Tackling Disparities in Influenza Vaccination in Primary Care: It Takes a Team

Kevin Fiscella, MD, MPH[1,2]

[1]Departments of Family Medicine and Public Health Sciences and Center for Community Health, University of Rochester School of Medicine and Dentistry, Rochester, NY, USA; [2]Family Medicine Research Programs, University of Rochester, Rochester, NY, USA.

J Gen Intern Med 29(12):1579–81
DOI: 10.1007/s11606-014-2999-2

Suboptimal influenza vaccination rates are associated with needless cardiovascular deaths. Persistent racial and ethnic disparities in influenza vaccination likely contribute to higher cardiovascular mortality for African Americans.[1]

In this issue of *JGIM*, Maurer et al. assess the impact of missed opportunities within office practices for influenza vaccination on racial and ethnic disparities in these vaccinations.[2] The authors conclude that improved office-based practices could improve vaccine uptake and reduce disparities. Are they right?

The authors examine self-report data from a national Internet survey conducted in 2010 to assess this question. They find that eliminating missed opportunities would reduce racial and ethnic disparities in influenza vaccination rates. Specifically, vaccination of all patients who have had at least one health care visit and who express a willingness to be vaccinated, if the provider has recommended it, would reduce disparities by half. After decades of modest progress, a 50 % reduction in disparities in influenza vaccination would have a significant population-wide impact on influenza complications and deaths for minority patients.

The authors appropriately acknowledge caveats that should accompany their findings. Internet surveys omit those with lower web access, including those with lower education and limited health literacy. Whether persons missed by the authors' survey method would respond similarly is not clear. Nonetheless, the authors' overall estimates of vaccination by race and ethnicity approximate those from non-Internet national surveys from the same years. Another caveat is that patient reports of how they would respond to a hypothetical scenario may not necessarily reflect how they actually behave. Finally, the study did not account for the number of office visits, only whether the person reported at least one visit. However, the number of primary care visits has only modest effects on disparities in influenza vaccinations.[3] In short, the authors' estimate might be in the ball park. Assuming the estimate is reasonable, can primary care deliver?

To address this question, it is worth noting key barriers and facilitators to influenza vaccination among minority patients. As the authors note, primary care represents a key source for obtaining these immunizations for members of many minority groups. Disparities in influenza vaccination reflect sequential and nested barriers at the community, provider, and patient levels. Community barriers include access to affordable insurance, availability of primary care physicians, and language access. These factors influence if, when, why, and how effectively patients are seen in primary care. Once patients are seen, vaccination rates reflect the complex interaction between the patient and primary care health care team. This interaction is shaped not only by patient attitudes, values and desires, health literacy, and culture, but also by the attitudes, priorities, and systems within primary care offices that ensure an opportunity for patient-shared decision-making surrounding influenza vaccination.

On balance, evidence suggests that patients' cultural attitudes toward influenza vaccination play some role in disparities in influenza vaccination. Racial and ethnic minorities report less favorable attitudes toward influenza vaccinations and view influenza vaccinations as relatively less important than other health care interventions.[4, 5] These differences in attitudes probably account for the finding that minority patients are less likely seek out or request influenza vaccinations[6] or schedule visits for the sole purpose of obtaining them.[4] Such differences in proactive patient behavior represent an important mechanism for generating health care disparities. Patients' requests affect clinicians' behavior. Clinicians respond to patient requests for tests, referrals, prescriptions, and preventive services.[7] Few clinicians will fail to administer an influenza vaccination when the patient requests it, particularly when getting a vaccination is the sole purpose of the patient's visit. However, when confronted with multiple competing evidence-based interventions during busy patient visits, primary care physicians tend to neglect influenza vaccinations.[8] This omission likely reflects patient and clinician priorities that compete for time for discussion and decision-making.

