BACKGROUND
Influenza (flu) vaccination among health workers supports many of the Institute of Medicine’s (IOM’s) six dimensions of performance (i.e., safe, effective, patient-centered, timely, efficient, equitable).

**IOM Safety:** not getting vaccinated for flu puts students/patients, staff, and the Princeton University community at risk for infection. From the 1976-77 through the 2005-06 seasons, estimated flu-associated deaths averaged 23,607 annually [1].

**IOM Efficiency:** Flu outbreaks can result in staff absences, disrupt health services and increase healthcare costs [2-3]. Flu vaccination can prevent influenza-related illness and work absence among healthcare personnel [4], making it an efficient and cost-effective method toward improving our organizational health and quality of care for students and staff, alike.

**IOM Effectiveness:** Estimates of vaccine effectiveness (i.e., prevention of illness in vaccinated populations) depend on many factors, including the age, immuno-competence of the recipient, the degree of similarity between the viruses in the vaccine and those in circulation, and timing of vaccination [6]. However, the collective evidence does support that vaccination is the most effective way to prevent flu infection among healthcare professionals [2-4].

Many healthcare personnel (HCP) are not vaccinated each year despite vaccination being a “best-practice” in preventing health-care associated influenza [6]. To deliver high-quality care in a cost-effective manner, we sought to understand and address barriers to influenza vaccine uptake within a university-based healthcare setting.

OBJECTIVE
The objective of this quality improvement study was to achieve the Healthy People 2020 performance goal for 90% flu vaccine uptake among our HCP.

METHODS
We measured flu vaccination coverage among staff by using a self-report questionnaire as our primary outcome measure throughout the study. The questionnaire ranged from 5-27 items because it was adapted for multiple settings (e.g., inpatient, outpatient, and community) [6].

The following are sample items from our questionnaire:

1. Did you get vaccinated for flu this past year?
2. If yes, what was the main reason for you to receive the flu vaccine in this past year?
3. If you answered “No” to question 1, what was the main reason for you not to receive the flu vaccine in this past year?
4. If you answered “No” to question 1, what do you think we can do to help you get vaccinated for the upcoming flu season?
5. Did you have the flu or flu-like illness over the past year?

BASELINE RESULTS
Before the QI-study, only 67.9% of staff were vaccinated during the 2013–2014 flu-season.

Figure 1 indicates that most of the unvaccinated staff were misinformed and afraid of getting sick from the flu shot (45.3%).

STUDY CYCLE Continued:
D. Impact of flu vaccine effectiveness on staff.

There was a lower incidence of flu or flu-like symptoms reported over the two year QI-study period (14.5%) relative to baseline (19% pre-study).

Only 6% of staff noted they may not get flu-vaccination next season.

ACT CYCLE:
The overall flu vaccination rates increased to 93.1% which is above the National Healthy People 2020 performance goal of 90%.

We achieved this performance goal within our second PDSA cycle because of further improvements noted in the student care setting. PDSA Cycle 1 (2014-2015) = 67% vs. PDSA Cycle 2 (2015-2016) = 93% vaccination uptake.

Because we have reached our performance goal after a second cycle, there are no new interventions/changes that will be introduced.

We will replicate our QI-efforts in subsequent flu seasons, and engage in quality assurance methods to assess vaccine uptake rates at the end of each flu season.

We will adopt influenza vaccination uptake among our staff as one of our organization’s Whole System Quality Indicators. This data will be reported to our Quality Improvement Committee.

CONCLUSIONS
• The Healthy People 2020 performance goal can be achieved through concurrent, multifaceted QI-strategies including education, staff-outreach, and increased accessibility.

• We were able to reach the Healthy People 2020 objective of a 90% HCP vaccination rate without having to entertain a mandatory influenza vaccination Policy.

• This study demonstrates the importance of intentional efforts to engage HCP over time towards understanding their role in influenza prevention, and to provide convenient opportunities for vaccination. Such efforts are of special importance for healthcare professionals who assess and treat students in a residentially-based university setting.

REFERENCES