

The Value of Immunization in the Future of Canada's Health System

Submission to the
*Commission on the Future
of Health Care in Canada*

Submitted by the
Canadian Public Health Association

in consultation with the members of the
Coalition for the Canadian Immunization
Awareness Program (CIAP)
www.immunize.cpha.ca

and the
Canadian Coalition for Influenza
Immunization
www.influenza.cpha.ca

October 2001

The goal of the **Canadian Immunization Awareness Program (CIAP)** is to help parents and health service providers in Canada work together to make sure children get all the shots they need at the right times.

Coalition members:

Chair: Dr. David Allison
Canadian Institute of Child Health
Canadian Medical Association
Canadian Nurses Association
Canadian Nursing Coalition for Immunization
Canadian Paediatric Society
Canadian Pharmacists Association
Canadian Public Health Association
College of Family Physicians of Canada
Conférence des Régions régionales de la santé des services sociaux du Québec
Council of Chief Medical Officers of Health

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The goal of the **Canadian Coalition for Influenza Immunization (CCII)** is to increase immunization rates by promoting the benefits of influenza immunization for all ages.

Coalition members:

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Canada's Association for the Fifty-Plus
Canadian Association of Chain Drug Stores
Canadian Diabetes Association
Canadian Gerontological Nursing Association (also representing the Canadian Nurses Association)
Canadian Infectious Disease Society
Canadian Lung Association
Canadian Medical Association
Canadian Paediatric Society
Canadian Pharmacists Association
Canadian Public Health Association
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The Value of Immunization in the Future of Canada's Health System, Submission to the Commission on the Future of Health Care in Canada submitted by the Canadian Public Health Association in consultation with the Coalition for the Canadian Immunization Awareness Program and the Canadian Coalition for Influenza Immunization is available online at www.immunize.cpha.ca.

For additional copies of this document, contact the Secretariat.

The Value of Immunization in the Future of Canada's Health System

Executive Summary

One hundred years ago, infectious diseases were the leading cause of death worldwide. In Canada, they now cause less than 5% of all deaths thanks to immunization programs undertaken from coast to coast. Immunization protects an entire population by preventing the spread of disease from one individual to another: the more people immunized, the less chance for disease to circulate. It is the single most cost-effective health investment, making immunization a cornerstone of efforts to promote health.

Canadian children in all provinces are routinely immunized against nine diseases: polio, pertussis, tetanus, diphtheria, *Haemophilus influenzae* type b, measles, mumps, rubella and hepatitis B. Vaccines are licensed federally in Canada through Health Canada. Provinces and territories select vaccines and schedules according to the goals of their individual public health programs.

Many infectious diseases have been controlled but could return if immunization is not maintained. Disease control requires the maintenance of very high levels of immunization as infectious agents still circulate, though in considerably reduced numbers. History demonstrates that when communities do not maintain high immunization rates, diseases within and beyond those communities can return. For example, risks for infectious diseases can arise from travel to other countries where vaccine-preventable diseases are widespread. Those returning to Canada with diseases that could have been prevented through immunization can place considerable burden on the health system.

Understanding the true value of vaccines is difficult when members of a society can no longer recall the impact, and fear, of a disease that seems to have vanished from their lives. It is imperative, therefore, that parents of young children understand the importance of maintaining a schedule of vaccinations for their children, and that adults recognize the importance of timely booster doses of selected vaccines.

A successful immunization program contributes to stronger overall health by providing a structural foundation and network of professionals for further national health initiatives and partnerships. Immunization can be used as a model for federal, provincial and territorial governments to improve public health management, planning, forecasting, evaluation, inventory control, health training, and public or community outreach.

Canadians understand health as a public good, and while Canada's health system is basically sound, it can still be improved. There is a need to refocus the balance. A publicly accessible health system should not only treat illness, but also be designed to improve health, prevent illness and thus reduce the need for treatment. The health system should be seen on a continuum from prevention through to palliative care. A national immunization strategy should be part of a broader national public health strategy.

Recommendations

The full submission produced in consultation with the Coalition for the Canadian Immunization Awareness Program and the Canadian Coalition for Influenza Immunization that follows this summary provides a number of recommendations for the consideration of the Commission on the Future of Health Care in Canada according to the Commission's four major themes: Canadian values, sustainability, managing change and cooperative relations. The summary text below represents a compilation of those more detailed recommendations, bringing together a number of points that are shared across theme and subject matter.

To refocus Canada's health system with respect to the key role played by immunization in the health of all Canadians, the following actions are recommended:

1. Extend the five principles of the Canada Health Act—comprehensiveness, universality, portability, public administration and accessibility—to include disease prevention and health promotion.
2. Reinvest in prevention. Create the political demand for prevention, building on the federal government's anti-tobacco model.
3. Ensure the protection of public health through an effective national immunization program. Recognize vaccination and surveillance programs as “essential health services”, and communicate this widely to the public. Ensure dedicated, non-discretionary federal funding of national immunization initiatives.
4. Ensure a well-resourced public health system to act as the primary provider of vaccines. Maintain high levels of coverage for control of vaccine-preventable diseases to prevent their resurgence following an imported case.

5. Establish a national review and decision-making process on vaccines that aims for consistency across provinces. The federal government should facilitate the national monitoring of immunization programs at the provincial and territorial levels, and ensure that performance indicators are part of the agreement with the provinces and territories.
6. Strengthen Canadian leadership and visibility in global immunization initiatives through further collaboration with the World Health Organization (WHO), Pan American Health Organization (PAHO) and Global Alliance for Vaccines and Immunization (GAVI). Develop and enhance mechanisms for the timely exchange of lessons learned between the national and international immunization arenas.
7. Ensure that all health service providers are well informed about the issues surrounding vaccine delivery and immunization safety.
8. Establish and expand national record systems for immunization and for vaccine adverse events, using information technology that will ensure a secure and up-to-date data system accessible for updating and retrieval anywhere in the country.
9. Expand partnerships from exclusively federal/provincial/territorial to include private/public cooperative initiatives. Involve industry at the discussion table where appropriate, since they are critical partners in the supply and delivery of vaccines.
10. Strengthen and maintain public trust in vaccines, while acknowledging that no vaccine is entirely without risk. Take appropriate actions to counter information disseminated by the anti-vaccine lobby. Use community development strategies to promote vaccine use.
11. Seek a national consensus on acceptable combinations of vaccines, and expand technical and scientific advisory committees to include all stakeholders in immunization (e.g., practitioners, governments, manufacturers) to ensure safe, cost-effective and appropriate vaccine supplies. Develop a clinical trials network to engage multiple universities.
12. Target vaccines to high-risk populations where appropriate. Identify the potential for improvements in the overall health and in reductions in health inequalities of hard-to-reach populations with respect to immunization (e.g., new Canadians, populations with special needs).

13. Address the ‘fragility’ of the Canadian vaccine supply (i.e., current limitations in manufacturing capacity to produce vaccine domestically).
14. With respect to delivery methods, foster research and development into less invasive methods of immunization that will help contain delivery costs in the future as the number and variety of approved vaccines increases.

Immunization has saved more lives in Canada in the last 50 years than any other health intervention. Not only providing excellent value, immunization saves money to the health system. For every dollar governments spend on protecting their citizens through immunization, there are savings of far greater value.

The recommendations outlined in this document aim to ensure that immunization is a cornerstone in future efforts to reduce illness and promote the health of all Canadians. The Coalition for the Canadian Immunization Awareness Program and the Canadian Coalition for Influenza Immunization thank the Commission on the Future of Health Care in Canada for the opportunity to contribute to the discussion on the health system and immunization. The Coalitions welcome further discussion with the Commission and other stakeholders in the immunization field to move the agenda forward.

The **Canadian Immunization Awareness Program** (CIAP) has promoted the benefits of infant and child immunization since 1996. In May 2001, in a letter to the Minister of Health, the Honourable Allan Rock, the Coalition called on all levels of government to work with CIAP and others towards a national immunization strategy to ensure:

- ▶ all parents of young children in Canada understand the importance of on-time vaccination;
- ▶ coordinated network of immunization records so that families and health service providers know who is up to date and who is not;
- ▶ rational, fair and equitable access to current and new vaccines for all children in Canada;
- ▶ consistent implementation of immunization programs in all provinces and territories so Canada can play its part in the global effort to control and eradicate diseases.

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The Value of Immunization in the Future of Canada’s Health System

One hundred years ago, infectious diseases were the leading cause of death worldwide. In Canada, they now cause less than 5% of all deaths thanks to immunization programs undertaken from coast to coast. Immunization protects an entire population by preventing the spread of disease from one individual to another: the more people immunized, the less chance for disease to circulate. It is the single most cost-effective health investment, making immunization a cornerstone of efforts to promote health.

Vaccine-preventable diseases have a direct and costly impact on society, resulting in doctor’s visits, hospitalizations and premature deaths. Children who become ill can also cause parents to lose time from work and other commitments. Many infectious diseases have been controlled but could return if immunization is not maintained. Disease control requires the maintenance of very high levels of immunization as infectious agents still circulate, though in considerably reduced numbers. History demonstrates that when communities do not maintain high immunization rates, diseases within and beyond those communities can return, as seen during the mid-1990s in the diphtheria outbreaks in the former Soviet Union.

Risks for infectious diseases can arise from travel to other countries where some vaccine-preventable diseases are widespread. Canadian travellers may acquire these diseases while abroad and transmit infection upon their return. Those returning to Canada with diseases that could have been prevented through immunization place considerable burden on the health system. Furthermore, the prevention of disease through immunization is especially important in cases where treatment options may be compromised because of resistance to antibiotic treatment. If the individual and the community have not maintained immunization, the potential for widespread disease can be great.

Modern vaccines are produced to exacting standards and are subject to high levels of compliance by regulatory authorities. Consequently, the risk of severe adverse events following immunization is extremely low. The risk is much smaller than the danger of the disease itself, and is also much smaller than the risk of almost every other medical intervention.

Vaccines are licensed federally in Canada through Health Canada. Provincial and territorial ministries of health buy certain available licensed products on

Immunization is the ‘exception’ in health services. The savings it creates from reduced medical care and fewer hospital admissions can offset its cost.

Figure 1
Cost-effectiveness of life-saving medical interventions

Intervention	Cost/ Life-Year Saved
Neonatal intensive care for low birth weight infants	\$270,00
Home dialysis for end-stage renal disease	\$20,000
Hypertension screening for men age 60	\$11,000
Breast cancer screening mammography, women age 50	\$810
Childhood immunization	<\$0 (i.e., cost saving)

Tengs et al. *Risk Analysis* 15(3):369-390, 1995

Canada is a signatory to the Declaration of the 1990 World Summit for Children, which established a number of child health goals in disease eradication and reduction, and immunization coverage.

“Immunization is the single most important public health triumph of the 20th century.”

—Centers for Disease Control and Prevention, USA

the market, often through federally negotiated contracts, and subsequently provide them free of charge to the public, federal employees and Department of Defence staff. The National Advisory Committee on Immunization (NACI) has provided general Canadian recommendations on the use of vaccines, drawing upon the expertise of specialists in public health, infectious diseases and paediatrics from across the country. However, the provinces and territories select vaccines and schedules according to the goals of their individual public health programs. Immunization for travel is an exception. Following a personal risk assessment, an individual pays for vaccines that have been deemed necessary for his/her particular travel destination and travel activities.

Canadian children in all provinces are routinely immunized against nine diseases: polio, pertussis, tetanus, diphtheria, *Haemophilus influenzae* type b, measles, mumps, rubella and hepatitis B. For approximately \$150 to cover the cost of the vaccines alone, a Canadian child can be vaccinated against these diseases from infancy to adolescence, and the impact of childhood immunization can last a lifetime. Moreover, every province spends considerably more on drugs for peptic ulcer than on immunizing children against nine diseases. The recent introduction of new universal immunization programs in some provinces, such as meningococcal meningitis in Quebec and influenza in Ontario, indicate a continued need to invest in prevention strategies. Before vaccines were used, children were at high risk of contracting at least one of the many vaccine-preventable diseases. Now, as nations provide safe and effective vaccines to their children, they directly contribute to the health of all their citizens. Clearly, immunization has proven to be the best health investment a country can make.

While immunization programs in Canada have markedly reduced the occurrence of vaccine-preventable diseases in children, adults who were not infected or immunized during childhood may be at increased risk for these diseases and their complications because of advancing age, occupation, lifestyle or development of certain chronic diseases. Understanding the true value of vaccines is difficult when members of a society can no longer recall the impact, and fear, of a disease that seems to have vanished from their lives. It is imperative, therefore, that parents of young children understand the importance of maintaining a schedule of vaccinations for their children, and that adults recognize the importance of timely booster doses of selected vaccines.

More broadly, a successful immunization program contributes to stronger overall health by providing a structural foundation and network of professionals for further national health initiatives and partnerships.

The Global Picture

According to the World Health Organization (WHO), immunization saves three million lives each year worldwide. In 1974, only 5% of the world's children were immunized against six vaccine-preventable diseases (polio, diphtheria, pertussis, measles, tetanus and TB). By 1998, nearly 74% of the world's children received immunization. The WHO has referred to this as "the single greatest public health achievement of all time."

At the global level, immunization is the focus of international health partnerships. In 1999, key multinational organizations—WHO, World Bank, United Nations Children's Fund, Rockefeller Foundation, International Federation of Pharmaceutical Manufacturers Association, and Bill and Melinda Gates Children's Vaccine Program at the Program for Appropriate Technology in Health—came together to improve vaccine delivery in developing countries. This network, called the Global Alliance for Vaccines and Immunization (GAVI), and its funding mechanism, the Global Fund for Children's Vaccines, now contribute substantially to worldwide immunization efforts.

Canada—already a world leader in global smallpox and polio eradication efforts, vaccine development and universal access to health services—can learn still more from its international experience, namely, the efficiency and effectiveness of public and private sector partnerships to achieve public health goals.

“A coordinated national strategy [for immunization] is more effective than several individual programs and has the potential for being financially efficient. . . .”

–The Development of National Goals for Vaccine-preventable Diseases of Infants and Children,
Canada Communicable Disease Report,
Supp. Vol. 2354

Immunization can be used as a model for federal, provincial and territorial governments to improve public health management, planning, forecasting, evaluation, inventory control, health training, and public or community outreach.

