

# **ALBERTA'S MENINGOCOCCAL IMMUNIZATION CAMPAIGN**

## **An Overview and Assessment**

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**April to September 2001**

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## EXECUTIVE SUMMARY

A province wide meningococcal immunization campaign took place over a six-month period between April 1 and September 30, 2001 throughout Alberta. The campaign had a preventive, proactive focus designed to protect two-to-24 year olds.

### Campaign Overview

At the completion of four phases of meningococcal immunization provided in specific areas of the province and as a result of a sustained high rate of IMD, a province wide immunization campaign was introduced. This campaign, involving the 17 RHAs in Alberta and FNIHB, used the meningococcal bivalent (A, C) polysaccharide vaccine. The two-to-24 year old age groups were the target population and implementation occurred at the same time as phase five in the Capital Health Region. Phase six was implemented in the Capital Health region over four days, to allow new residents to be immunized, as well as those who missed previous opportunities.

### Campaign Assessment

Feedback indicated the experience of the early campaign phases were extremely helpful in preparing and implementing the province wide program. Regions expressed appreciation for the expertise shared by AHW and Capital Health (and surrounding regions) in particular.

#### 1. Results Achieved

- During the province wide campaign, an immunization rate of 68 per cent (414,573/606,766) was achieved.
- The overall immunization rate of 76 per cent was achieved for all phases of the target population that included more than 750,000 individuals.
- This rate was nine per cent below the 85 per cent target set at the beginning of the province wide campaign, but is considered high for a campaign of this type.
- The low turnout for the 20-to-24 year old age group (36 per cent) reduced the overall immunization rate.

#### 2. What Worked Well For Participants During the Provincial Campaign

- Regular communication via teleconferences.
- Collaborative decision-making process.
- Established clear roles and responsibilities.
- AHW responsiveness.
- Atmosphere of collaboration and teamwork.
- Standard information and promotional materials.
- Unique strategies used in local promotions.
- Orientation programs for implementation teams.
- Provincial call centre preparedness.
- Provision of vaccine and administrative funds by AHW.

### **3. Areas For Improvement During the Provincial Campaign**

- Need for an easy-to-use template on communication materials.
- Possibility of a provincially led media campaign.
- More ready-made forms, such as a standard consent form.
- Consistent application of funding.
- Need for more technologically advanced data collection systems.

### **4. Suggested Strategies For Future Campaigns**

- Collaboration and teamwork through regularly scheduled teleconferences, collaborative decision-making, clear roles and responsibilities and being responsive.
- Communication and promotion using standard information templates and promotional materials province wide.
- During implementation, provide orientation programs, as many consistent ready-made forms as possible, encourage and share unique strategies, have a provincial call centre, provide provincial support and funding on a consistent basis, have efficient information-gathering systems, establish regular reporting schedules and include FNIHB in the planning and implementation.
- Be generally prepared, live with limiting factors, address completion date issues early, establish a realistic implementation schedule for the regions and provide sufficient detailed information to the public to alleviate unnecessary concerns.

## **In Summary**

The completion of all six phases, including the province wide campaign, yielded the results anticipated. The incidence of IMD in Alberta returned to pre-outbreak levels, with a total of 23 reported cases in 2002 and 14 reported cases in 2003.

## An Overview

A province wide meningococcal immunization campaign took place over a six-month period between April 1 and September 30, 2001 throughout Alberta. This intervention was in direct response to a sharp and sustained rise of invasive meningococcal disease (IMD) among certain young age groups, despite completion of four previous phases in targeted areas within the province.

The campaign had a preventive, proactive focus designed to protect targeted groups. It was planned and implemented in a consultative, collaborative manner by Alberta Health and Wellness (AHW), all 17 regional health authorities (RHAs) and the First Nations and Inuit Health Branch (FNIHB) along with many community and health care partners.

The province wide campaign was phase five of a six-phase process that began in February 2000 and concluded March 2002. When considered along with other phases of area specific meningococcal immunization, 76 per cent of the target group (two-to-24 year olds) were immunized against meningococcal disease.

Information contained in this document was gathered and compiled through a series of interviews with medical officers of health (MOHs) of the RHAs and a teleconference with Communicable Disease nurse managers involved in implementing the program. Discussions with AHW staff involved in the process and a review of program documents associated with the campaign also contributed to this document.

The intent of this report is to summarize:

- Information of IMD incidence and its spread.
- Provide an overview of the campaign, its processes and results.
- Interpret results and lessons learned from the campaign that will assist in future campaigns.

