Happier, But at Risk for Burnout: The Complex Effects of Medical Home Transformation on Safety Net Clinical Staff

Lewis SE, Nocon RS, Tang H, et al. Patient-centered medical home characteristics and staff morale in safety net clinics. Arch Intern Med 2012;172:23–31.

Study Overview

Objective. To evaluate whether perceived patient-centered medical home (PCMH) characteristics affect the morale, job satisfaction, and burnout of staff at safety net clinics.

Design. Analysis of a self-administered survey.

Setting and participants. 391 health care providers and 382 clinical staff in 65 safety net clinics across 5 states (CO, ID, MA, OR, and PA). The initial survey included a $10 incentive, and nonresponders received 2 reminders. A total of 603 surveys (78%) were completed, with similar provider/staff response rates. Nonresponders included city-based and Massachusetts clinics disproportionally. Half the respondents were based in city clinics, and most were non-Hispanic white and female.

Survey. Five subscales measured respondents' perceptions of 5 PCMH traits at their practice: care management, tracking data, quality improvement, communication with patients/access to care, and communication with other providers. PCMH score calculations excluded the "other providers" question because of irrelevance to staff. The PCMH subscale scores were averaged to create a total PCMH score. Questions were created by the researchers or adapted from health provider and PCMH evaluation surveys and were adjusted to a scale of 0 to 100 from the Likert 5-point scale, so that a 3 on the Likert scale equals 50 points.

There were 3 questions associated with morale, job satisfaction, and burnout (MSB), measured at the individual level. All had Likert-type scales with a 5-response range. Morale ("Rate staff morale in your clinic") was measured from poor to excellent; satisfaction ("Overall I am satisfied with my current job") ranged from strongly disagree to strongly agree, and Burnout ("Using your own definition of 'burnout,' please check one") varied from "…[having] no symptoms of burnout" to "...completely burned out." The survey also asked about work environment, provider or nursing shortages in the clinic, presence of an electronic medical record (EMR), and years since completion of clinical training.

The researchers used univariate and multivariate generalized estimating equation models to determine

It's flu season.
Which one's the culprit?

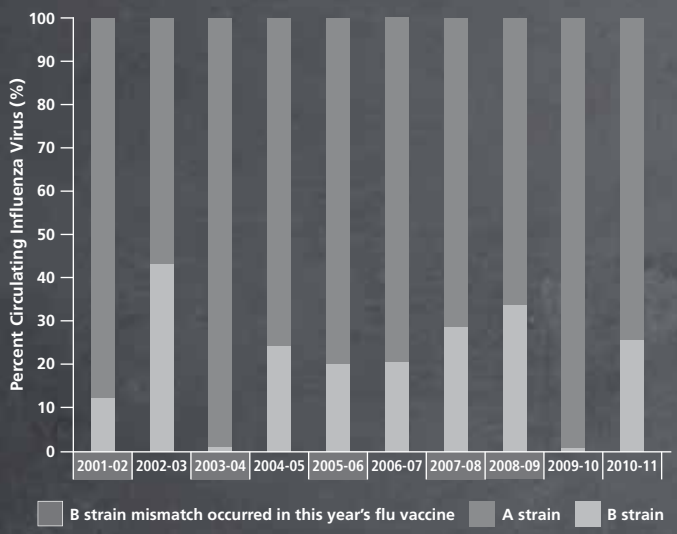
DATA INDICATE IT MAY BE THE B STRAIN

Many of your members may be vaccinated against influenza, yet still may not be protected against all circulating strains this coming season. Why? There are different strains of influenza—A strains and B strains. Protecting against influenza depends, in part, on predicting the circulating strains each season, and then ensuring the vaccination covers those strains.[1]