Survey of Canadian parents on their attitudes towards childhood vaccinations

Ipsos-Reid Survey, September 6, 2001 (release date). Data collected May 23 to June 17, 2001.

Some of the results include:

- On a scale of 0 (not at all important) to 10 (extremely important), parents rate immunization as the most important factor in keeping children healthy (74%), over healthy diet, hand washing and exercise.
- Nine out of ten parents agree vaccination is the best method of preventing illness and reducing the attendant burden on hospitals and other health services (91%).
- Ninety percent of parents feel all children should have the standard vaccinations.
- Fifty-nine percent are very confident that vaccines are very beneficial (9 or 10 on scale of 0 to 10) and another 25% give a rating of 8 out of 10.
- Thirty-four percent of parents have missed work or other commitments in a typical year because of a child's ear infection.
- At least two-thirds and as many as 93% of parents have already had their children vaccinated against polio, measles, German measles, diphtheria, mumps, whooping cough, tetanus or lock jaw and Hib.
- Ninety-six percent of parents would pay for a vaccine to protect their child out of their own pocket if necessary.
- Ninety-two percent feel governments should fund all vaccines.

II. RECOMMENDATIONS BY THEME*

Refocusing the Balance: Immunization and Canada's Health System

A. Values

Health and health services are central public issues in this country. According to the 1997 National Forum on Health, Canadians want a flexible health system that is integrated, supportive of community action and driven by information. With respect to the public's broad concerns about their health system as a reflection of citizenship, democracy and the public interest, immunization is perhaps the most readily applicable health system component.

Canadian values include equity, compassion, collective and individual responsibility, respect for others, efficiency and effectiveness. These are the basic tenets of Medicare, and also mirror the tenets of public health practice and health promotion. As such, a publicly accessible health system should not only treat illness, but also be designed to improve health and prevent illness, thus reducing the need for treatment. Children must be allowed freedom from the fear of serious disease that is preventable. The importance of vaccines is recognized historically (as for polio and smallpox), but the challenge is to raise the profile for ongoing vaccination and support for immunization programs today. The focus of the health system should shift to prevention and an early, upfront investment in lifelong health gains. The costs of preventing illness as well as treating it should be broadly shared.

Equitable access is a key determining value for Canadians in the design of their health system. It would follow, therefore, that Canadians consider it a moral duty of their health system to provide each recommended vaccine to every citizen. Linked to this value is the need for individual and collective responsibility. Public accountability for a national immunization program is preferred by a majority of Canadians over privately managed services. Increased efficiency and effectiveness may result, as such a system would allow for better record keeping and maintenance of up-to-date data. Canadians also want to be well informed about their health and have the means to maintain their health, but the health system often falls short in supplying

* Some of the recommendations provided below are not confined to one theme and may appear with slightly different emphasis in multiple theme areas.

thorough and accessible public information. The National Immunization Strategy, currently in development by federal, provincial and territorial governments, has recognized the need to offer the public better information on vaccination. The impact of a lack of appropriate information is particularly visible in the immunization field when it comes to confronting the anti-vaccination movement. Health service workers often receive either inappropriate demands for services and vaccines, or the refusal by some members of the public to participate in immunization programs for themselves or their children.

Recommendations

To refocus the health system's immunization network with respect to Canadian values, the following actions are recommended:

1. Extend the five principles of the Canada Health Act—comprehensiveness, universality, portability, public administration and accessibility—to include disease prevention and health promotion.
2. Ensure the protection of public health through an effective national immunization program.
3. Establish a national review and decision-making process on vaccines that aims for consistency across provinces.
4. Reinvest in the prevention of disease and promotion of good health.
5. Strengthen Canadian leadership and visibility in global immunization initiatives through further collaboration with the World Health Organization (WHO), Pan American Health Organization (PAHO) and the Global Alliance for Vaccines and Immunization (GAVI). Develop and enhance mechanisms for the timely exchange of lessons learned between the national and international immunization arenas.

“Avoiding disease or injury is preferable to even the most magical cure.”

–Caring for Medicare: Sustaining a Quality System, Report from the Commission on Medicare, Saskatchewan, 2001

“In the opinion of the Commission, adopting a preventive management approach [to health and social services] is the only way to manage the sociodemographic, epidemiological and technological transitions that are now underway.”

–Emerging Solutions: Report and Recommendations, Commission d'étude sur les services de santé et les services sociaux, Québec, December 2000

The main components required to achieve the sustainable development of primary health services are:

technical sustainability: development and maintenance of the necessary cadre of appropriately trained individuals, means and resources to meet needs at the local and regional levels;

social sustainability: development and maintenance of community support, as well as the capacity within the community to play an effective role;

political sustainability: development and maintenance of political will necessary to sustain a major policy direction;

financial sustainability: provision of adequate human and material resources to sustain a major policy direction; and

managerial sustainability: development and maintenance of the capacity to direct and plan effective services responding to demonstrated needs.

–Sustainability and Equity: Primary Health Care in Developing Countries, Canadian Public Health Association, 1990.

B. Sustainability

Currently, provincial immunization programs are demonstrating their sustainability by successfully maintaining high coverage rates, but these efforts are threatened by an ongoing lack of comprehensive record systems, a multiplicity of delivery systems, and the burden of introducing newly developed vaccines and responding to crises. A national immunization program would have the following key functions: procurement and universal distribution of vaccines, programmatic guidelines, national goals and strategies, monitoring and evaluation of program performance at the delivery level, establishment of national standardized reporting procedures and a national record system, and quality assurance of vaccines and adequate supply.

The Commission's mandate calls for the development of recommendations on the sustainability of the health system, taking into account government expenditures and continuing public confidence. For this submission, CIAP and CCII expand the definition of sustainability to address issues related to a national immunization program. A five-point definition of sustainability, as developed by the Canadian Public Health Association (CPHA) in the 1990 position paper *Sustainability and Equity: Primary Health Care in Developing Countries*, cites the main components required to achieve the sustainable development of primary health services as technical, social, political, financial and managerial.

Recommendations

Technical sustainability refers to the development and maintenance of the necessary cadre of appropriately trained individuals, means and resources to meet a national immunization program's needs at the local and regional levels. To refocus the health system's immunization efforts to be technically sustainable, the following actions are recommended:

1. Ensure that all health service providers are well informed about the issues surrounding vaccine delivery and immunization safety. Ensure a well-resourced public health system to act as the primary provider of vaccines.
2. Establish a national record system for immunization using information technology that will ensure a secure and up-to-date data system accessible for updating and retrieval anywhere in the country.
3. Reinforce the national record system for adverse events that are possibly attributable to vaccination, to reassure the public that vaccines are continually monitored for safety.
4. The federal government should facilitate the national monitoring of immunization programs at the provincial and territorial levels.

5. Target vaccines to high-risk populations where appropriate. As well, regular immunization programs, such as those for influenza, can act as models for future targeted responses to pandemics or acts of bioterrorism.
6. New vaccines create a dilemma with respect to the timing of their introduction and implementation. Therefore, seek a national consensus on acceptable combinations of vaccines, and expand technical and scientific advisory committees to include all stakeholders in immunization (e.g., practitioners, governments, manufacturers) to ensure safe, cost-effective and appropriate vaccine supplies.
7. Ensure the fulfillment of international quality standards in vaccine production.
8. Address the ‘fragility’ of the Canadian vaccine supply (i.e., current limitations in manufacturing capacity to produce vaccine domestically).