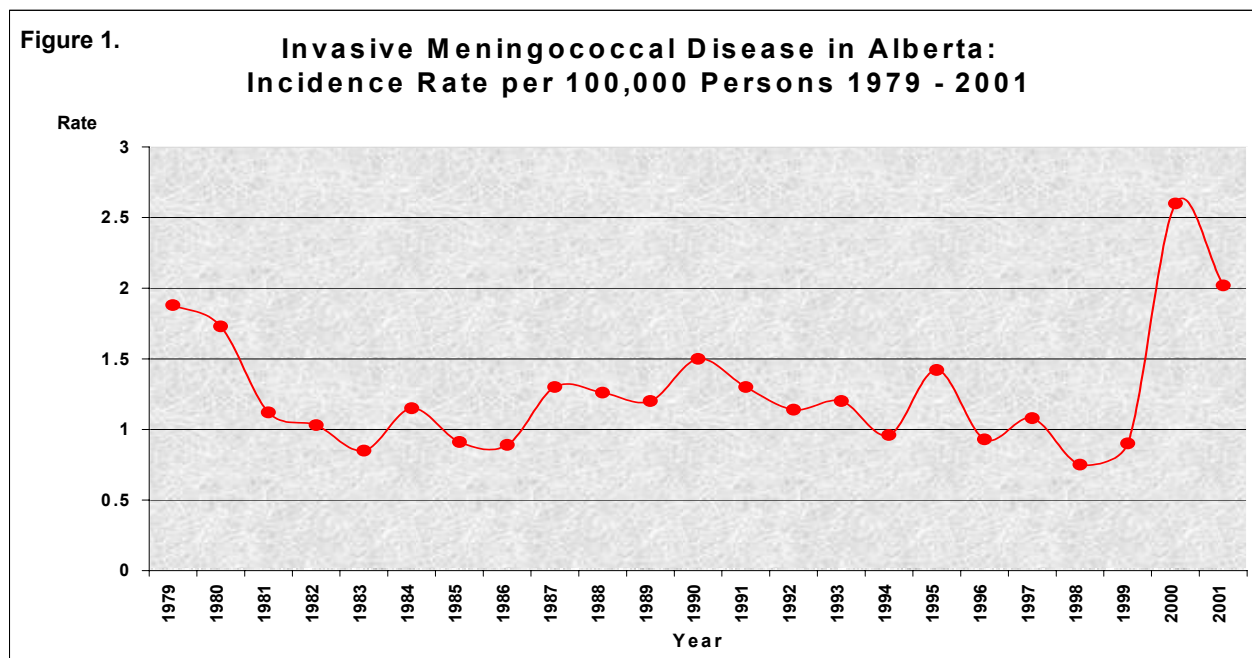
## BACKGROUND INFORMATION ON MENINGOCOCCAL DISEASE

Meningococcal disease is caused by the bacterium *Neisseria meningitidis*. This organism is generally harmless, inhabiting the noses and throats of healthy people for periods of weeks to months. Infrequently, the organism will invade the blood stream or lining of the brain, causing serious illness and sometimes death. When this occurs, it is known as IMD.

### Meningococcal Disease in Alberta<sup>1</sup>

Meningococcal disease is normally found in Alberta, and other parts of Canada, where periods of increased activity do occur without prediction or pattern. Outbreaks are rare in Canada, with most infections tending to occur as random, sporadic cases. Alberta experienced a significant increase in activity, first noted in Edmonton and area, beginning in the latter part of December 1999, primarily occurring in 15-to-19 year olds.

An outbreak was declared in January 2000, when the occurrence of IMD reached a rate of over 10 cases/100,000 population over a 3-month period. This rate was particularly high in persons aged 15-to-19 years in Edmonton and surrounding area. For the last 20 years, IMD had been occurring at an average annual rate of one case per 100,000 population in Alberta. A sharp increase occurred in December 1999, peaking at a provincial rate of 2.6 cases/100,000 (Figure 1).



Source: Communicable Disease Reporting System (CDRS), Health Surveillance, October 8, 2002

<sup>1</sup> Data contained in this report was obtained from Communicable Disease Reporting System (CDRS), Disease Control & Prevention, Alberta Health and Wellness.



## Regions Affected

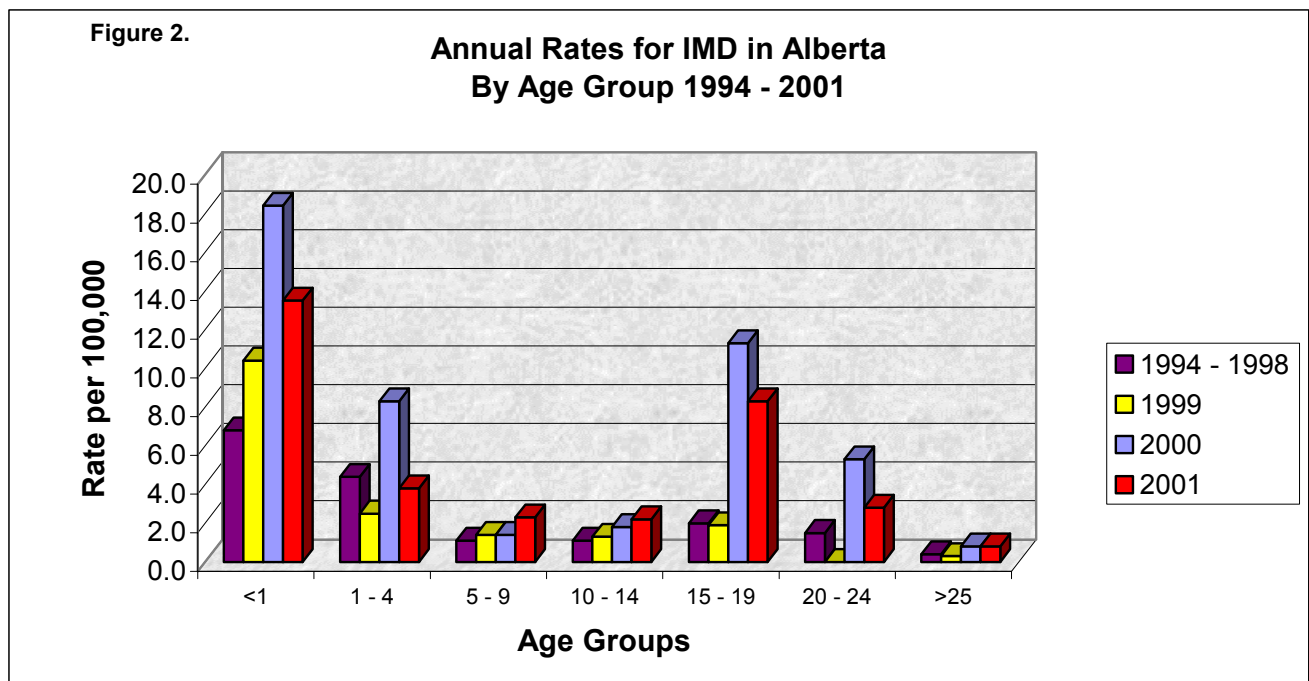
During the outbreak period, Capital Health reported disproportionate rates of disease compared to the rest of the province. Increased activity was also reported from surrounding health authorities, but to a much lesser extent. In addition, a cluster of IMD in teenagers occurred in the Calgary Health region at the end of 2000, and early 2001.