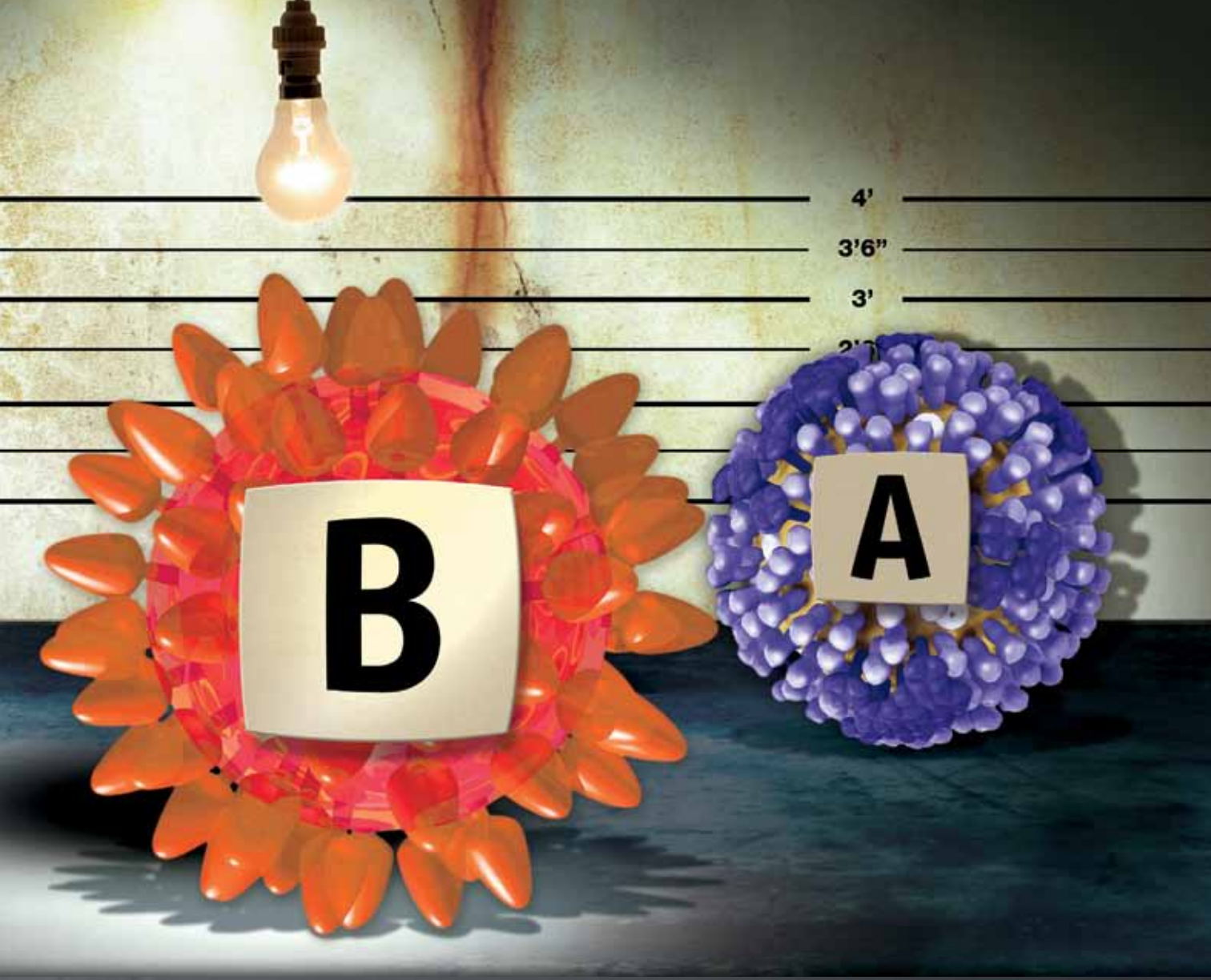
Influenza B causes flu morbidity every season, yet predicting the dominant circulating B strain is not an exact science. Current flu vaccines protect against two A strains, and one of the two B strain lineages.[2]

In 5 out of 10 influenza seasons (2001-2011), the predominant circulating B strain was different from the one included in the influenza vaccine.[3] When the incorrect B strain is predicted in an annual vaccine, the mismatch can leave a portion of your membership unprotected.