Social sustainability refers to the development and maintenance of community support for a national immunization program, as well as the capacity within the community to play an effective role. To refocus the health system’s immunization efforts to be socially sustainable, the following actions are recommended:

1. Use community development strategies to promote vaccine use. A successful vaccination program, like a successful society, depends on the cooperation of every individual to ensure the good of all.
2. Promote the value of wellness over illness, and clearly characterize the immunization system as a part of the wellness and prevention wings of the system.
3. Strengthen and maintain public trust in vaccine safety, while acknowledging that no vaccine is entirely without risk. Take appropriate actions to counter information disseminated by the anti-vaccine lobby. The regular monitoring of immunization safety will provide technical and scientific assurance of the safety of vaccines being made available. Trust becomes even more important when cases of vaccine-preventable diseases decline, giving fewer reminders of the need for immunization.

Political sustainability refers to the development and maintenance of the political will necessary to sustain a major policy direction. To refocus the health system’s immunization efforts to be politically sustainable, the following actions are recommended:

1. Create the political demand for prevention. Build on the federal government’s anti-tobacco model: acknowledge the cost effectiveness of vaccines for all ages, communicate the benefits of disease prevention over treatment, and counter anti-immunization statements as they arise.

“A coordinated national strategy [for vaccine-preventable disease in infants and children] is more effective than several individual programs and has the potential for being financially efficient; [given that] vaccine-preventable diseases easily cross provincial and territorial borders.”

–Canadian National Report on Immunization, 1996

“If more and more of our tax dollars are allocated to treating illness through the health system, there will be less money available for other social programs that contribute to the overall health status of children...”

–Caring for Medicare: Sustaining a Quality System, Report from the Commission on Medicare, Saskatchewan, 2001

“... [C]linical treatment has been the most common chronic disease strategy and there has been only a limited political will to expend resources on health promotion and disease prevention. Outcomes from such programs are generally visible only over the longer term, and are therefore less attractive politically than money invested in health care facilities, such as hospitals.”

–Interim Report of the Standing Senate Committee on Social Affairs, Science and Technology, September 2001

“The viability of our health care system depends not only on financial sustainability, but on overall system integrity and coherence of design. That means examining how priorities and expenditures align with an overarching vision for health care that can be shared by the public, providers and policy-makers alike.”

- Commissioner Roy Romanow,
August 10, 2001

“... because of the diversity of factors that influence health outcomes, it is very difficult to co-ordinate government activity ... Given that the health care system itself is only responsible for a relatively small percentage of the actual determinants of health, the responsibility for population health cannot reside exclusively with the various ministries of health. Yet the structure of most individual governments does not easily lend itself to inter-ministerial responsibility for addressing complex problems, and this difficulty is compounded ... when the various levels of government, along with the many non-governmental players, are taken into account, as they must be if population health strategies are to be truly effective.”
-Interim Report of the Standing Senate Committee on Social Affairs, Science and Technology, September 2001

Canada is a signatory to the Declaration of Alma-Ata, 1978, recognized as the clearest and most widely accepted articulation of a basic set of values for health as related to world development.

Article III states in part:

“...The promotion and protection of the health of the people is essential to sustained economic and social development and contributes to a better quality of life and to world peace.”

The Declaration further defines the elements of primary health services as “...providing promotive [sic], preventive, curative and rehabilitative services [and includes] ...education concerning prevailing health problems and the methods of preventing and controlling them; ... immunization against the major infectious diseases; prevention and control of locally endemic diseases; appropriate treatment of common diseases and injuries; and provision of essential drugs.”

2. Ensure that immunization programs are defined as essential services within the basic health package to the provinces and territories. Communicate this widely to the public.
3. Acknowledge the presence of new partners in the field of immunization, including from the private sector. Governments must foster their active participation in national, inter-agency committees to discuss mechanisms for implementing and maintaining a national immunization program.

Financial sustainability refers to the provision of adequate human and material resources to sustain a major policy direction. It is important to again acknowledge the tremendous cost savings already demonstrated by immunization programs in the health system. To refocus the health system's immunization efforts to ensure ongoing financial sustainability, the following actions are recommended:

1. Support the creation of a direct budget line to finance recurrent costs associated with immunization programs. Ensure dedicated, non-discretionary federal funding of national immunization initiatives.
2. Establish clear mechanisms to transfer and account for financial resources to avoid disruptions in vaccination and surveillance activities and to respond quickly to emergency situations.
3. Costs increase if there are multiple delivery systems and levels of decision-making for programs. Aim for a more sustainable infrastructure for the delivery of vaccines on a national level using evidence-based decision- and policy-making.
4. Reinvest in prevention. The money saved by prevention should remain in prevention budgets, and not be siphoned off to treatment initiatives. Investing in prevention is an early investment in the health of individuals and populations for greater positive health outcomes and quality of life over the longer term.

Managerial sustainability refers to the development and maintenance of the capacity to direct and plan effective services responding to demonstrated needs. These issues are addressed in section C: Managing Change.

C. Managing Change

To achieve a national immunization strategy, the first imperative is to put “turf protection” aside and focus on the best use of our most powerful tool against the spread of disease. This may be a tall order. The range of perspectives held by governments is great in terms of how decisions are made, how programs are delivered and what human resources are required. Moreover, the divergences from province to province will become more obvious as more expensive and complex vaccines become available. The aversion to federally designated funding criteria on the part of the provinces and territories and the reluctance to invest in prevention are formidable barriers to change. It will be necessary to define a national immunization program in much wider terms than what is conventionally equated with federal initiatives on issues of national importance. In other words, a national strategy on immunization should allow for expanded partnerships among providers, the public and the private sector.

There is a need to refocus the balance. A national immunization strategy should be part of a broader national public health strategy. The health system should be seen on a continuum from prevention through to palliative care. Good indications already exist that a national immunization program is now seen as a key factor in a revitalized health system for Canada. A 1999 commitment by the Deputy Minister of Health for a National Immunization Strategy proposes to find ways to harmonize immunization programs across the country, develop provincial and territorial immunization registries, ensure immunization safety and address vaccine procurement issues.

Canada has a varied mix of immunization systems across the country, in which some provinces and territories first implement a particular vaccination program, while others await the results before signing on. Under this scenario, the provinces and territories may not feel inclined to sign on to a national strategy towards the harmonization of the immunization system. Therefore, efforts should begin with the most achievable goals, such as developing linked record-keeping systems, vaccine safety issues and partnering over supply concerns.

Standard measurements and reporting mechanisms for vaccinations, coverage data, adverse reactions and disease epidemiology are vital to yield national data. New record-keeping systems must be transferable between provinces and territories. As well, the advent of complex vaccines coming to market will require strategic implementation for optimal effect. The calendars for vaccination could be extremely complex in the future with several paediatric vaccines, vaccines for adolescents and for adults, and still others for travellers.

Canada has shown leadership with the introduction of combination vaccines for children to protect against diphtheria, polio, whooping cough and Hib, all in one shot. The accounting for these new factors will be a complex arena for policymakers in the future. Thus, it is appropriate to address fundamental infrastructure issues now.