## Serogroups

There are several different strains of meningococcal disease, categorized into serogroups. The most common serogroups are A, B, C, W-135 and Y. Groups B and C are primarily responsible for most cases of the disease in Alberta and the rest of Canada. In 1999, prior to the onset of the outbreak, 42 per cent of IMD cases were due to serogroup C. This rose to 82 per cent in both 2000 and 2001, establishing itself as an outbreak strain.

## Risk Groups

Historically, the incidence in Alberta was highest among children less than one year of age (6.8), followed by children one-to-four years of age (4.4) and adolescents 15-to-19 years (2.0), as seen in Figure 2.<sup>2</sup>



Source: Mid-Year Population (1994-2001), Communicable Disease Reporting System (CDRS), Disease Control & Prevention, Alberta Health and Wellness, October 10, 2002

<sup>2</sup> Age-specific incidence 8-year average: 1994-2001.

During the outbreak period of 2000 and 2001, those less than one year of age experienced the highest rate of disease, followed by the 15-to-19 year olds, commonly seen during outbreaks of IMD. Rate of disease in the 15-to-19 year old age group was four to five times higher than expected levels. The third most significant age group affected was the one-to-four year olds, followed by 20-to-24 year olds. This rank ordering was consistent in both 2000 and 2001, with the rank order one having the highest incidence (Table 1).

**Table 1: Summary Profile of Top Five Age Ranking and Age-Specific IMD Rates for Alberta in 2000 and 2001**

Rank Order	Year 2000		Year 2001	
	Age	Age-Specific Rate	Age	Age-Specific Rate
1	<1	18.4	<1	13.8
2	15-19	11.3	15-19	8.3
3	1-4	8.3	1-4	3.8
4	20-24	5.3	20-24	2.8
5	10-14	1.8	5-9	2.3

Source: Mid-Year Population (2000-2001), Communicable Disease Reporting System, Disease Control & Prevention, Alberta Health and Wellness, October 10, 2002.

## Disease Outcomes

A total of 140 cases of IMD were reported during the outbreak period of 2000 and 2001. Of those, 114 (81 per cent) were serogroup C during the outbreak period. There were a total of 131 cases that survived the disease, representing a survival rate of 94 per cent. Of those who survived, some experienced serious long-term complications including deafness, loss of limbs, marked scarring, and amputations of limbs.

Though there were fewer cases (62) reported in 2001, there were twice as many deaths (six), bringing the total deaths to nine during the two-year outbreak period. Seven of the nine deaths were the result of serogroup C infection, with an overall death rate of 6 per cent.

# AN OVERVIEW OF THE PROVINCE WIDE CAMPAIGN

## 1. Pre-campaign

A series of four area-specific meningococcal immunization phases beginning in February 2000, led up to the province wide campaign. These phases were prompted by a sharp increase in the incidence of meningococcal disease in specific areas.

The first two phases targeted the two-to-19 year old age groups, and occurred in the Edmonton area over an eight-day period. Phase three was introduced in October 2000, in the Edmonton area, expanding to include the 20-to-24 year old age group as a result of sustained high rates of IMD. During phase four, Calgary implemented an immunization program that preceded the province wide campaign and was directly linked to the decision to proceed with this immunization campaign province wide. In all cases, coordination by AHW and information sharing with all health regions were key elements during the phases of the campaigns.

In all areas of the provincial campaign, feedback indicated that what worked well from the Edmonton area experience in 2000, was used and contributed substantially to the success of the province wide campaign.

## 2. During the Campaign

In keeping with the decision to proceed with a province wide campaign, AHW procured the vaccine and each RHA and FNIHB planned for the implementation of this campaign.

### **PHASE FIVE**

***April 1 to September 30, 2001***

Implementation took place throughout the province, with a bivalent (A, C) meningococcal polysaccharide vaccine offered by all RHAs to all those two-to-24 years of age. Since a large part of the target population was already immunized in the Edmonton area during phases one to three, Capital Health only participated in the last 12 days of the province wide campaign (September 12 – 28, 2001).

