

# Vermont Asthma Control Program

## Data Brief – Immunizations And Asthma

Asthma treatment guidelines recommend that adults and children with current asthma receive an annual influenza vaccination and a pneumonia vaccination. Complications from influenza and pneumonia can be especially severe in those with asthma.

In 2010, among Vermont adults with asthma, 54% received a flu vaccination and 42% have had a pneumonia vaccination. Males and females with asthma are equally likely to have had a flu or pneumonia vaccination regardless of age. For flu vaccinations, those under 18 and over 65 have the highest rates of vaccinations (Figure 1), while for pneumonia vaccination the over 65 age group is more likely to be vaccinated than younger Vermonters (Figure 2).

Figure 1: Flu vaccination in the previous 12 months, by gender among Vermonters with asthma, 2010

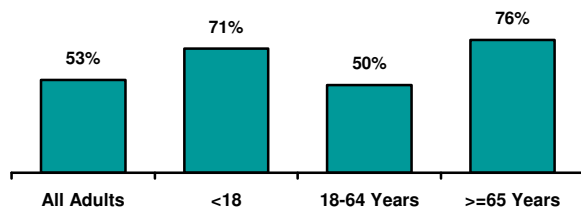
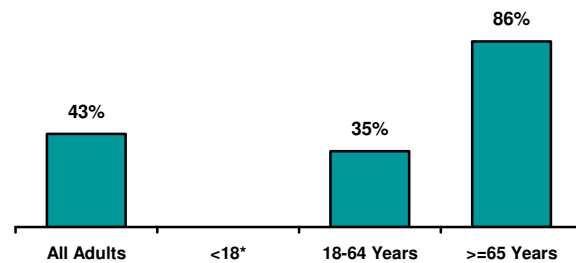


Figure 2: Pneumonia vaccination in adult Vermonters with asthma, 2010



\* Data Not Available

From 2007 to 2010, Vermont adults with asthma were significantly more likely to have received a flu vaccination than adults without asthma for every year. In 2011 less than half of those with asthma received a flu vaccination (46% with asthma vs. 40% without)\*\*.

Two out of five Vermont adults with asthma have received a pneumonia vaccination sometime in their lifetime, compared to one out of four adults without asthma. As with flu vaccinations, this has remained steady from 2007 to 2010, and those with asthma are significantly more likely to have received a vaccination. In 2011, less than half of those with asthma received a pneumonia vaccination (47% with asthma vs. 31% without).\*\*

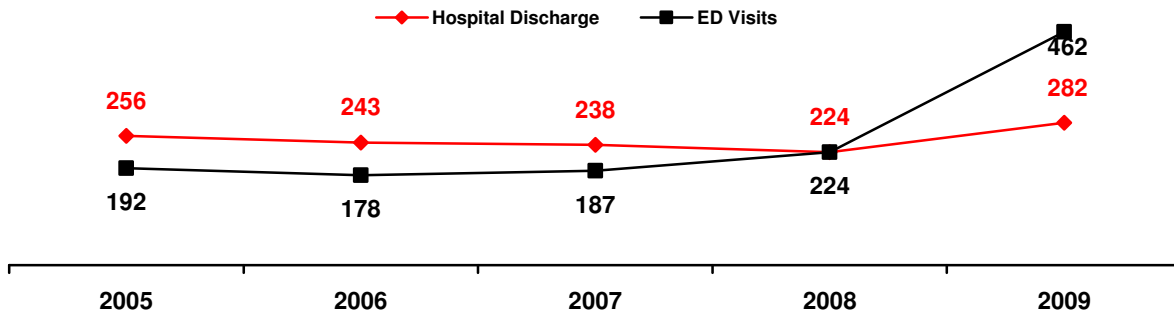
### Influenza & Pneumonia Hospitalizations and ED Visits among Vermonters with Asthma<sup>2</sup>

In 2009, the number of ED visits and hospital discharges for pneumonia and influenza with any mention of asthma as a secondary diagnosis rose significantly. Both of these numbers had been steady from 2005 through 2008 (Figure 3).

1. Vermonter Behavioral Risk Factor Surveillance System (BRFSS)
2. Vermont Uniform Hospital Discharge Data Set, 2005-2009

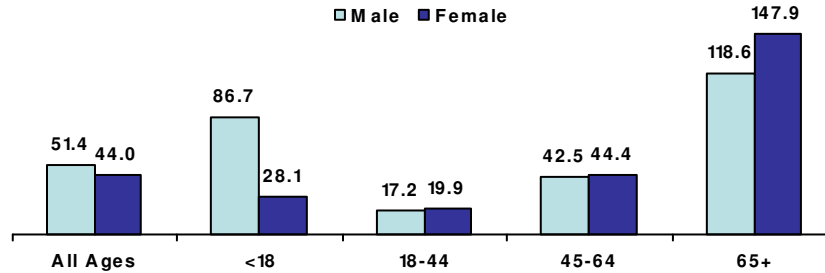
\*\* The BRFSS methodology changed in 2011 to incorporate cell phone interviews and is not part of the 2006-2010 trend.

**Figure 3: Number of ED Visits and Hospital Discharges for P&I with mention of asthma**



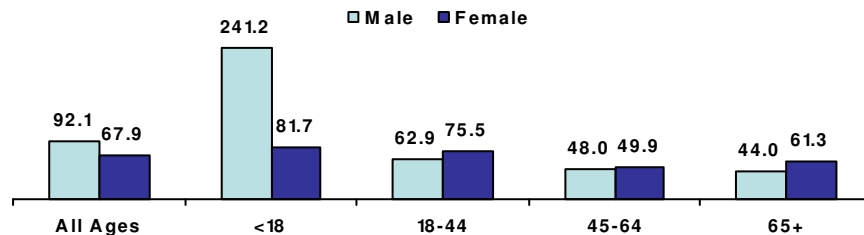
When looking at the rate of hospital discharges for 2009 by age and gender among Vermonters with asthma (figure 4), the only statistical difference is for ages less than 18. Unlike the flu vaccination rate, males show a significantly higher rate of hospital discharge than females.

**Figure 4: Hospital Discharges for P&I with mention of asthma, per 10,000 Vermonters with asthma, 2009**



ED visit rates for males with asthma also have higher rates of pneumonia and influenza diagnoses overall and for ages less than 18, with both being significantly higher than the female rate. (figure 5)

**Figure 5: ED Visits for P&I with mention of asthma, per 10,000 Vermonters with asthma**



Since 2007, there has been only one death for influenza or pneumonia with asthma listed as a secondary cause of death.<sup>3</sup>

For more information on asthma data or to suggest ideas for future asthma Data Briefs, contact Jason Roberts, M.P.H. (802-863-7303; Jason.Roberts@state.vt.us).

<sup>3</sup> Vermont Vital Statistics, 2007-2011: