Acceptability of Intanza® 15 μg Intradermal Influenza Vaccine in Belgium During the 2010–2011 Influenza Season

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ABSTRACT

Introduction: Intradermal (ID) influenza vaccination induces an enhanced immune response in the elderly when compared with intramuscular (IM) vaccination. In 2009, an ID seasonal influenza vaccine (Intanza® [Sanofi Pasteur MSD, Lyon, France] 15 μg) was approved for use in individuals aged ≥ 60 years in Europe. This survey conducted in Belgium was the first in Europe to assess the acceptability of this vaccine in routine clinical practice by vaccinees and their general practitioners (GPs).

Methods: GPs willing to use both the ID and IM influenza vaccines were selected during the 2010–2011 influenza season. Each GP recruited ≤ 10 patients aged ≥ 60 years who received the ID vaccine. Vaccinees and GPs completed questionnaires about their opinions on influenza vaccination and the acceptability of the ID influenza vaccine.

Results: In total, 105 GPs and 837 vaccinees completed questionnaires. A high proportion...
of vaccinees (40.3%) was aged ≥ 75 years, and 95.5% had been vaccinated the previous year. The majority of vaccinees was very satisfied (70.0%) or satisfied (27.9%) with the ID vaccine. The main reasons for the high satisfaction rate were that the injection was not very painful, administration was quick, and the vaccinee felt confident about the micro-needle injection system. Most vaccinees (91.1%) who had previously received IM influenza vaccination preferred the ID vaccine, and 98.5% of vaccinees reported they would consider receiving the ID vaccine the following year. The majority of GPs was very satisfied (78.6%) or satisfied (18.4%) with the ID vaccine, and most GPs (87.6%) expressed a preference for the ID vaccine over IM influenza vaccine.

**Conclusion:** The ID influenza vaccine was well accepted by vaccinees and their GPs, who expressed a preference for the ID vaccine over conventional IM influenza vaccine. The availability of the ID influenza vaccine may help to improve uptake of seasonal influenza vaccination in the elderly.

**Keywords:** Belgium; Elderly individuals; General practitioners; Immunosenescence; Intanza; Intradermal influenza vaccine; Micro-needle injection system; Survey; Vaccination acceptability

**INTRODUCTION**

Annual vaccination against influenza is an important public health measure to prevent the disease and its complications [1]. Recommendations for influenza vaccination vary across Europe but are consistent for at-risk groups, such as the elderly, individuals with chronic diseases, and healthcare workers [2–4]. The elderly are at particularly high risk for influenza complications, and it has been estimated that 80–90% of influenza-associated deaths during epidemic seasons occur in individuals aged ≥ 65 years [5–7]. Vaccination of the elderly protects against influenza disease and reduces the risk of mortality and of hospitalization associated with serious complications, such as pneumonia [8, 9].

The target for seasonal influenza vaccination coverage set by the World Health Organization and the Council of the European Union (EU) for individuals aged ≥ 65 years is ≥ 75% [2, 3]. However, vaccination coverage rates in many European countries are low. A survey of 27 EU member states, plus Norway and Iceland, showed that influenza vaccination coverage in the older adult population during the 2007–2008 influenza season ranged from 1.1% in Estonia (≥ 65 years of age) to 82.6% in The Netherlands (≥ 60 years of age) [10]. Vaccination coverage data for the 2007–2008 influenza season were unavailable for Belgium in that survey, but have been reported elsewhere as 53.3% among individuals aged ≥ 65 years (53.5% and 54.9% for the 2008–2009 and 2009–2010 influenza seasons, respectively) [11]. A drop in vaccination coverage rates has been reported among elderly individuals in Belgium for the 2010–2011 influenza season when compared with the previous two seasons (approximately 5% reduction vs. 2008–2009, and approximately 8% reduction vs. 2009–2010 for individuals aged 65–84 years) [12], most likely because concerns about the H1N1 strain have subsided.

The immune response to influenza vaccination is lower in individuals aged ≥ 60 years than in younger adults because of immunosenescence [13]. Nevertheless, seasonal intramuscular (IM) influenza vaccine is effective in the elderly [14, 15]. However, influenza vaccines offering enhanced immunogenicity and the potential for improved protection in the expanding elderly population are an attractive alternative. Clinical studies have