Table. Nursing home characteristics associated with invasive MRSA rates, Emerging Infections Program, 2011–2015

Proportion of residents with characteristic	Referent Level for rate ratio	Adjusted Rate Ratio	95% Confidence Interval
Ventilator dependence[1]	Any vs. none	1.17	1.01–1.35
Cerebral palsy[2]	Any vs. none	1.14	1.05–1.25
Multi-drug resistant organism infection[2]	Any vs. none	1.13	1.04–1.24
Viral hepatitis[2]	Any vs. none	1.12	1.01–1.23
Brain injury[2]	Any vs. none	1.1	1.01–1.21
Stay less than 30 days	10% increase	1.09	1.04–1.14
Any vascular ulcer, foot infection/lesion[3]	Quartile increase	1.09	1.05–1.14
Surgical wound[3]	Quartile increase	1.08	1.03–1.13
Ostomy[3]	Quartile increase	1.07	1.03–1.11
Dialysis[1]	Tertile increase	1.07	1.01–1.14
Multiple sclerosis[2]	Tertile increase	1.06	1.02–1.10
Receipt of antibiotics[1]	Quartile increase	1.06	1.01–1.11
African American race	10% increase	1.05	1.02–1.08
Excessive assistance required or total dependence for bed mobility	10% increase	1.05	1.01–1.08
Excessive assistance required or total dependence for walking in the corridor	10% increase	0.97	0.95–0.99
White race	10% increase	0.96	0.93–0.98
Influenza vaccination[2]	10% increase	0.96	0.94–0.99
Age > 65	10% increase	0.95	0.91–0.99
Urinary tract infection[2]	Quartile increase	0.95	0.91–0.99
Non-Alzheimer's dementia[2]	10% increase	0.95	0.92–0.98
New admission[4]	10% increase	0.92	0.88–0.95
Wound infection[2]	Any vs. none	0.9	0.83–0.98
Isolation[1]	Any vs. none	0.83	0.74–0.93

[1] Ocurred in the last 7 days
[2] Active diagnosis in the last 7 days
[3] Present at the time of assessment
[4] Versus reentry

Fig. 1.

Presentation Type:
Top Rated Posters

Enhancing Influenza Vaccination of Hospital Workers from 30% to 80% Through Application of Behavior Change Theories

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Background: Historically, influenza vaccination coverage among Norwegian healthcare workers has been low. In 2014–2015 and 2015–2016 the national averages were 9% and 12%, respectively, Although the Fig.s for Oslo University Hospital were higher (30% in 2015–2016), we were still far from the goal of 75% set by the WHO. The same year, <10% of employees at Vestre Viken Hospital Trust were vaccinated. Before the 2016–2017 influenza season, we therefore launched a campaign using methods based on behavior change theories and social marketing to enhance vaccination coverage. **Methods:** In May–June 2016 a questionnaire was sent by e-mail to all employees at Oslo University Hospital (n = ~25,000) and Vestre Viken Hospital Trust (n = 9,000). The questionnaire was structured according to the theory of planned behavior, asking questions related to attitude, subjective norms, and perceived control. The respondents were asked to grade each answer from 1 to 5, and we could then calculate a score for each question based on the proportion (%) of respondents across the 5 grades. Thus a score between 0 and 500 was possible. We then selected the questions with the highest and lowest scores for intervention, and applied stages of change principles and social marketing for implementation. In May–June 2017, the same questionnaire was sent to all employees and the procedure was repeated before the 2017–2018 influenza season. Finally, for the third time, the procedure was repeated before the 2019–2020 season. This time some additional questions were added, about which sources the employees were using for information on influenza vaccination. **Results:** In 2017–2018 vaccination coverage increased from 30% to 54%. The year after we reached 73%, and at the time of abstract submission (November 12, 2019) we have passed 80% for the 2019–2020 season, still with more vaccines to be given. Among Norwegian healthcare workers, attitudes and perceived control seemed to have a stronger impact on behavior (vaccination) than subjective norms. **Conclusions:** We were able to significantly increase voluntary influenza vaccination, reaching the WHO goal of at least 75%, by the application of behavior change theories and social marketing.