## 3. Post Campaign

### **PHASE SIX**

***February 15 to March 1, 2002***

Implementation took place following completion of the province wide campaign and involved immunization of two-to-24 year olds during four, one-day clinics in Capital Health. Residents new to the region or those who missed previous opportunities could also be immunized.

#### **4. Associated Developments**

Another meningococcal immunization campaign for infants less than two years of age took place at the end of the province wide campaign, and subsequently led to a routine infant program.

##### ***Spring 2001***

A new vaccine (meningococcal conjugate C vaccine) was licensed in Canada. This vaccine protects infants less than two years of age from meningococcal serogroup C infections.

##### ***June 12, 2001***

AHW announced that a meningococcal conjugate C immunization program for children less than two years of age would begin November 2001, and was completed by March 31, 2002.

##### ***November 2001 – March 2002***

All RHAs in Alberta implemented this program for infants between two months and 23 months of age.

##### ***April 5, 2002***

AHW announced a routine meningococcal conjugate C vaccine program for all infants born on, or after September 1, 2001.

#### **5. Roles and Responsibilities**

**The Expert Advisory Committee on Outbreak Response** included the Provincial Health Office, Council of Medical Officers of Health, FNIHB Alberta, Advisory Committee on Communicable Disease Control, Provincial Laboratory of Public Health, and Health Canada.

- Reviewed the epidemiology of IMD in Alberta.
- Established criteria warranting the Calgary campaign and a province wide campaign.
- Determined the target groups and start dates for campaign.
- Established key messages for communications.
- Monitored confirmed case incidence data and public concern.

**Provincial Implementation Group** included the Provincial Health Office, Medical Officers of Health, Communicable Disease (CD) nurse specialists and/or manager(s) from each health region, communications representative(s) from each health region and AHW staff.

- Teleconferences to keep each other informed about progress, issues of concern, success stories for implementation strategies, etc.
- Planned the campaign and shared strategies within their own regions or departments.

##### **Alberta Health and Wellness**

- Coordinated the immunization campaign overall.
- Chaired conference calls with the Outbreak Response Team and the Provincial Implementation Group.

- Liaised with Provincial Laboratory to establish enhanced laboratory surveillance for suspect and confirmed cases of meningococcal disease.
- Secured vaccine supply.
- Led in-services for public health staff in the regions, developed practice guidelines for the program, including information about the vaccine, its handling requirements, administration criteria, fact sheets for informed consent and other program specific guidelines.
- Provided mass media campaign templates (posters, radio ads, newspaper ads, etc.) for use by the regions.
- Provided administration funding to regions to assist with campaign implementation.
- Announced the commencement of the provincial campaign to the media.
- Implemented a provincial call centre.
- The Provincial Health Officer responded to media inquiries in conjunction with health regions.
- Compiled provincial statistics and a summary report.

### **Regional Health Authorities and First Nations and Inuit Health Branch**

- Implemented the province wide campaign within their regions, including decisions on where the implementation sites were located (schools, community centres, clinics, etc.), requirements for staff, security and supplies with the exception of vaccine, organized on-site flow through process, determined consent required, maintained vaccine quality and determined impacts on other ongoing public health programs.
- Promoted campaign dates and times through local newspapers and news broadcasts.
- Communicated with regional stakeholders such as schools, physicians and politicians.
- Communicated with local media.
- Implemented a process for handling public inquiries.
- Provided weekly statistics on vaccinations that were administered, adverse reactions, vaccine supplies used and public calls received.
- Participated in information-sharing teleconferences by decision-makers and implementation groups.

## **6. Implementation Highlights**

### **(i) Vaccine Supply**

Prior to the provincial immunization campaign, the availability of vaccine was the determining factor for the campaign schedule. Since vaccine was available on a staggered basis, the campaign was scheduled to take place from April 1 to September 30, 2001. Deliveries were scheduled based on vaccine availability and began with regions where risk was higher.

AHW worked closely with the manufacturer and the Provincial Vaccine Depot (PVD) to ensure vaccine supplies were delivered on a timely basis. Nighttime receipt of vaccine supplies to the depot from the European manufacturer was common. The PVD brought in extra packing teams and enlisted the aid of local couriers to make deliveries twice a day.

## **(ii) Regional and First Nations and Inuit Health Branch Liaison**

Unlike usual practice with other vaccine programs, AHW supplied the meningococcal vaccine to targeted individuals on reserves. The most efficient way to distribute the vaccine and account for use was to have distribution occur entirely through public health staff in the regions. This was a first-time experience for all involved, and the process varied among regions. In some cases, the region provided the vaccine and the FNIHB staff administered it. In other cases, regional public health staff and FNIHB staff worked together to administer doses in both the regions and on reserves.

FNIHB staff were included in the in the province wide decision-making process and implementation teleconferences throughout the campaign.

## **(iii) Clinic Sites**

Each region made its own decision regarding location of the clinics. In many cases, regions focused primarily on schools, and completed the process before the summer. In other cases, community-based clinics were held, supplemented by public health unit clinics, and special visits to universities and colleges.

## **(iv) Consent Issues**

Each RHA, including FNIHB, was responsible for determining its own process for obtaining consents. They developed their own forms (often in collaboration with other regions or based on feedback from Capital Health's experience). Informed consent was required for all ages, with parental/guardian consent required for children up to age 16 years and for children with special needs.