Skeptical patient attitudes do not mean that patients will invariably refuse a vaccination. Some patients will adamantly refuse, but many may reconsider following an informed discussion and shared decision-making with a knowledgeable member of the care team. This is key point. Failing to explore a patient's concerns and beliefs regarding influenza

Published online August 16, 2014

vaccinations represents a missed opportunity. As the findings of Maurer et al. suggest, a clear recommendation from the clinician, and potentially from a trusted delegate, is associated with increased rates of acceptance of influenza vaccination. Moreover, in one study, a standardized recommendation for influenza vaccination eliminated disparities in vaccination rates.[9] Thus, while cultural differences in attitudes and beliefs about influenza vaccination probably contribute to vaccination disparities, patient attitudes and beliefs are often mutable. Primary care clinicians and their teams represent a trusted source for information and recommendations for their patients—but primary care clinicians cannot do it alone. Primary care has become too busy and complex for a go-it-alone approach.

The findings of Maurer et al. do not suggest a silver bullet for the conundrum of disparities in influenza vacation. They do however suggest an opportunity for primary care clinicians to make a difference. This requires a team approach. The science of teamwork provides guidance.

First, improving disparities in influenza vaccination requires leadership and commitment from primary care clinicians. This means establishing improved vaccination rates for minority patients as a shared goal among all staff. This also entails adopting organized systems for improving rates of vaccination involving all members of the practice.[10] Such an approach is particularly helpful for patients who do not come to their office visits requesting influenza vaccinations. Designating one staff member to champion planning for an influenza campaign and producing written reports of practice performance predicted an 8 % higher rate of vaccination among at-risk primary care patients.[11] Holding regular staff meetings that include progress reports provides a forum to discuss changes in strategies. Ensuring that the race and ethnicity of practice staff members are similar to those of patients in the practice can help address cultural barriers.

Second, it means using alerts, now commonly embedded with the electronic health record, to remind clinicians and staff which patients have not yet been vaccinated. When used, electronic alerts improve influenza vaccination rates.[12] However, alerts as a stand-alone intervention have limited benefit. Optimally, alerts should be coupled to standing orders. When standing orders are linked to additional strategies such as alerts, they improve influenza vaccination rates by 16 %. Standing orders delegate the discussion of risks and benefits to staff, freeing up limited clinician time. Coupling alerts and standing orders minimizes "alert fatigue"—overwhelming clinicians with too many electronic alerts. Standing orders are widely underused in primary care. Only 42 % of primary care physicians report consistent use of standing orders for influenza vaccinations.[13] The reasons for low rates are not clear, but may reflect clinicians' reluctance to adopt a team approach to vaccination and delegate key tasks to their staff. When standing orders are not feasible because of staff qualifications and/or state laws, an alternative is to pre-order vaccinations or at minimum flag patients for influenza vaccinations during 5-10-min pre-session huddles with the care team. Identifying eligible patients during pre-session huddles involves the entire team in the process. Establishing a 5-min post-session debriefing provides an opportunity for the clinician and staff to reflect together on missed opportunities for evidence-based interventions, including vaccinations, and devise strategies for improvement. A key unproven assumption behind huddles and debriefings is that the additional time devoted to them is offset by improved efficiency through task delegation and teamwork. If conducted efficiently, they provide the hope for improving preventive care without crowding out key patient and clinician visit priorities.

Third, outreach to patients can improve rates and reduce disparities. Outreach is also underutilized. Only about one in four physicians in a survey conducted by Maurer et al. reported sending out reminders to patients regarding influenza vaccination. For younger patients who have consented, text messaging can prove cost-effective.[14] When outreach is coupled to other interventions, the effect can be dramatic. A randomized trial of patient tracking, recall, outreach, and use of clinician prompts *tripled* rates of influenza vaccination among elderly, largely African American patients within inner-city primary practices.[15] Major improvement of influenza vaccination rates among minority patients is possible. With an impending shift toward value-based payments, such as pay for performance and monthly per-patient payments, use of effective interventions, including team-based strategies for improving vaccinations rates, becomes more economically feasible.

Last, the emergence of accountable care organizations creates opportunities for better integration of primary care and public health. Community-based approaches including local campaigns relevant to minority communities that encourage proactive behavior by patients, i.e., to request influenza shots from their clinician, in addition to the provision of influenza vaccinations within schools, work places, and churches, can also help reduce disparities. In some instances, these services might be provided through contracts with primary care practices and their staff.