Recommendations

To refocus the health system to manage change that aims to establish a national immunization program, the following actions are recommended:

1. Re-examine the Canada Health Act as it applies to population health.
2. Evolve the framework of the health system from a medical or disease model to an increased emphasis on prevention.
3. Provide clear and ongoing support and resources to the public health system for the delivery of prevention programs.
4. Ensure that all jurisdictions use the public delivery model for immunization activities.
5. Ensure that performance indicators are part of the agreement with the provinces/territories (e.g., service delivery).
6. Identify the potential for improvements in the overall health and in reductions in health inequalities of hard-to-reach populations with respect to immunization (e.g., new Canadians, populations with special needs).
7. Increase consumer involvement in health and the health system, and keep the public informed about the value of vaccines in preventing outbreaks of disease. For instance, the greatest risk with respect to infectious disease now comes from beyond Canada's borders. Canadian travellers, who already bear the cost of immunization for travel, need accurate and accessible information to protect their health while traveling and reduce the risk of infecting populations.
8. Maintain high levels of coverage for control of vaccine-preventable diseases to prevent their resurgence following an imported case. Provide objective measures to evaluate program effectiveness.
9. With respect to delivery methods, foster research and development into less invasive methods of immunization that will help contain delivery costs in the future as the number and variety of approved vaccines increases.

D. Cooperative Relations

In the area of immunization, it has been demonstrated internationally that partnerships between the public sector and private enterprise can offer great benefits in terms of improved health. It is also known that public-private partnerships remain a sensitive topic for governments, especially given concerns about the public's perception of such activities. However, in tandem with the WHO, the time has come in Canada to focus less on the distinctions between the public and private sectors and more on the opportunities that such partnerships can offer. The WHO suggests that these partnerships are best seen as "social experiments" that can be made to work for the common good so long as "the greatest possible importance is attached to protecting the public's interest."

Recommendations

To refocus the health system to build cooperative relations for a national immunization program, the following actions are recommended:

1. Establish a strong national voice for prevention and immunization programs, with ongoing NGO involvement. Identify common visions and deliver on recommendations.
2. Expand partnerships from exclusively federal/provincial/territorial to include private/public cooperative initiatives.
3. Coordinate policy development. Currently, resource allocation and decision-making rests with the provinces and territories. A national immunization program should set national guidelines and standards. The provinces and territories should then be tasked with the implementation.
4. Involve industry at the discussion table where appropriate, since they are critical partners in the supply and delivery of vaccines.
5. Establish definitive terms for accepting new vaccines to ensure they are safe, effective and timely.
6. Guide the development and introduction of vaccines by revisiting priorities on a regular basis.
7. Develop a clinical trials network to engage multiple universities.

The World Health Organization has called public-private partnerships "a central feature of the global health landscape."

"Canada needs to make monitoring health a priority. ... the Federal Government should provide Canada, its provinces and territories, and various interested parties with a vehicle to coordinate information and advocate for the development of policies conducive to population health."

—National Forum on Health, 1997

"The historic polio eradication in the Americas achieved in 1994 was the product of the collective action of non-governmental organizations, ministries of health, international donor agencies and local health care providers, among others in the pursuit of a common objective."

—Pan American Health Organization

III. SUMMARY

“A renewed health and welfare policy should be structured around prevention of diseases and social problems as well as health promotion and protection.”
—Emerging Solutions: Report and Recommendations, Commission d'étude sur les services de santé et les services sociaux, Québec, December 2000

Canadians understand health as a public good, and while Canada's health system is basically sound, it can still be improved. A publicly accessible health system should not only treat illness, but also be designed to improve health, prevent illness and thus reduce the need for treatment. Therefore, the costs of preventing illness as well as treating it should be broadly shared.

Immunization is a critically important weapon in the battle to control and eliminate infectious diseases. Vaccination is necessary for two reasons: to protect the individual and to protect communities. Vaccine-preventable diseases have specific characteristics that make them suitable for clearly defined national goals and targets, such as, existing control programs of demonstrated effectiveness, measurable outcomes, an infrastructure already in place linking resources with strategies, and established surveillance indicators. Furthermore, infectious diseases affect or threaten all population groups across the country, making them 'national' from the outset.

To achieve the full potential of vaccines and prevent disease:

- The public must see vaccines as a means of mobilizing the body's natural defences and be better prepared to seek vaccinations for themselves, their children, and others in their care. Therefore, funded advocacy is essential.
- Health service workers must be aware of the latest developments and recommendations. Therefore, continuing education for health service workers is essential.
- Vaccine supplies and financing must be made more secure especially for new vaccines. Therefore, dedicated national funding for immunization strategies must be established.
- Record keeping and registries must be rationalized and made robust for a true national service. Therefore, public trust in vaccine safety and delivery is maintained.
- Information technology to support timely vaccinations must be better utilized, reinforcing the public health capacity to respond quickly to recurring and new diseases.
- Researchers must face increasingly complex questions about safety and efficacy, and look for new approaches to vaccine delivery.
- Public-private partnerships for the design and delivery of immunization programs must be expanded and strengthened.

By understanding the significant role of prevention in the promotion of health, the system can be rebalanced from a focus on illness to a focus on health. Resources can be used more effectively and efficiently in prevention efforts. To that end, it is recommended that prevention—specifically

immunization—be a key component of a renewed Canada Health Act, highlighting its central role in population health and its reduction of the burden of illness on the health system.

The greatest health achievement of the last century has been the progress against infectious disease, a success in large part attained through immunization. Immunization has saved more lives in Canada in the last 50 years than any other health intervention. Better overall health is the first result of an effective immunization program. It can also contribute to the national health system by providing a structural foundation and network of professionals for further national health initiatives and partnerships.

Moreover, immunization is the single most cost-effective health investment that can be made. Not only providing excellent value, immunization saves money to the health system. For every dollar governments spend on protecting their citizens through immunization, there are savings of far greater value.

The recommendations outlined in this document aim to ensure that immunization is a cornerstone in future efforts to reduce illness and promote the health of all Canadians. The Coalition for the Canadian Immunization Awareness Program and the Canadian Coalition for Influenza Immunization thank the Commission on the Future of Health Care in Canada for the opportunity to contribute to this important discussion on the health system and immunization initiatives. We welcome further discussion with the Commission and other stakeholders in the immunization field to move the agenda forward.

“If we were building a health care system today from scratch, it would be structured much differently from the one we now have and might be less expensive. The system would rely less on hospitals and doctors and would provide a broader range of community-based services, delivered by multi-disciplinary teams with a much stronger emphasis on prevention. We would also have much better information linking interventions and health outcomes. However, we are not starting with a blank slate, we must be careful about the pace of change so that both the public and health care providers maintain their confidence in the system—a difficult balancing act.”

