Does Participation in QI Affect Clinician Burnout?

Badgett RG, Duran B
Internal Medicine, KU School of Medicine-Wichita

"***Quality indices, which are supposed to improve care, 'are the bane of my existence***," she says. 'Many times those numbers reflect not what my patients or I perceive as quality of care, but simply what managers are able to extract from the health record system.' "

Gunderman R. NEJM Catalyst. Jan 10, 2107

"the E.M.R. has become the convenient vehicle to channel every quandary in health care. New state regulation? Add a required field in the E.M.R. New insurance requirement? Add two fields. ***New quality-control initiative? Add six***."

Ofri, D. NY Times. Nov 14, 2017

Background

Burnout among healthcare professionals is a threat to both workforce and patient well-being. Based on Spreitzer's Integrative Model of Human Growth at Work, execution of quality improvement (QI) projects could be posited to reduce burnout if the workforce gains control over a dysfunctional worksite or to increase burnout if the workforce loses autonomy.

This meta-analysis explores the link between workforce participation in the design of QI or practice redesign initiatives and impact on levels of burnout.

Methods

We meta-analyzed studies published through January 2019 that executed QI projects, measured burnout, and had either concurrent or historical controls.

Results

Six controlled studies with 6842 healthcare professionals were included (Figure 1). 66% of professionals were in the VA PACT study. One study, the Healthy Work Place (HWP) trial, was randomized. All interventions included components of workflow improvement. Meta-analysis showed no overall effect on burnout (odds ratio: 0.95; 95% CI 0.74 to 1.23); however, heterogeneity was substantial (I2=72%). Details in Figure 2.

Whether healthcare professionals had local control over project design significantly modulated the results: studies granting local control tended to reduce burnout (odds ratio 0.77; 95% CI 0.57 to 1.03; I2=44%) whereas studies not clearly granting local control tended to increase burnout (odds ratio 1.29; 95% CI 0.91 to 1.81; I2=80%).

Conclusion

There is substantial heterogeneity in the impact of practice transformation and QI initiatives on workforce burnout.

Burnout can be avoided, and likely reduced by both workforce involvement in implementation decisions and also addressing workflow.

These findings are consistent with Spreitzer's Integrative Model of Human Growth at Work.

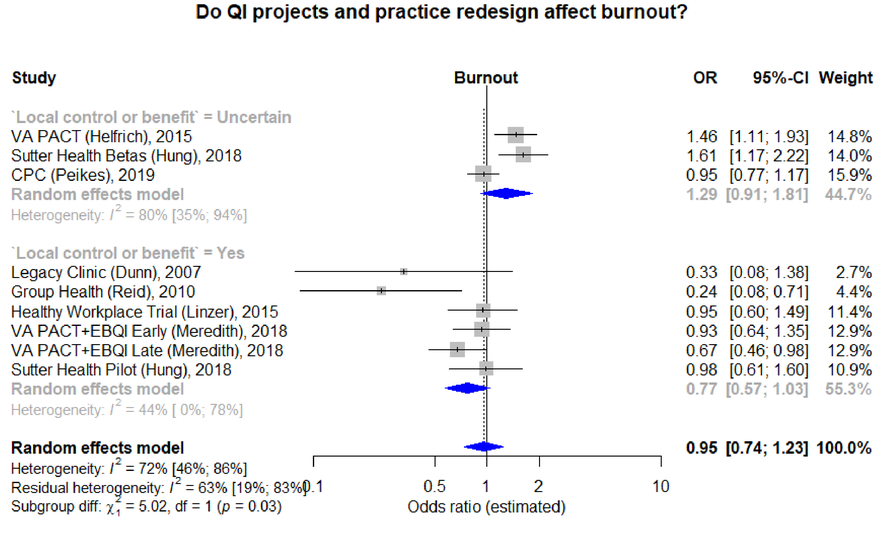
Limitations include observation study designs and lack of details and objective scale to determine local control of projects.

Figure 1. PICO Table of included studies

Trial	Patients	Intervention	Comparison	Outcome
Legacy Clinic (Dunn) 2007 J Gen Intern Med PMID: 17891503	22 to 32 physicians in a single primary care group	Practice redesign: "Data-guided interventions to enhance physician and organizational well-being were built on physician control over the work environment, order in the clinical setting, and clinical meaning"	Before-after study	Primary: • Maslach 22-item burnout inventory
Group Health (Reid), 2010 Health Affairs PMID: 20439869	48 primary care staff in a pilot site chosen because of "stable workforce, strong leadership, and history of successful quality improvement"	Practice redesign. Scope: • Practice redesign Local control over developmental decisions: • Yes Improvement in clinical efficiency and/or workload: • Yes	Usual care with contemporary control	Primary: • Maslach emotional exhaustion scale
Healthy Workplace Trial (Linzer) 2015 J Gen Intern Med PMID 25724571	Primary care clinicians at 34 clinics in the upper Midwest and New York City	QI Projects to "improve worklife and clinician outcomes"	Usual care with randomized, contemporary control	Primary: • Mini Z
VA PACT (Helfrich) 2015 PMID 24715396	4,539 VA primary care personnel from 588 VA primary care clinics	Practice redesign: Patient Aligned Care Teams (PACT)	Before-after study	Primary: • Maslach
VA PACT (Meredith) 2018 PMID 30170541	356 primary care employees (107 primary care providers and 249 staff) from 23 primary care practices (6 intervention and 17 comparison) within Desert Pacific Veterans Health Administration region	Practice redesign: Patient Aligned Care Teams (PACT). Six of 26 approved EBQI innovations directly addressed provider and staff morale	Before-after study	Primary: • Maslach
Sutter Health (Hung) 2018 PMID 29636052	46 primary care departments in a large ambulatory care delivery system	Practice redesign: Lean-based rede-signs beginning in the area of primary care. At the pilot sites, personnel were "deeply engaged in the design of new work flow".	Before-after study	Primary: • Maslach
Comprehensive Primary Care (CPC) initiative (Peikes). (CMS) 2019 J Gen Intern Med PMID 30019124 NCT02320591	495 primary care practices	Practice redesign with uncertain control by front line. "CPC required participating practices to implement five primary care functions—access and continuity, planned care for chronic conditions and preventive care, risk-stratified care management, patient and caregiver engagement, and coordination of care with patients' other care providers—supported by enhanced payment, continuous improvement driven by data, and optimal use of health information technology"	902 primary care practices as contemporary controls	Primary: • Mini Z

This is a living meta-analysis online at https://openMetaAnalysis.github.io/Burnout-and-quality-improvement

Figure 2. Forest plot of results



Conclusions

- QI projects, as currently implemented, may *worsen* burnout
- Paradoxically, if executed with principles of empowerment or targeting front-line worklife, may *improve* front-line well-being.
- The Sutter Clinic experience exemplifies this, "*higher levels of empowerment and engagement, as observed in the pilot clinic, may be particularly effective*". Note the difference in results between the Sutter pilot and subsequent Sutter beta sites

References

1. CPC (Peikes). J Gen Intern Med. 2019 PMID: 30019124
2. Healthy Work Place (HWP) Study (Linzer). J Gen Intern Med. 2015 PMID: 25724571
3. Group Health (Reid). Health Aff(Millwood). 2010 PMID: 20439869
4. Legacy Clinic (Dunn). J Gen Intern Med. 2007 PMID: 17891503
5. Sutter Health (Hung). BMC Health Serv Res. 2018 PMID: 29636052
6. VA PACT (Helfrich). J Gen Intern Med. 2014 PMID: 24715396
7. VA PACT (Meredith). BMC Fam Pract. 2018 PMID: 30170541