## **(v) Communications and Promotion**

Public health and communications staff in all regions used innovative strategies to promote the campaign to target audiences. The foundation for the promotional campaign included the following materials developed by AHW:

- Fact sheets about the disease, vaccine, and possible reactions after immunization, for informed consent.
- Posters, newspaper advertisements, faxable flyer, radio advertisements – with a theme of *“spread the word, not the disease”*

Most regions implemented a multi-faceted communications plan, including:

- Newspaper and radio advertisements.
- Posters in schools, community locations, health clinics, etc.
- Take-home information sheets for students at schools.
- A message was left on the public health clinic phone line.

Some of the more innovative strategies used by regions included:

- Sandwich boards outside clinics and in rural areas (complete with sandbags for windy regions).
- Collaboration with community health representatives and immigrant services to reach target groups that did not speak/understand English.
- Advertising on aboriginal radio stations.
- Telephone fanout system that sent a phone message about clinics on residents' phones.

- Bag stuffers in grocery stores, liquor stores, etc.
- Leaflets and posters left at bars (for 20-to-24 year old target group), delivered by hired companies, rugby teams, etc.
- Utility bill inserts.
- Transit advertisements.
- Mobile van that visited bars and community festivals, to promote and provide vaccinations on the spot.
- Collaboration with other health providers/units in the region (i.e. dental).
- Radio and TV talk shows and programs (with one TV show even demonstrating the vaccine being given).
- Attendance at youth-centred events, such as trade shows, job fairs and entertainment events.

#### **(vi) Call Centres**

The *Provincial Meningococcal Information Line* began on February 5, 2001, in response to the Calgary Health's immunization campaign and the upcoming provincial program. AHW and contracted employees staffed the provincial call centre. The Call Centre began at 8 a.m. to 8 p.m. weekdays, and 12 noon to 7 p.m. on weekends. This schedule was later changed due to a lower volume of calls. Instead the staff checked the line regularly and responded to voice mail messages accordingly. The provincial call centre was discontinued at the end of April 2002, following completion of the infant meningococcal conjugate vaccine program.

Regions organized themselves for responding to calls in different ways, based on size and geography. In the larger centres, such as Capital Health Region, the existing phone line, *Capital Health Link*, was used. In some smaller regions, each community's public health office handled calls. Phone messages outlining clinic times and dates were commonly used. Clinic dates and times were also posted on the Alberta government's web site.

#### **(vii) Crowd Control and Security Issues**

There were no reports of security challenges or the need for crowd control.

## CAMPAIGN ASSESSMENT

The MOHs, the CD nurse managers in the regions and staff at AHW provided insights that will assist future campaigns of this type. This section of the report outlines results achieved, identifies what worked, and reflects on what constitutes a successful campaign.

Many participants' felt that the lessons learned in the previous phases of the immunization campaign still held true. Many of these lessons were taken into consideration when planning for this province wide campaign.

### 1. Results Achieved

Together, all phases of the immunization program for the targeted groups (two-to-24 year olds), including the province wide campaign, achieved an immunization rate of 76 per cent. Although lower than the 85 per cent target originally set, the result was still considered high for a campaign of this type. If the 20-to-24 year old age group was removed, the overall immunization rate was 79 per cent.

The immunization rate for the province wide campaign (April 1 to September 30, 2001) was 68 per cent (phase 5).

The reported rate of adverse reactions following immunization during all phases was 0.03 per cent (217 incidents out of 758,523 immunizations). The reactions were mild and all individuals recovered fully.

### 2. What Worked Well During the Province wide Campaign

Many individuals interviewed felt that most of the successful strategies learned from the 2000 mass immunization campaign experience were positively applied to the province wide campaign. They are outlined below.

#### Collaboration and Teamwork

- **Establish regular communication mechanisms, such as teleconferences.**

Without fail, the regular teleconferences were the most often-mentioned positive experience from the provincial campaign. Both at the senior decision-making level, and the implementation team level, participants appreciated the opportunity to keep up-to-date, problem solve on issues and hear success stories that they could then adapt for their own circumstances.

"The Province has been faithful to keep us in the loop – and that's appreciated," said one participant. Another commented, "I also found the teleconferences very helpful to share experiences and solutions."

Teleconferences started out weekly, moved to biweekly and then monthly, as the process became more routine. Timely circulation of minutes and regular newsletter distribution were also mentioned as useful ways to keep the groups informed.



- **Engage in collaborative decision-making processes.**

The process used to establish the criteria for a targeted and province wide campaign as decided by the Expert Advisory Committee on Outbreak Response, worked well. When the time came, people could easily understand and support the decision. “We had good preparation. I was comfortable with the decision because I participated in developing the criteria,” noted one MOH.

- **Establish clear roles and responsibilities.**

The need to clearly define roles and responsibilities was again emphasized. This was quite clear in the province wide campaign, with AHW responsible for policy and consistency of messages, and regions responsible for the operations portion of the campaign.

- **Maintain ongoing responsiveness.**

AHW was generally seen to be responsive to the needs and concerns of the regions. This was demonstrated by the department’s attentiveness to the need for a campaign in the Calgary Health Region, and by their response to Capital Health’s call for a meningococcal conjugate vaccine program for all infants. AHW also was seen to be responsive to such things as problems with the vaccine vials.