—National Forum on Health, 1997

APPENDIX I:

The Canadian Immunization Survey: Attitudes Toward Childhood Vaccinations

Ipsos-Reid Survey 2001, commissioned by Wyeth-Ayerst Canada

THE CANADIAN IMMUNIZATION SURVEY ATTITUDES TOWARD CHILDHOOD VACCINATIONS A Study of Canadian Parents of Children Under the Age of 7

Key Findings: National Perspective

- 74% rate having children immunized a '10' on a scale of 0 (not at all important) to 10 (extremely important) – beating out healthy diet, washing their hands and exercise.
- 91% of parents believe vaccinating children may ease the burden on the healthcare system.
- 90% feel all children should have the standard vaccinations.
- 82% actively seek the most recent information about vaccinations.
- Only 5% feel there is no need for children to be vaccinated due to the elimination of vaccine-preventable illnesses.
- 59% are very confident that vaccines are very beneficial (9 or 10 on scale of 0 to 10), with another 25% giving a rating of 8 out of 10.
- Prevention is the number one factor taken into account when deciding to get a vaccination.
- Meningitis and Hepatitis B rank highest on parental concern over children contracting the diseases, as well as parental perception of disease severity.
- 34% of parents have had to miss work or other commitments due to child's ear infection or tube procedure.
- Most parents adhere to children's vaccination schedule.
- 49% would discuss a new vaccine with their physician/pediatrician during their next appointment.
- 75% would turn to their physician for information on vaccines. Physicians also considered most credible source of information.
- Only 21% of parents recalling having been offered or recommended a vaccination that is not covered by the government.
- 96% of parents would pay out of their own pocket for a vaccine to protect their child if they had to do so.
- 92% feel governments should fund all vaccines.

Executive Summary

Canadian parents clearly value childhood vaccinations, considering them at least as important as a proper diet and exercise for keeping children healthy. And, parents are very concerned about vaccine-preventable diseases – considering many of them very serious conditions and ones that their children are likely to contract if not immunized against them. The result is that, for the most part, parents are ensuring their children get the standard vaccinations – and many are getting recently introduced vaccines and/or are interested in learning more about new vaccines for children. Only five percent of parents feel there is no need for their child to be vaccinated.

While a small proportion of parents have concerns over the safety of vaccines, for the most part parents rate childhood immunizations very safe – in fact, six in ten deem them very safe. Furthermore, the vast majority of parents consider immunization very beneficial for their children. And it's not only the children who stand to benefit. Parents report missing an average of more than six days of work or other commitments in a typical year due to ear infections. Parents also see the big picture, recognizing vaccinations as a means of preventing illness and thereby easing the burden on the healthcare system.

Virtually all parents say they would pay out of their own pocket for a vaccination to protect their child, but they also feel very strongly that governments should fund all vaccines. Indeed, one in five parents say they consider non-government funded vaccines to be less of a priority for their children, indicating the impact of government funding on the adoption of new vaccinations. To further illustrate this point, only one in five recall having ever been recommended a vaccination for their child that is not covered by the government. This would suggest that Canadian parents often do not have access to important new vaccines not covered by the government.

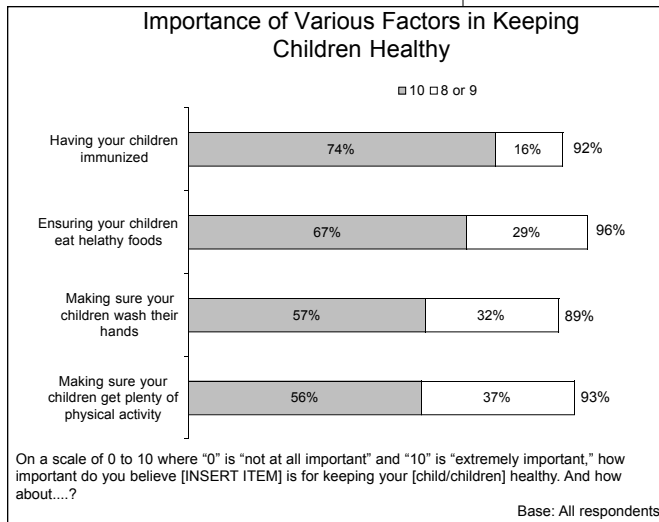
Research Methodology

This document summarizes the findings of Canada's largest ever survey of Canadian parents on their attitudes toward childhood vaccinations.

All data for this research were collected by Ipsos-Reid via 15 minute telephone interviews with parents of children under the age of seven. A total of 1,500 interviews were conducted between May 23rd and June 17th, 2001. A sample of this size carries an associated margin of error of ± 2.5 percentage points, nineteen times out of twenty. Respondent sample was drawn from Ipsos-Reid's national panel which pre-identified respondents as having children in the target age range. Final data were weighted to reflect the population of parents of children under the age of seven according to 1996 Census figures.

The Findings

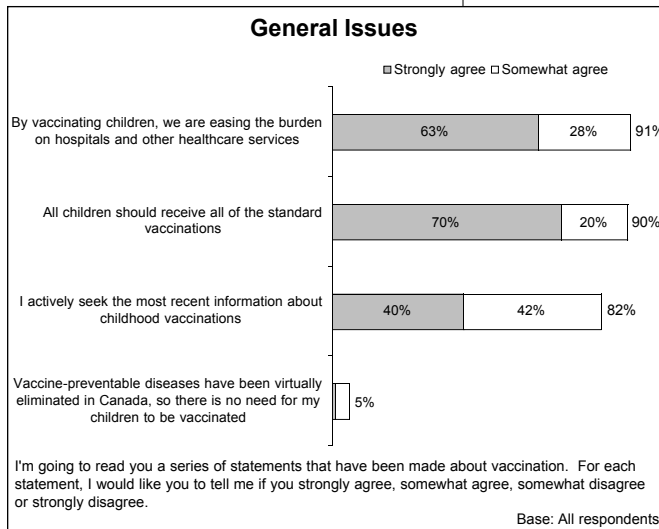
Parents Rate Immunizations Most Important Factor in Keeping Children Healthy



On a scale of 0 (not at all important) to 10 (extremely important), 74% of parents rate having children immunized as a full "10" in terms of its importance in keeping children healthy. Looking at the proportion who rated each of the four factors tested a solid "10" or "extremely important", immunization beats out ensuring children eat healthy foods (67%), making sure children wash their hands (57%), and making sure children get plenty of physical activity (56%).

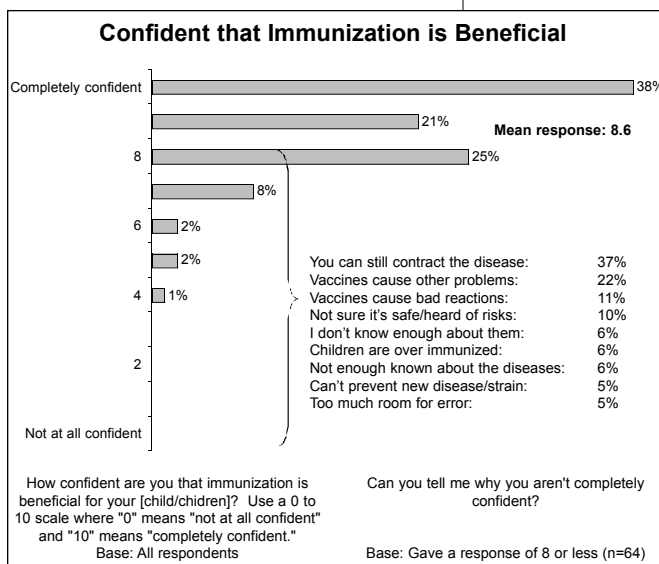
Nine out of Ten Agree Vaccination Best Method of Prevention

Nine in ten parents (91% total agree, 63% strongly agree) believe that vaccinating children can prevent illness and ease the burden on hospitals and other healthcare services. And, a solid majority (90%) feel that all children should receive all of the standard vaccinations (70% strongly agree). Only 5% of parents believe that vaccine-preventable diseases have been virtually eliminated in Canada, so there is no need for my children to be vaccinated.



