 5-15.
- Nelson, E.C., Batalden, P.B., Huber, T.P., Mohr, J.J., Godfrey, M.M., Headrick, L.A., et al. (2002). Microsystems in health care: Part 1. Learning from high-performing front-line clinical units. *The Joint Commission Journal on Quality Improvement*, 28(9), 472-493.
- Nelson, E.C., Batalden, P.B., Mohr, J.J., & Plume, S.K. (1998). Building a quality future. *Frontiers of Health Services Management*, 15(1), 3-32.
- Ohm, B. (2000). Evaluating your performance improvement system using a Baldrige based self-assessment. *QRC Advisor*, 16(7), 11-12.
- Rural facility receives Baldrige for 2006. (2007). *Healthcare Benchmarks and Quality Improvement*, 14(2), 16-18.
- Simmons, J. (2003). Using Clinical Microsystems to improve quality at all levels. *The Quality Letter for Healthcare Leaders*, 15(3), 2-11.
- Somkin, C.P., & Hiatt, R.A. (1998). Screening mammography in an integrated health care system: The Kaiser Permanente experience. *Breast Disease*, 10(3-4), 45-53.
- Spath, P. (2004). Using Baldrige criteria to advance excellence. *Hospital Peer Review*, 29(5), 69-72.
- Stalker, L.V. (2000). Changing clinical practice by improving systems: The pursuit of clinical excellence through practice-based measurement for learning and improvement. *Quality Management in Health Care, 9*(1), 1-13.
- Varkey, P., Reller, M.K., & Resar, R.K. (2007). Basics of quality improvement in health care. *Mayo Clinic Proceedings*, 82(6), 735-739.
- Viau, M., & Southern, B. (2007). Six Sigma and Lean concepts, a case study: Patient



centered care model for a mammography center. Radiology Management, 29(5), 19-28.

- Wasson, J.H., Godfrey, M.M., Nelson, E.C., Mohr, J.J., & Batalden, P.B. (2003). Microsystems in health care: Part 4. Planning patient-centered care. *The Joint Commission Journal on Quality and Safety*, 29(5), 227-237.
- Weinstein, J.N., Brown, P.W., Hanscom, B., Walsh, T., & Nelson, E.C. (2000). Designing an ambulatory clinical practice for outcomes improvement: From vision to reality The Spine Center at Dartmouth-Hitchcock, year one. *Quality Management in Healthcare*, 8(2), 1-20.
- Zapka, J.G., Taplin, S.H., Solberg, L.I., & Manos, M.M. (2003). A framework for improving the quality of cancer care: The case of breast and cervical cancer screening. *Cancer Epidemiology, biomarkers & prevention, 12*(1), 4-13.

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Disclaimer

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

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