

## **Novartis Vaccines Diagnostics**

### **Responses**

#### **1. Economic Recovery and Growth**

*Given the current climate of federal and global fiscal restraint, what specific federal measures do you feel are needed for a sustained economic recovery and enhanced economic growth in Canada?*

Health care spending in Canada is expected to outpace inflation and grow at an exponential rate. The federal government has the leading and overall responsibility to ensure our health care system will care for all Canadians and for the generations to come. Canada's economic stability and growth is directly affected by how well our health care system functions, efficiently and effectively promoting and protecting the health of Canadians. It has long been recognized that preventative healthcare is the leading tool available to curb escalating costs while ensuring optimal health care outcomes, yet it is widely underutilized. Vaccines have been credited with the eradication of smallpox, the elimination of polio from most of the world and having significantly reduced the incidences of measles, mumps, rubella, diphtheria, whooping cough, tetanus and Haemophilus influenza type b. Furthermore, there is widespread global recognition that the cost-effectiveness of immunization makes it the most worthwhile health investment available. Immunization programs have demonstrated cost-benefit ratios in the range of 5:1 for direct medical care costs to 17:1 for indirect societal costs which includes the time off from work with illness or time off to care for sick children(1). These cost-effectiveness figures do not include the added benefits of prevention of pain, suffering, or disability as a result of vaccine-preventable disease. The creation of the federal government's National Immunization Strategy (NIS) a decade ago, provided preventative health care with a platform to demonstrate results. Government is able to measure and see tangible benefits. Novartis believes that continued government support and investment in the National Immunization Strategy is essential. Government support ensures that children, youth and adults are not faced with life-threatening infections that could have been prevented through available vaccines. A National Immunization Strategy builds capacity in health care and leads to economic growth. ----- (1) Vaccine Industry Committee. BIOTECanada. Building on the Legacy of Vaccines in Canada: Value, Opportunities, and Challenges. November 2008.

#### **2. Job Creation**

*As Canadian companies face pressures resulting from such factors as uncertainty about the U.S. economic recovery, a sovereign debt crisis in Europe, and competition from a number of developed and developing countries, what specific federal actions do you believe should be taken to promote job creation in Canada, including that which occurs as a result of enhanced internal and international trade?*

Canada's public health care system is an asset. Healthy families mean healthy communities, which in turn lead to a healthy productive workforce. We can attribute our competitiveness, our status as a developed nation, and economic strength to our health care system. Health care is an investment with a significant, positive return. Our health care system is shared with federal, provincial and territorial responsibilities. The system is complex and the monies committed are significant. Federal actions that include investment in the infrastructure required for leadership, funding, coordination and collaboration of the many aspects of the Canadian vaccine programs are critical to building and sustaining our ability to efficiently gain access to important new vaccines and provide them to those identified at risk for disease.

### **3. Demographic Change**

*What specific federal measures do you think should be implemented to help the country address the consequences of, and challenges associated with, the aging of the Canadian population and of skills shortages?*

Each year the toll of influenza weighs heavily on the health care system and the overall health of the population. It has been demonstrated that efficient immunization programs with the most effective vaccines available will dramatically reduce the number who become infected each year, decreasing the cost of managing of the illness and the associated morbidity that significantly affects our aging population. It has been recognized that the risk of influenza infection increases with age and unfortunately can be the critical event that exacerbates an existing health condition that is being effectively managed by a senior independently in their home to then requiring hospitalization and then relocation to a nursing home facility as advanced health care is needed. Novartis was the first vaccines company to enhance the efficacy of an influenza vaccine through the use of an adjuvant which is used to boost a vaccine's effectiveness by increasing the body's immune response. This adjuvant effect is particularly important in elderly subjects and those suffering from chronic illnesses that run a high risk of developing the most severe influenza-related complications. More than 90% of influenza-related deaths occur in people aged 65 and older and the elderly account for 70% of influenza related hospitalizations (2) (3). Influenza vaccines, however, have shown to significantly protect the elderly population against severe complications, including hospitalization and death. The Novartis influenza vaccine, FLUAD\*, has been proven to provide superior antibody response, as compared to conventional flu vaccines. FLUAD\* was first approved in Italy in 1999 and has been distributed to more than 50 million people worldwide(4). Currently, adjuvanted flu vaccines only available in select provinces to select individual and are not universally included in Canada's public immunization schedule to those who are eligible. ----- (2) Thompson WW, Comanor L, Shay DK. Epidemiology of seasonal influenza: Use of surveillance data and statistical models to estimate the burden of disease. J Infect Dis. 2006;194 S2:S82-S91. (3) Kwong JC, Stukel TA, Lim J,McGeer AJ, Upshur REG, et al. (2008) The effect of universal influenza immunization on mortality and health care use. PLoS Med 5(10): e211. doi:10.1371/journal.pmed.0050211 (4) Novartis Vaccines Data on file, 2010