“When they became aware of problems with the vaccine, they met with the manufacturer’s representatives from Germany” said a nurse manager in a region.

Although AHW made an announcement for a routine meningococcal infant program after interviews for this report were complete (April 5, 2002), participants considered this to be a sign of responsiveness. During interviews, a number of MOHs and nurse managers had expressed the need for the program to be ongoing.

- **Foster an atmosphere of collaboration and teamwork.**

Many participants felt the province wide campaign provided a good opportunity to strengthen ties between the health regions and AHW. In addition, new relationships were forged.

As one regional nurse-manager said, “The joint staffing with FNIHB staff was a real bonus for both parties.” Collaboration was also enhanced within regions between the schools, community groups, and other health professionals.

### Communication and Promotion

- **Develop standard information and promotional materials.**

The preparation of a template of materials by AHW was appreciated. One MOH commented that provision of such materials is “absolutely an important” responsibility of AHW.

A nurse manager said, “I also really liked the provincial approach via media, posters, fact sheets. The idea of giving consistent messages by developing provincial information sheets, radio spots, etc. was great.”

### 3. Areas For Improvement

A number of areas where improvements could be made were highlighted by those interviewed. They are outlined below.

- **Develop Standard Templates.**

Technical difficulties and messaging with some of the “template” communication materials provided by AHW were noted by a number of nurse-managers. Comments included: formats used for radio and newspaper ads did not universally suit everyone; posters could have been more colorful and upbeat (especially for the 20-to-24 year old age group); the main message could have been more direct (“Get the Shot”). Timeliness also could have been improved in some cases. Some participants wondered whether the addition of television advertisements would have been beneficial and whether ‘new media’ such as web sites, links and secure sites could have been used more extensively. Information for health care professionals, such as fact sheets on adverse reactions, also would have been useful.

- **Consider the possibility of a provincial media campaign.**

One region questioned the cost-benefit of the media campaign undertaken by each region to inform target groups about the campaign. Another participant suggested that a province wide campaign by AHW (perhaps including television) might have been more efficient. In questioning the effectiveness of a costly mass media campaign, one MOH suggested it would have been useful to see the cost per client calculated for each region, along with an outline of promotional strategies used.

- **Consider a separate teleconference group for communications officers.**

Although communications personnel appreciated being involved in the regular implementation teleconferences, there was some suggestion that efficiency may be increased if communications held their own updates. In this case, good liaison with the nurse managers involved with the program would be required so communications would be included if a death or other urgent situation occurred. If such liaison did not exist, separating the communications department could produce its own difficulties.

- **Organizers must also be prepared to “change gears”** as circumstances change.

- **Use of an electronic bulletin board** was suggested as a way to efficiently share information in times of non-urgency.

### 4. Suggested Strategies for Future Campaigns

The interviews conducted provided an opportunity to identify strategies for future immunization campaigns and are outlined below.

- **Provide orientation programs for implementation teams.**

Training programs developed by AHW (two days for the polysaccharide phase and one day for conjugate phase) were mentioned as effective. The programs should include a train-the-trainer process and a comprehensive binder of information.

- **Provide as many consistent ready-made forms as possible.**  
A standard consent form provided by AHW would have been useful.
- **Encourage sharing of unique strategies for implementation.**  
The unique strategies used by the RHAs and FNIHB to reach target groups shared through teleconferences were often highlighted as being particularly successful. Even though some strategies reached only small numbers (such as the mobile van or rural sandwich boards), each was considered important. Feedback showed that a diverse marketing strategy was required, particularly for the hard-to-reach groups such as 20-to-24 year olds. A survey of clients in the Calgary Health region showed many different strategies were involved in informing people.
- **Develop plans for a provincial call centre.**  
AHW staff felt that arrangements for the provincial call centre worked well, including information binders, orientation session, flexibility for staffing, availability of a registered nurse with other non-healthcare staff, and assistance by other departments.
- **Provide provincial support and funding on a consistent basis.**  
Regions appreciated that AHW supplied the vaccine and provided some implementation funding.

As one MOH said, “We were thrilled that the department recognized the funding needs of the regions.”

A list of what could be submitted for reimbursement was suggested, as was some up-front funding. Others questioned whether the funding formula should be based on a ‘per dose’ administered or per capita.

- **Develop efficient information-gathering systems.**  
Technology should be used to make data collection less time-intensive. A number of regions mentioned they would like to see the tracking systems become more computerized and therefore, more efficient. It appeared that information systems were not sophisticated enough to handle those requirements. Some participants envisioned the benefits of a system with bar-coded vaccine, personal health cards, etc.
- **Establish regular reporting schedules.**  
Most regions recognized the value of weekly statistical reports (numbers of doses of vaccine distributed and administered, number of adverse reactions, etc.). It was suggested Wednesday would be a better report-in day than Monday. Again, participants felt that an electronic system would be helpful.
- **Establish a dedicated centre for staffing within regions.**  
In large regions, the presence of a dedicated centre for staffing was seen to be required. This centre would provide orientation, scheduling, payroll, liaison with human resources and union involvement. The need for clearly defined roles, and for one person with overall responsibility for the campaign, was highlighted.