Six in Ten Very Confident that Immunization is Beneficial

With an average response of 8.6 out of 10, parents clearly view childhood immunizations as beneficial. In fact, the majority give a response of 9 (21%) or 10 (38%) on a 10-point scale where a 10 means 'completely confident'. Another 25% gave a response of 8 out of 10.



Among the minority who gave a response of 8 or less, the number one reason for being less than completely confident that immunization is beneficial is the sense that "you can still contract the disease" (mentioned by 37%). Others feel that vaccines cause other problems (22%), or bad reactions (11%).

Prevention is Most Important Factor in Deciding to Get a Vaccination

On an open-ended basis, parents cite prevention (21%) more frequently than any other as being the most important factor they considered when deciding to get a

specific vaccination for their child. A physician's recommendation and safety are priorities for 15% of parents, followed by efficacy at 12%.

Meningitis Ranks Highest on Concern over Contracting and Disease Severity

Three-quarters (72%) of parents rate meningitis an 8, 9 or 10 on a scale of 0 (not at all concerned) to 10 (extremely concerned) in terms of how concerned they are about their child contracting the illness. Hepatitis B ranks second with 58% giving a response of 8 or higher. Rather surprisingly, 49% of parents indicate a high level of concern over their child contracting polio. Of the six diseases tested, whooping cough (41%), measles (35%) and chicken pox (21%) recorded the lowest levels of concern.

Mirroring parental concern over contracting these illnesses, meningitis is perceived as the most serious condition with 95% of parents rating it an 8 or higher, followed by hepatitis B (84%), polio (82%), whooping cough (44%), measles (35%) and chicken pox (16%). These results suggest that concern over a child contracting an illness is closely linked to how serious parents believe a particular illness is.

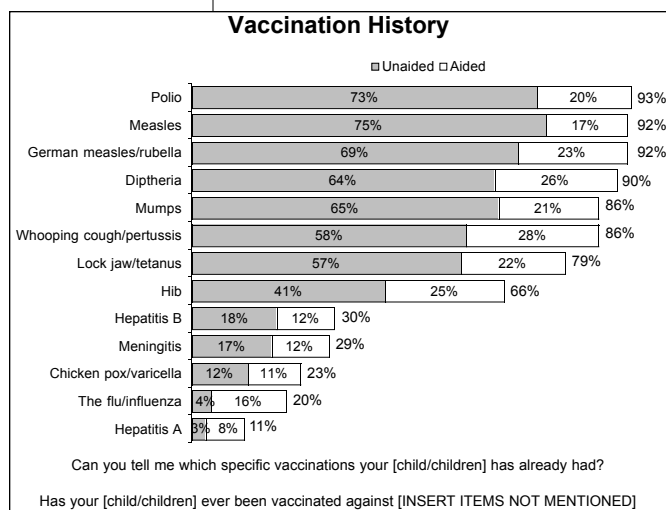
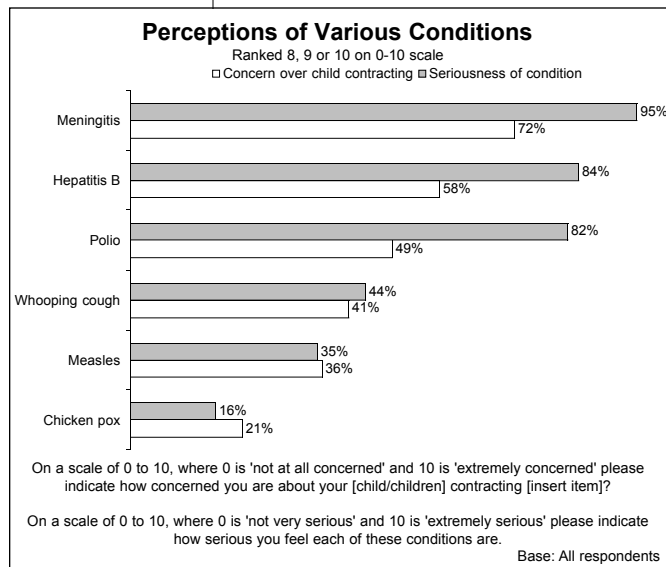
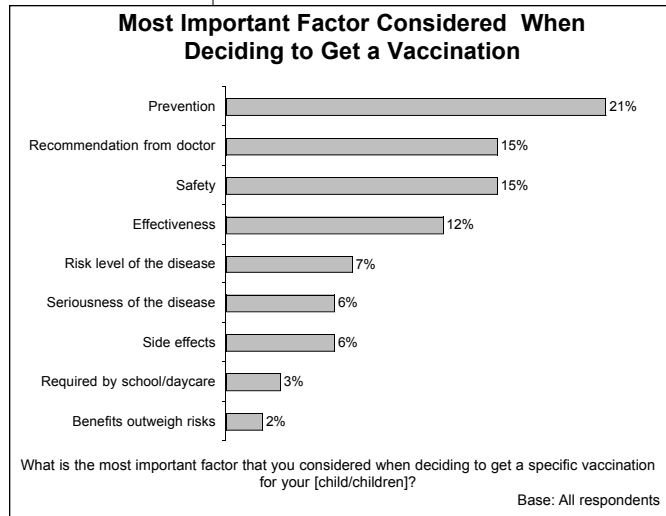
34% of Parents Have Missed Work or Other Commitments Because of Child's Ear Infection

On average, parents are missing 6.5 days of work, school or other commitments in a typical year due to a child's ear infection or ear tube procedure.

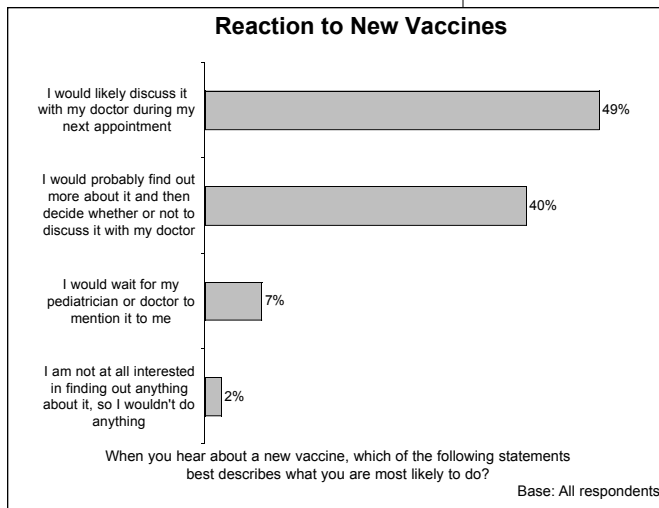
Most Parents Adhere to Children's Vaccination Schedule

At least two thirds, and as many as 93% of parents have already had their children vaccinated against polio, measles, german measles, diphtheria, mumps, whooping cough, lock jaw, and Hib.

No more than 30% and as few as 11% have vaccinated against hepatitis B or A, meningitis, chicken pox, or influenza, and no more than 17% report plans to get any of these vaccinations for their children.



