As people age, the immune system weakens.\textsuperscript{i, ii} For this reason, adults 65 years of age and older do not respond as well as younger adults to influenza vaccine, leaving them more vulnerable to infection and its associated complications.\textsuperscript{iii}

**Fluzone High-Dose vaccine**, the first influenza vaccine designed specifically for people 65 years of age and older, is the only FDA-approved influenza vaccine for seniors shown in clinical trials to have **superior efficacy** compared to Fluzone vaccine, its standard-dose comparator, in preventing flu.\textsuperscript{iv, v}

Since its introduction in 2010, more than 90 million doses of Fluzone High-Dose vaccine have been distributed in the United States, and during the **2017-2018 season, about 70 percent** of adults 65 years of age and older who were vaccinated in the United States received Fluzone High-Dose vaccine. Following licensure, Fluzone High-Dose vaccine has met a number of milestones, including publication of several studies in peer-reviewed scientific journals:

**Dec. 2009:** FDA Licensure
In response to the unmet medical need in older adults, Fluzone High-Dose vaccine was licensed by the FDA in December 2009 under the agency's accelerated approval process. Licensure was based on the vaccine’s safety profile and superior immunogenicity compared to Fluzone vaccine.

**Jan. 2010:** U.S. Commercial Launch
Fluzone High-Dose vaccine was introduced in 2010 and made available to healthcare providers to vaccinate their patients in the 2010-2011 influenza season.

**Aug. 2014:** Data Publication on Safety & Efficacy
*The New England Journal of Medicine* (NEJM) published results from a large multi-center, doubleblind, post-licensure efficacy trial demonstrating the clinical benefit of Fluzone High-Dose vaccine compared to Fluzone vaccine in the prevention of influenza disease conducted over two flu seasons involving nearly 32,000 participants 65 years of age and older ("FIM12").\textsuperscript{v}

Fluzone High-Dose vaccine was found to be **24.2 percent more effective** than Fluzone vaccine, its standard dose comparator, in preventing laboratory-confirmed influenza caused by any influenza viral type or subtype in association with protocol-defined influenza-like illness, in adults 65 years of age and older. A secondary endpoint demonstrated Fluzone High-Dose vaccine was **51.1 percent more effective** than Fluzone vaccine, its standard dose comparator, against culture-confirmed influenza caused by viral strains antigenically similar to those contained in the vaccine using a modified Centers for Disease Control and Prevention (CDC) influenza-like illness definition.\textsuperscript{vi}

**Nov. 2014:** FDA Label Update
FDA approved the supplemental biologics license application for Fluzone High-Dose vaccine to include the efficacy data published in NEJM in the Prescribing Information. *Fluzone High-Dose Prescribing Information*.

**Dec. 2014:** Data Publication in Long-Term Care Population
*Journal of Infectious Diseases* published data from a University of Pittsburgh School of Medicine study evaluating Fluzone High-Dose vaccine compared to Fluzone standard dose vaccine in frail, older residents of long-term care facilities.\textsuperscript{vii}

**Aug. 2015:** Data Publication on Cardio-Respiratory Events
*Vaccine* published a sub-analysis of the efficacy data looking at serious cardiorespiratory events, all-cause hospitalizations and pneumonia, in study participants 65 years of age and older who received Fluzone High-Dose vaccine compared to Fluzone vaccine.\textsuperscript{viii}

**Sept. 2015:** Data Publication on Health Economics
*The Lancet Infectious Diseases* published a sub-analysis of the efficacy data evaluating the cost effectiveness of Fluzone High-Dose vaccine versus Fluzone vaccine in study participants 65 years of age and older.\textsuperscript{ix}

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FLUZONE® HIGH-DOSE (INFLUENZA VACCINE) FACT SHEET

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Feb. 2017: **Data Publication on Fluzone High –Dose Effectiveness**
*Journal of Infectious Diseases* published a study evaluating the rate of death after a flu admission for those who received Fluzone High-Dose compared to a standard dose influenza vaccine, across two influenza seasons.¹

July 2017: **Data Publication on Nursing Home Residents**
*The Lancet Respiratory Medicine* published data from the first randomized, controlled, prospective nursing home study to date on the comparative effectiveness of influenza vaccines, evaluating risk of respiratory and all-cause hospitalizations with Fluzone High-Dose vaccine compared to a standard-dose flu vaccine.²

Feb. 2018: **Data Publication High-Dose Efficacy in Veterans Health Administration patients**
*The Journal of Infectious Diseases* published effectiveness data from a retrospective observational study of Veterans Health Administration (VHA) patients. The study evaluated influenza- and pneumonia-associated hospitalizations in VHA patients 65 years of age or older in the 2015-2016 influenza season who received Fluzone High-Dose vaccine compared to standard-dose vaccine.

### ABOUT FLUZONE HIGH-DOSE VACCINE

#### IMPORTANT SAFETY INFORMATION

Fluzone High-Dose vaccine should not be given to anyone who has had a severe allergic reaction (eg, anaphylaxis) to any vaccine component, including eggs, egg products, or to a previous dose of any influenza vaccine.

Tell your doctor if you have ever experienced Guillain-Barré syndrome (severe muscle weakness) after a previous dose of influenza vaccine. If you notice any other problems or symptoms following vaccination, please contact your health care professional immediately.

The most common side effects to Fluzone High-Dose vaccine include pain, swelling, and redness at the injection site; muscle aches, fatigue, and headache. Other side effects may occur. Vaccination with Fluzone High-Dose vaccine may not protect all individuals.

#### INDICATION

Fluzone High-Dose vaccine is given to people 65 years of age and older to help prevent influenza disease caused by influenza A and B strains contained in the vaccine.

For more information about *Fluzone High-Dose* vaccine, talk to your health care professional and see complete Patient Information.

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