Influenza B Strain Prevalence Is Variable[3]



References: 1. World Health Organization. Influenza (Seasonal) Fact Sheet No 211, April 2009. http://www.who.int/mediacentre/factsheets/fs211/en/#. Accessed January 4, 2012. **2.** Centers for Disease Control and Prevention. Seasonal Influenza (Flu). 2011-2012 Influenza Vaccine Information. http://www.cdc.gov/flu/flu_vaccine_updates.htm. Accessed January 4, 2012. **3.** Centers for Disease Control and Prevention. Seasonal Influenza (Flu). Past Weekly Surveillance Reports. http://www.cdc.gov/flu/weekly/pastreports.htm. Accessed January 4, 2012. **4.** Thompson WW, Shay DK, Weintraub E, et al. Influenza-associated hospitalizations in the United States. *JAMA*. 2004;292(11):1333-1340. **5.** Molinari NA, Ortega-Sanchez IR, Messonnier ML, et al. The annual impact of seasonal influenza in the US: measuring disease burden and



VACCINATED, YET NOT OPTIMALLY PROTECTED

What does this mean for your health plan?

- In seasons where mismatched circulating B strains predominate, your vaccinated members may be more susceptible to influenza illness

ESTIMATED ANNUAL IMPACT OF INFLUENZA A AND B

- 200,000 hospitalizations[4]*
- 31 million outpatient visits[5†]
- 44 million lost working days[5†]
- 38 million lost school days in one year[6‡]

*Based on 2003 population demographics.
†Estimated annual average based on data from influenza seasons from 1979-1980 through 2000-2001.
‡Estimated figure pertains to 1996 only.

POTENTIAL IMPACT OF PROTECTION

Protecting against both influenza B strain lineages avoids the challenge of predicting which one will predominate in upcoming influenza seasons. In fact, a recent CDC model[§] estimated that protecting against both B strains may have helped avoid 2.7 million cases of influenza illness over ten flu seasons.[7]

§The model used in the analysis is dependent on variables such as overall burden of influenza, annual vaccine capacity and coverage, and proportion of influenza burden due to circulating B strains.

costs. *Vaccine*. 2007;25:5086-5096. **6.** Adams PF, Hendershot GE, Marano MA. Current estimates from the National Health Interview Survey, 1996. *Vital Health Stat 10*. 1999;(200):1-203. **7.** Reed C, Meltzer MI, Finelli L, Fiore A. Public health impact of including two lineages of influenza B in a quadrivalent seasonal influenza vaccine. [Published online ahead of print January 4, 2012.] *Vaccine*. (2012),doi:10.1016/j.vaccine.2011.12.098.

MedImmune
GAITHERSBURG, MD 20878

the relationship between the binary MSB outcome variables and the PCMH subscale scores, controlling for clustering at the clinic level. They accounted for respondent type (provider vs. staff), the PCMH subscale, and the total PCMH scores.

Main results. The mean total PCMH score of the practices was 64 (SD = 7) on a scale of 0–100, with all the individual subscales averaging to between 61 (SD = 8) and 66 (SD = 10). The 22-item PCMH score had a high overall Cronbach's α of 0.87, with most of the subscales also having high scores (communication with other providers = 0.78, care management = 0.82, quality improvement = 0.80). However, access to care (α = 0.48) and tracking data (α = 0.56) had lower α scores.

Given the novel use of these staff experience measures, the researchers measured the survey response distribution and inter-relationship of subscale components. Overall, morale had a normal distribution of responses (32.8% ranking morale as good), and job satisfaction and burnout were primarily positive (53.7% and 49.5%, respectively, selected the second most positive response). The individual components of MSB correlated moderately with each other, ranging from $r = 0.32$ for morale and burnout and $r = 0.48$ for morale and job satisfaction (both $P < 0.001$).

Univariate analysis found that access to care and communication with patients had a significant association with morale for both providers (OR = 1.77, $P < 0.01$) and staff (OR = 2.23, $P < 0.001$). The same was seen for satisfaction (provider OR = 1.59, $P < 0.001$; staff OR = 1.54, $P < 0.001$). Overall, univariate correlates of the total PCMH score found positive association with increased morale for providers (2.03, $P < 0.01$) and staff (2.37, $P < 0.001$); increased provider and staff job satisfaction (1.32 and 1.28 respectively, not significant); and reduced freedom from burnout (0.91 and 0.93 respectively, not significant).