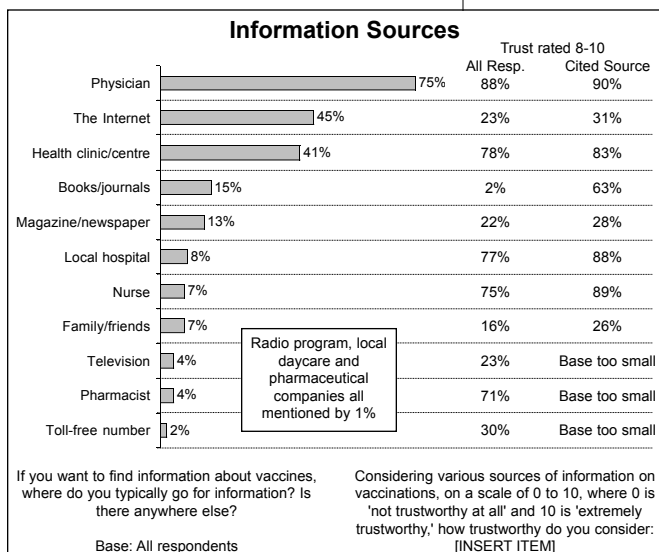
In every case, the reason cited most frequently for not getting or planning to get a specific vaccine is that it was not mentioned by a doctor/pediatrician.



Conditions like whooping cough, chicken pox and influenza are viewed by some as not being serious enough to warrant vaccination. Rather alarmingly, an average of about 10% of parents are not getting vaccines because they don't believe their child is at risk for highly contagious diseases like whooping cough, meningitis, hepatitis B or influenza.

Majority of Parents are Interested in New Vaccines

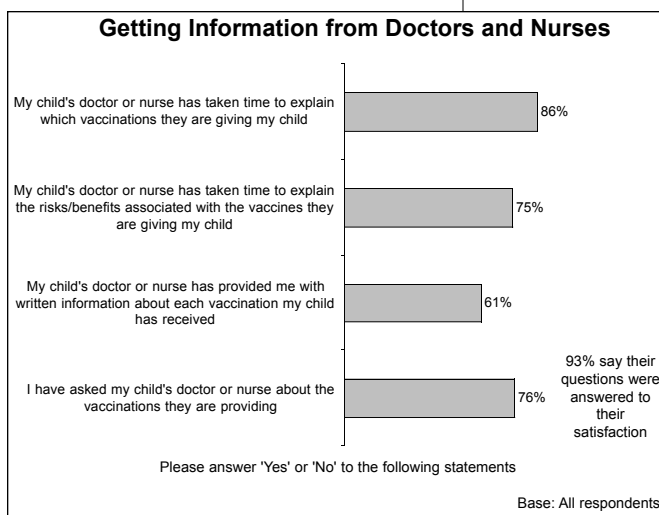
Half (49%) report that, if they heard about a new vaccine, they would likely discuss it with their doctor during their next appointment. Four in ten (40%) would find out more about it on their own and then decide whether or not to discuss it with their doctor.



Only one in ten say they would either wait for their doctor to mention it to them (7%) or that they are not at all interested in finding out about new vaccines (2%).

Physicians the Most Popular Source of Information on Childhood Immunizations

Three-quarters say they would go to their physician/pediatrician for information about vaccines. More than four in ten mention the Internet (45%) and health clinics (41%) as sources of information they would use.



When it comes to trustworthiness, the Internet falls short with only 23% giving it a trustworthiness rating of at least 8 out of 10. The most trusted sources of information are physicians (88%), health clinics (78%), hospitals (77%), nurses (75%) and pharmacists (71%).

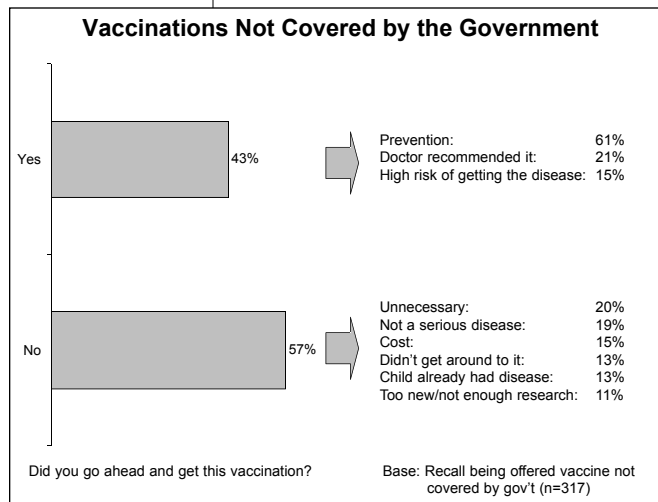
Physicians Play Important Role in Educating Parents

More than eight in ten (86%) of parents report that their child's doctor or nurse has taken time to explain which vaccinations they are giving, and another 75% say they are taking the time to explain the risks and benefits associated with the vaccinations they are giving. Six in ten (61%) have been provided with written information about each vaccination their child has received.

Parents clearly want information – three quarters (76%) have asked their child’s doctor or nurse about the vaccinations they are providing. Of this group, the large majority (93%) say their questions have been answered to their satisfaction.

Parents May Not be Getting Vaccines That Aren’t Covered by Government

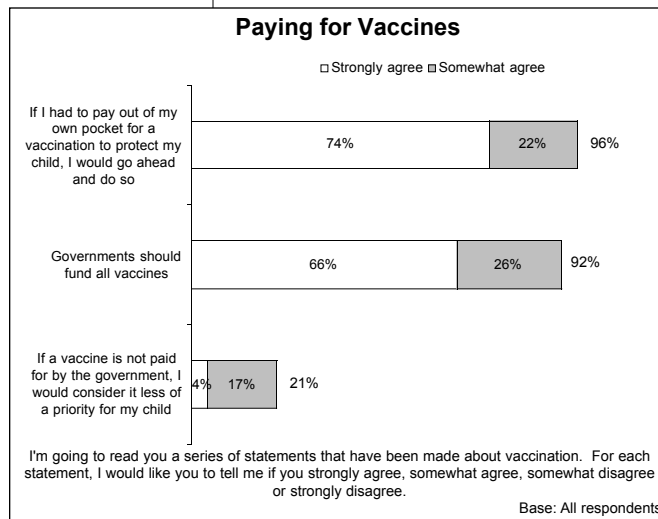
Only one in five (21%) respondents can recall having been offered a vaccination for their child that is not covered by the government. Of this group, most (57%) did not get this vaccination. For the most part, such vaccines were deemed unnecessary (20%), or for a disease that is not serious (19%). For one in seven (15%) the decision not to get a government-funded vaccine was based on cost.



Among those who went ahead and got the vaccination, the majority (57%) of those who have private drug insurance, paid for the vaccination through it.

Parents Will Pay for Vaccinations Out-of-Pocket if They Have to, but Feel Governments Should be Funding Them

Three-quarters of parents *strongly agree* that if they had to pay out of their own pocket for a vaccination to protect their child, they would go ahead and do so. Another 22% somewhat agree with this statement. Nonetheless, two-thirds *strongly agree* that governments should fund all vaccines – with a further 26% somewhat agreeing.



Only one in five (4% strongly agree, 17% somewhat agree) say they consider vaccines *not* paid for by the government less of a priority for their child. This suggests that fully four in five parents believe that government funding is an indication of a higher priority vaccine.