In conclusion, there is no question that primary care clinicians can improve influenza vaccination rates among minority patients. Doing so requires leadership from primary care clinicians, a practice-wide commitment to improving rates, organized team-based approaches, and use of data and team discussion to guide improvement efforts.

Acknowledgments: *Supported by funding through AHRQ K18 HS022440-01*

Corresponding Author: *Kevin Fiscella, MD, MPH; Family Medicine Research Programs, University of Rochester, 1381 South Avenue, Rochester, NY 14620, USA (e-mail: Kevin_fiscella@urmc.rochester.edu).*

REFERENCES

1. **Fiscella K, Dressler R, Meldrum S, Holt K.** Impact of influenza vaccination disparities on elderly mortality in the United States. Prev Med. 2007;45:83–87.
2. **Maurer JH, Katherine M.; Uscher-Pines, Lori.** Can routine offering of influenza vaccination in office-based settings reduce racial and ethnic disparities in adult influenza vaccination? JGIM. 2014 (SPI 2965).
3. **Fiscella K, Holt K.** Impact of primary care patient visits on racial and ethnic disparities in preventive care in the United States. J Am Board Family M: JABFM. 2007;20(6):587–597.
4. **Hebert PL, Frick KD, Kane RL, McBean AM.** The causes of racial and ethnic differences in influenza vaccination among elderly Medicare beneficiaries. HSR. 2005;40(2):517–537.
5. **Benjamin E.** Understanding influenza and influenza vaccination as health priorities among Black and Latino older adults using Q methodology. Paper presented at: 142nd APHA Annual Meeting and Exposition (November 15-November 19, 2014)2014.
6. **Groom HC, Zhang F, Fisher AK, Wortley PM.** Differences in adult influenza vaccine-seeking behavior: the roles of race and attitudes. J Publ Health Manag Pract. 2014;20(2):246–250. 210.1097/PHH.1090b1013e318298bd318288.
7. **Kravitz RL, Bell RA, Azari R, Kelly-Reif S, Krupat E, Thom DH.** Direct observation of requests for clinical services in office practice: what do patients want and do they get it? Arch Intern Med. 2003;163(14):1673–1681.
8. **Shires DA, Stange KC, Divine G, et al.** Prioritization of evidence-based preventive health services during periodic health examinations. Am J Prev Med. 2012;42(2):164–173.
9. **Schwartz KL, Neale AV, Northrup J, et al.** Racial similarities in response to standardized offer of influenza vaccination. A MetroNet study. J Gen Intern Med. 2006;21(4):346–351.
10. **Stinchfield PK.** Practice-proven interventions to increase vaccination rates and broaden the immunization season. Am J Med. 2008;121(7, Supplement 2):S11–S21.
11. **Dexter LJ, Teare MD, Dexter M, Siriwardena AN, Read RC.** Strategies to increase influenza vaccination rates: outcomes of a nationwide cross-sectional survey of UK general practice. BMJ Open. January 1, 2012 2012;2(3).
12. Task Force on Community Preventive Services. Recommendations regarding interventions to improve vaccination coverage in children, adolescents, and adults. Am J Prev Med. 2000;18(1 Supp):92–96.
13. **Zimmerman RK, Albert SM, Nowalk MP, Yonas MA, Ahmed F.** Use of standing orders for adult influenza vaccination: a national survey of primary care physicians. Am J Prev Med. 2011;40(2):144–148.
14. **Stockwell MS, Kharbanda EO, Martinez RA, Vargas CY, Vawdrey DK, Camargo S.** Effect of a text messaging intervention on influenza vaccination in an urban, low-income pediatric and adolescent population: a randomized controlled trial. JAMA. 2012;307(16):1702–1708.
15. **Humiston SG, Bennett NM, Long C, et al.** Increasing inner-city adult influenza vaccination rates: a randomized controlled trial. Public Health Rep. 2011;126(Suppl 2):39–47.