In multivariate models, the PCMH quality improvement subscale was positively linked (for both providers and staff) to higher morale (OR = 2.64 and 3.62) and satisfaction (2.45 and 2.55) and reduced burnout for staff (2.32). The quality improvement subscale also correlated highly with work environment ($r = 0.78$, $P < 0.001$). This was correlated with the overall PCMH score ($r = 0.59$, $P < 0.001$). Indeed, including work environment in analyses caused MSB associations with PCMH subscales to decrease significantly, with the exception of the access to care/patient communication subscale (staff morale OR went from 2.07 to 1.78,) and the quality improvement subscale (staff burnout OR from 2.32 to 2.50). The work environment α was also high (0.85).

Conclusion. The authors found that transformation toward the PCMH model is associated with higher provider and staff morale and job satisfaction, although it also was linked with more frequent burnout. PCMH characteristics, particularly the quality improvement subscale, were tightly linked to the reported work environment and correlated with improved morale, satisfaction, and burnout markers.

Commentary

It is no secret that the health care delivery system in the United States is in need of rigorous change in order to recruit and maintain the primary care providers (PCPs) needed so that patients can receive consistent, proactive, and lower-cost care. The PCP shortage has many roots, including lower income compared with specialties, high work stress levels due to high demand and finite time, and the interrelatedness of these 2 factors [1,2]. Current medical education also tends to emphasize and reify specialization, and medical school debt further encourages a specialist path [1,3].

One popular proposed solution is the PCMH, a revamped model of primary care delivery. Two key components of the PCMH model are team-based care ideally coupled with payment reform. It is widely hoped that the PCMH will renew interest in primary care through improved but still developing payment methods and better allocation of the distributed teams' roles [4].

A recent study found 26 active PCMH multisite demonstrations with external payment reform, including almost 14,000 physicians and over 5 million patients [5]; the number has likely increased significantly even as some of the pilots have ended. Indeed, the Patient-Centered Primary Care Collaborative website listed 27 active multi-stakeholder pilots (comprising over 17,000 physicians) in 18 states as of January 2011 [6]. However, none of these pilots was long term, and few reports published so far have measured provider or staff experience [7]. Most have been focused instead on quality, costs, and patient experience [8]. Yet provider and staff experience are essential to the sustainability of PCMH transformation as well as to the success of primary care in general [9,10].

Consequently, Lewis et al have begun to address an important gap in the evaluation of PCMH demonstrations. The researchers explored the link to PCMH features as perceived by providers and staff in safety net clinics and their self-reported morale, job satisfaction, and burnout. These results should help determine what effect transformation toward a PCMH model could have on provider/staff experience measures and, consequently, the primary care work environment. They found that a higher PCMH score was associated with better morale and job satisfaction but also additional reported burnout. Work environment and PCMH characteristics were tightly linked (particularly the quality improvement subscale), suggesting that one may facilitate the other.

While the positive and negative effects of PCMH on MSB are important to understand, it is worth noting that the survey was disseminated in the first year of PCMH transformation. Because their question is about *perceived* PCMH features, the timing of the survey in the transformation timeline is crucial. Indeed, the authors suggest that relatively few PCMH effects were likely seen during this early phase though staff were planning and undergoing a lot of change. Practice transformation is an ongoing, inexact process; it would not be surprising if during a somewhat tumultuous restructuring process, burnout increases from extra responsibilities and stresses on providers and staff—negative influences that may or may not dissipate after the further transformation.

The American Academy of Family Physicians' National Medical Home Demonstration Project, which followed 2 randomized groups of practices undergoing either facilitated or nonfacilitated PCMH transformation from June 2006 to May 2008, found that "change fatigue" is a real risk during the early, high-pressure transformation period, and can manifest itself not only as burnout but also as passive or active conflict and/or resistance [11]. This project also described an important concept called "adaptive reserve," which is a clinic's internal capacity for evolution and organizational learning, which reflects how it handles such fatigue [12]. Many of the features of adaptive reserve (quality of leadership, healthy relationships, good communication) align with those of the Work Environment covariate in Lewis et al's study (leadership creates enjoyable, productive environment, teamwork between people at clinic, candid communication between staff and physicians) [11]. Importantly, the project investigators also observed that the realization of a shared and tangible goal helped renew energy and purpose, which could promote higher morale and job satisfaction scores [12].

In addition to concerns around the early timing of the survey, other limitations exist. It is important to note the distribution of the burnout score. Less than 10% of respondents reported high burnout scores, and over 60% reported none or only occasional stress but not burnout. So the findings as couched by the researchers of "decreased freedom from burnout" are notable only for the minority of staff respondents who reported mostly, occasional, or 1 symptom. This finding is important but should not overshadow the larger implications of the study.

In addition, the study is not able to prove causation between the identified correlates; for example, it remains unclear if work environment influences PCMH characteristics or the other way around. Further, the study focused on perceived characteristics and not objective criteria or official PCMH recognition standards (ie, National Center for Quality Assurance), and there may have been response bias even among the high level of respondents. Lastly, because the sample was collected from a pre-selected group of qualified clinics pre-linked with Regional Coordinating Centers, the results might not be generalizable to all safety net clinics.

Lewis et al should be applauded for helping to spearhead the consideration of providers and staff experiences within PCMH transformation. Practice transformation involves wholesale re-imagination of fundamental job roles, work flows, and provider identity; analyses like these are essential to identifying how they are changing and over what timeline. Despite issues regarding generalizability, the authors should also be recognized for focusing on safety net practices, which can serve to gain some of the strongest benefits from PCMH and may also have the best team-based infrastructure for transformation. Furthermore, the survey the investigators created to determine PCMH scores had generally high Cronbach's αs, suggesting that it is for the most part a viable staff experience evaluation tool moving forward. Replicating this survey at the current sites in the future, and other sites nationally would likely be beneficial: Once the dust of change has settled around a new PCMH model, providers and staff may give different—and likely more accurate—results regarding MSB.

Applications for Clinical Practice

The results of this study suggest that staff and providers in safety net clinics have increased morale and job satisfaction linked with perceived PCMH characteristics, suggesting that the PCMH model may be able to help rejuvenate the field of primary care. However, there was a slightly higher sense of burnout in this early stage of transformation, which suggests that change fatigue needs to be monitored closely as transformation progresses. Utilizing this survey iteratively over time in PCMH transformations will help to identify whether providers and staff see improvements to their morale, job satisfaction, and burnout measures and determine which features of change are most challenging. By naming these difficulties and addressing them head-on, implementers can positively alter the future of medical home construction in the primary care landscape.

—Lydia Flier, BS, and Asaf Bitton, MD, MPH

References

1. Bodenheimer T, Grumbach K, Berenson RA. A lifeline for primary care. N Engl J Med 2009;360:2693–6.
2. Sandy LG, Bodenheimer T, Pawlson LG, Starfield B. The political economy of U.S. primary care. Health Aff (Millwood) 2009;28:1136–45.
3. Bodenheimer T, Berenson RA, Rudolf P. The primary care-specialty income gap: why it matters. Ann Intern Med 2007;146:301–6.
4. Fisher ES. Building a medical neighborhood for the medical home. N Engl J Med 2008;359:1202–5.
5. Bitton A, Martin C, Landon BE. A nationwide survey of patient centered medical home demonstration projects. J Gen Intern Med 2010;25:584–92.
6. Patient Centered Primary Care Collaborative. Accessed 25 Jan 2012 at www.pcpcc.net/pcpcc-pilot-projects.
7. Reid RJ, Coleman K, Johnson EA, et al. The group health medical home at year two: cost savings, higher patient satisfaction, and less burnout for providers. Health Aff (Millwood) 2010;29:835.
8. Jaen CR, Ferrer RL, Miller WL, et al. Patient outcomes at 26 months in the patient-centered medical home National Demonstration Project. Ann Fam Med 2010;8 Suppl 1:S57–67; S92.
9. Nutting PA, Crabtree BF, Miller WL, et al. Journey to the patient-centered medical home: a qualitative analysis of the experiences of practices in the National Demonstration Project. Ann Fam Med 2010;8 Suppl 1:S45–56; S92.
10. Friedberg MW. The potential impact of the medical home on job satisfaction in primary care: comment on "patient-centered medical home characteristics and staff morale in safety net clinics". Arch Intern Med 2012;172:31–2.
11. Nutting PA, Crabtree BF, Miller WL, et al. Transforming physician practices to patient-centered medical homes: lessons from the national demonstration project. Health Aff (Millwood) 2011;30:439–45.
12. Nutting PA, Miller WL, Crabtree BF, et al. Initial lessons from the first national demonstration project on practice transformation to a patient-centered medical home. Ann Fam Med 2009;7:254–60.