### **4. Productivity**

*With labour market challenges arising in part as a result of the aging of Canada's population and an ongoing focus on the actions needed for competitiveness, what specific federal initiatives are needed in order to increase productivity in Canada?*

Numerous studies from all around the world have demonstrated the tremendous value of vaccines. Canada is no exception. The cost-effectiveness of immunization makes it the most valuable health investment of our times. From direct medical costs to societal costs, the evidence of savings is strong and frankly indisputable. Expenses due to emergency visits, surgeries, on-going procedures, pain management tools, medicines, therapies, personal care, disability services, etc., is only a fraction of what it costs to assist someone affected by a serious virus or disease. An inability to be a productive, contributing member of society adds a substantial additional layer of costs, not to mention the toll it plays on mental health. Healthy Canadians help to ensure a healthy nation and economy. As the leading health investment available, vaccinations have demonstrated their value. A National Immunization Strategy is recommended that will allow vaccine accessibility for all Canadians, allowing all levels of governments to save on health care, infuse strength to Canada's economy and productivity, and protect Canadians from a life of pain and suffering.

## 5. Other Challenges

*With some Canadian individuals, businesses and communities facing particular challenges at this time, in your view, who is facing the most challenges, what are the challenges that are being faced and what specific federal actions are needed to address these challenges?*

The ongoing threat of diseases in our communities is a concern facing all Canadians. While most lay people are only aware of the threat to their health that is posed by communicable disease, health care providers and physicians are aware of the threat that communicable diseases pose and are acutely aware of the challenges of those that are virulent and difficult to treat causing significant morbidity and mortality. For many years physicians have been frustrated with the threat of meningococcal disease, particularly group B disease for which there has been an ongoing endemic state and no available vaccine to prevent infection. An estimated 215 cases of meningococcal disease arise every year in Canada. The illness is caused by *Neisseria meningitidis*, an ordinarily harmless bacteria residing in the nasal passage that for reasons not entirely clear to scientists, sometimes enter the bloodstream, proliferates wildly and turns into one of the deadliest foes in the human body. With breaking speed, meningococcal infection can lead to sepsis, organ damage, and a severe inflammation of the membranes that surrounds the brain with death within 24-48 hours(5). The death rate is between 10 to 15%, and of those who survive meningococcal infection, 15-20% emerge from the battle with amputated limbs, brain damage or any host of other scars and disabilities. It is, by any measure, a devastating disease(6) (7). Currently, no vaccine is available to protect against meningococcal B disease which causes approx. 55% of the cases in Canada. This remains a significant health care challenge. Within the next 12-18 months Novartis Vaccines & Diagnostics intends to bring to the Canadian market a meningococcal B vaccine that will address this issue. This is yet another example of a new vaccine which would provide significant health benefits to Canadians provided it was adequately supported by predictable and sustained government funding. Novartis Pharmaceuticals Canada Inc. provides healthcare solutions that address the evolving needs of patients and societies. We would be pleased to speak to members of the Committee with regard to the benefit of a National Immunization Strategy. ----- (5) Thompson MJ, Ninis N, Perera R, et al. Clinical recognition of meningococcal disease in children and adolescents. *The Lancet*. 2006;367(9508):397-403. (6) Rosenstein NE, et al. Meningococcal Disease. *N Engl J Med*. 2001;344:1378-1388 (7) Stollenwerk N, et al. Diversity in pathogenicity can cause outbreaks of meningococcal disease. *Proc Natl Acad Sci U S A*. 2004;101:10229-10234.