- Involve the First Nations and Inuit Health Branch.**  
 The FNIHB appreciated being involved in all decision-making process and implementation discussions around the provincial campaign. The new approach of vaccine supply coming from RHAs, and in some cases, jointly immunizing people on reserves or within the health regions, met with mixed reviews. In some cases, the collaboration worked well; in others, it was less successful. In most circumstances, FNIHB would prefer to coordinate its own vaccine supply and implementation.
- Be prepared to live with limiting factors.**  
 The type of vaccine vial available for all meningococcal polysaccharide phases was a limiting factor. Only 50 dose vials were available from the manufacturer. These required special adapters to withdraw the vaccine, were difficult for the user, and caused wastage. Given the restraints on the available product, there appeared to be few options available, except to make the best use possible of the vials.
- Prepare for closing date issues.**  
 All areas experienced difficulties with the ‘end’ dates for various phases of the campaign. No matter how long the campaign, or how extensively it was advertised, some members of the public were not aware of it until after the fact. This was problematic in rural areas. Participants generally agreed on the following:

  - Be clear about deadlines and age eligibility dates in all communication, both with staff and the public.
  - Establish a policy and stick to it.
  - Consider having a six-month ‘grace’ period after the ‘end’ date, when people could be vaccinated in public health units on a non-urgent basis. Vaccine supplies would have to be made available for this option.
  - Proactive consideration and clear policy direction is required for such issues as handling relocated or transient individuals.
- Establish a realistic implementation schedule and communicate the reasons for it.**  
 Given the limited availability of vaccine and resources, immunization clinics had to be staggered. This led to the perception that one community is being favored over another. Feedback indicated that it is best to establish a realistic schedule and to fully explain to staff, other professionals and the public why and how the schedule was determined. (For example, one small region stretched itself to begin immunization clinics at two centres at the same time; in the future they would focus on one clinic at a time, and communicate the reasons why it was arranged the way it was.)
- Provide sufficient detailed information to alleviate unnecessary concerns.** Some confusion developed within the general public about the different types of meningococcal infections and types of vaccines. For the educated public, sufficiently detailed background information must be available upon request. Sufficient clarity and description must be provided throughout (for example, routine childhood immunization with *haemophilus influenza* type B conjugate (Hib) vaccine did not provide protection against meningitis for the current meningococcal infections).

## SUMMARY

In addition to previous campaigns, the proactive, preventative nature of the province wide meningococcal immunization campaign yielded the results anticipated. The incidence of IMD in Alberta has returned to pre-outbreak levels, with a total of 23 reported cases in 2002 and 14 cases in 2003. Of the 996,921 Albertans eligible for the meningococcal polysaccharide vaccine, 758,523 (76 per cent) were immunized. Despite many opportunities provided, the low uptake in the 20-to-24 year old age group (36 per cent) reduced the overall immunization rate in Alberta. If that age group had not been included in the target group eligible, the immunization rate would have been 79 per cent for all phases of the campaigns. In any event, this rate is considered high given the complexities of campaigns of this type.



## **APPENDIX A**

# **Alberta's Meningococcal Immunization Campaign By Phases**

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## Alberta's Meningococcal Immunization Campaign by Phases February 15, 2000 to March 1, 2002

	Phase	Location	Age Eligible	Number Immunized	Eligible Population	Immunization Rate
Pre	1 Feb 15-25, 2000	Edmonton, St. Albert, Counties of Parkland, Leduc, Strathcona, Sturgeon	15-19	55,913	68,568	81%
Pre	2 Feb 23-28, 2000	Edmonton, St. Albert, Fort Sask., Oneway, Counties of Parkland, Leduc, Strathcona, Sturgeon and Crossroads and Reserves.	2-19	152,841	186,316	81%
Pre	3 Oct 19-24, 2000	Edmonton, St. Albert, Fort Sask., Oneway, Counties of Parkland, Leduc, Strathcona, Sturgeon and Crossroads and Reserves.	2-19 plus 20-24	53,753 13,690	54,912 64,062	61%
Pre	4 Feb 6-24, 2001	Calgary Health Region	16-20	57,368	69,199	82%
	Mar 31-Apr 6, 2001	Capital Health Region	20-24	2,587	43,500	6%
During	5 Apr 1-Sep 30, 2001	<b>Provincial Campaign</b>	<b>2-24</b>	<b>414,573</b>	<b>606,766</b>	<b>68%</b>
	Sep 17-28, 2001	Capital Health Region	30 mon-24 yr	3,283	40,913	8%
Post	6 Feb 15-Mar 1, 2002	Capital Health Region	35 mon-24 yr	4,515	36,398	12%
	1-6 Feb 15, 2000 - Mar 1, 2002	All Campaigns	2 - 24	758,523	996,921	76%

Source: Alberta Health and Wellness, Disease Control & Prevention, March 31, 2002



