



The Michigan Surgical Quality Collaborative (MSQC) – Bibliography

<https://www.msqc.org/Public/index.aspx>

1: Ann Surg. 2007 Dec;246(6):1100-3.

The Michigan surgical quality collaborative: will a statewide quality improvement initiative pay for itself?

Englesbe MJ, Dimick JB, Sonnenday CJ, Share DA, Campbell DA Jr. Department of Surgery, University of Michigan, Ann Arbor, MI 48109, USA.

OBJECTIVE: In this article, we detail a unique collaboration between hospitals in Michigan and a major third party payer, using a "pay for participation model." The payer has made a significant investment in this regional surgical quality improvement (QI) program and funds each center's participation. **RESULTS:** Based on the documented costs and incidence of surgical complications at our center, we estimate that a 1.8% annual reduction in complication rates is required for the payer to recoup its investment in this regional QI program. If we achieve our goal of a 3% reduction in complications per year over the 3-year program, the payer will save \$2.5 million in payments. Our findings suggest that only a very modest improvement in surgical results, of a magnitude that seems realistically achievable based on similar QI initiatives, is necessary to financially justify payer involvement in a statewide quality improvement initiative. **CONCLUSION:** The framework of this program should be used by surgeons to attract private payers into QI collaboratives, facilitating improved patient outcomes and decreased health care expenditures.

Publication Types:

Research Support, Non-U.S. Gov't

Review

PMID: 18043116 [PubMed - indexed for MEDLINE]

2: N Engl J Med. 2006 Feb 23;354(8):864-70.

Strategies for improving surgical quality--should payers reward excellence or effort?

Birkmeyer NJ, Birkmeyer JD.

Michigan Surgical Collaborative for Outcomes Research and Evaluation, Department of Surgery, University of Michigan, Ann Arbor, USA. PMID: 16495401 [PubMed - indexed for MEDLINE]

3: J Am Coll Surg. 2006 Jun;202(6):933-7.

Who pays for poor surgical quality? Building a business case for quality improvement.

Dimick JB, Weeks WB, Karia RJ, Das S, Campbell DA Jr. VA Outcomes Group, Department of Veterans Affairs Medical Center, White River Junction, VT, USA. jdimick@umich.edu

BACKGROUND: Both providers and payors bear the financial risk associated with complications of poor quality care. But the stakeholder who bears the largest burden of this risk has a strong incentive to support quality improvement activities. The goal of the present study was to determine whether hospitals or payors incur a larger burden of increased hospital costs associated with complications. **STUDY DESIGN:** We merged clinical data for 1,008 surgical patients from the private sector National Surgical Quality Improvement Program to the internal cost-accounting database of a large university hospital. We then determined the marginal costs of surgical complications from the perspective of both hospitals (changes in profit and profit margin) and payors (increase in reimbursement paid to the hospital). In our analyses of cost and reimbursement, we adjusted for procedure complexity and patient characteristics using multivariate linear regression. **RESULTS:** Reimbursement for patients without complications (\$14,266) exceeded hospital costs (\$10,978), generating an average hospital profit of \$3,288 and a profit margin of 23%. When complications occurred, hospitals still received reimbursement in excess of their costs, but the profit margin declined: reimbursement (\$21,911) exceeded hospital costs (\$21,156), yielding an average profit of \$755 and a profit margin of 3.4%. Complications were always associated with an increase in costs to health-care payors: complications were associated with an average increase in reimbursement of \$7,645 (54%) per patient. **CONCLUSIONS:** Hospitals and payors both suffer financial consequences from poor-quality health care, but the greater burden falls on health-care payors. Strong incentives exist for health-care payors to become more involved in supporting quality improvement activities.

Publication Types:

Comparative Study

PMID: 16735208 [PubMed - indexed for MEDLINE]

4: J Am Coll Surg. 2004 Oct;199(4):531-7.

Hospital costs associated with surgical complications: a report from the private-sector National Surgical Quality Improvement Program.

Dimick JB, Chen SL, Taheri PA, Henderson WG, Khuri SF, Campbell DA Jr. Center for Evaluative Clinical Sciences, Dartmouth Medical School, Hanover, NH, USA.

BACKGROUND: The National Surgical Quality Improvement Project (NSQIP) has reduced morbidity rates in Veterans Affairs Hospitals. As the NSQIP methods move to private-sector hospitals, funding responsibilities will shift to the medical center. The objective of the current study was to calculate hospital costs associated with postoperative complications, because reducing morbidity may offset the costs of using the NSQIP. **STUDY DESIGN:** Patient data were obtained from a single private-sector center involved in the NSQIP from 2001 to 2002 (n=1,008). Cost data were derived from the hospital's internal cost-accounting database (TSI; Transitions Systems Inc). Total hospital costs associated with both minor

complications and major complications were calculated. Multiple linear regression was used to determine the cost of each type of complication after adjusting for patient characteristics. RESULTS: Rates of minor complications (6.3%, 64 events) and major complications (6.6%, 67 events) were similar. Median hospital costs were lowest for patients without complications (4,487 dollars) compared with those with minor (14,094 dollars) and major complications (28,356 dollars) ($p < 0.001$). After adjusting for differences in patient characteristics, major complications were associated with an increase of 11,626 dollars (95% CI, 9,419 dollars to 13,832 dollars; $p < 0.001$). Minor complications were not associated with increased costs in the adjusted analysis. CONCLUSIONS: Given the substantial costs associated with major postoperative complications, reducing morbidity may provide sufficient cost savings to offset the resources needed to participate in the private-sector expansion of the NSQIP.

PMID: 15454134 [PubMed - indexed for MEDLINE]

5: Surgery. 2005 Nov;138(5):815-20.

Partnering with payers to improve surgical quality: the Michigan plan.

Birkmeyer NJ, Share D, Campbell DA Jr, Prager RL, Moscucci M, Birkmeyer JD. Michigan Surgical Collaborative for Outcomes Research and Evaluation, Department of Surgery, University of Michigan, Ann Arbor, MI, USA.

PMID: 16291379 [PubMed - indexed for MEDLINE]