## **APPENDIX B**

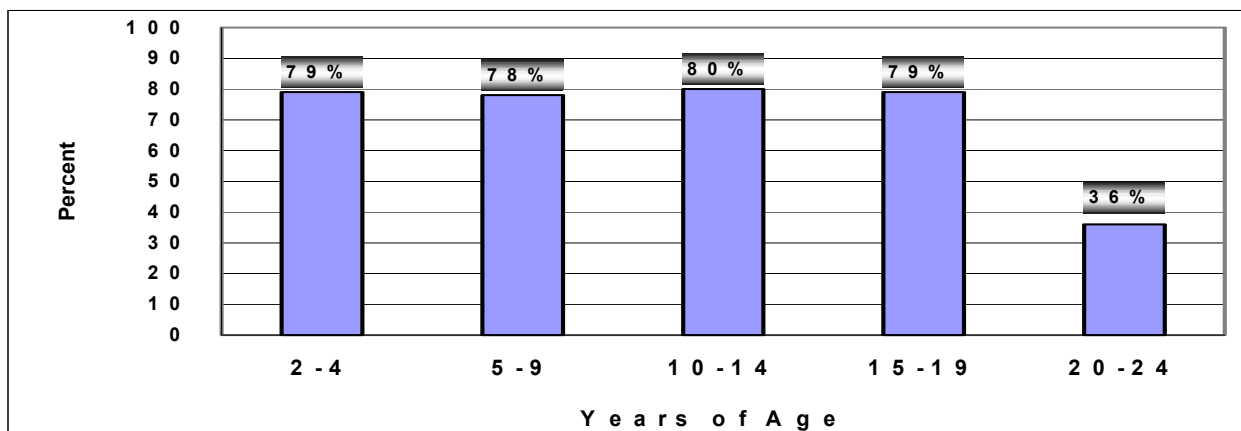
### **Alberta's Meningococcal Immunization Rates By RHA and Age Group**

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## Alberta's Meningococcal Immunization Rates by RHA and Age Group: February 15, 2000 to March 1, 2002

RHA	2 to 4 years	5 to 9 years	10 to 14 years	15 to 19 years	20 to 24 years	Total	Minus 20-24 yr olds
Chinook	79%	70%	79%	76%	53%	71%	76%
Palliser	71%	88%	92%	73%	28%	71%	82%
Headwaters	79%	98%	103% <sup>1</sup>	82%	28%	78%	92%
Calgary	80%	78%	78%	92%	35%	72% <sup>2</sup>	82%
RHA #5	83%	92%	97%	78%	32%	78%	88%
David Thompson	84%	88%	87%	87%	40%	77%	87%
East Central	85%	77%	79%	67%	39%	72%	80%
Westview	84%	78%	78%	70%	28%	74%	85%
Crossroads	84%				24%	73%	84%
Capital	104%					88%	104% <sup>1</sup>
Aspen	68%	82%	90%	83%	28%	73%	82%
Lakeland	88%	69%	72%	50%	23%	60%	67%
Mistahia	74%	84%	84%	68%	41%	70%	78%
Peace	77%	80%	82%	69%	35%	69%	77%
Keeweenok	78%	76%	75%	65%	40%	68%	74%
N. Lights	59%	76%	87%	41%	22%	57%	67%
Northwestern	71%	77%	78%	61%	43%	67%	72%
<b>Provincial Totals</b>	<b>79%</b>	<b>78%</b>	<b>80%</b>	<b>79%</b>	<b>36%</b>	<b>76%</b>	<b>79%</b>



<sup>1</sup> Indicates new residents to RHA since the beginning of the campaign in February 2000.

<sup>2</sup> Inclusion of the Calgary-funded October 2001 Meningococcal Polysaccharide Immunization Program increases the immunization rates to:

2-4 yrs (87%), 5-9 yrs (84%), 10-14 yrs (86%), 15-19 yrs of age (95%) and 20-24 yrs of age (40%).

### Limitations

- Immunization rates do not account for clients being immunized out of region or for post secondary students going to school out of their region of residence.
- This information is aggregate data submitted by RHAs over a two-year period. It does not include nominal data submitted as individual immunized events.
- Some RHAs were able to offer vaccines over a longer time period than others.
- Individuals immunized outside the publicly funded program are not included in the statistics presented in this report (e.g. purchased vaccines)

Source: Alberta Health and Wellness, Disease Control & Prevention, March 31, 2002



# **APPENDIX C**

## **Sample of Materials**

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# Parent – Student Fact Sheet

## — Meningococcal Infection

### **What is meningococcal infection?**

A meningococcal infection is caused by a bacteria which can produce two serious diseases: meningococcal meningitis and meningococemia. Meningitis is an inflammation or infection of the membrane which lines the brain and spinal cord. Meningococemia is a more severe infection involving the blood and many parts of the body.

### **How is this infection spread?**

The disease is spread to others through direct contact with droplets from the nose or throat (saliva) of an infected person. Kissing, sharing of eating or drinking utensils, cigarettes or other close contact can increase the risk of transmitting the bacteria. Generally, there is no increased risk from normal casual contact such as being in school or on the same bus or airplane as an ill person, or visiting the home or friends of those persons identified as direct contacts of an ill person. In rare instances there is an increase in incidents in certain age groups for reasons that are not well understood.

### **Who contracts meningococcal infections?**

Most people exposed to the bacteria do not become infected, and even if infected, the majority of people do not develop any disease or symptoms. In a small number of these people however, the bacteria are able to invade the body and produce meningitis or other serious infections. Although the disease can develop in all age groups, those most commonly affected are children under 5 years of age and young adults of 15 to 25 years of age.

### **What are the symptoms of meningococcal infections?**

Early symptoms of a meningococcal infection are similar to those of other infections such as the flu and include fever, headache, nausea, vomiting and generally feeling unwell. These symptoms are usually more severe than those commonly associated with the flu and progress more rapidly to a severe headache, stiff neck, vomiting and/or a reddish- purplish tiny bruise-like skin rash. In young children, the most significant symptom may be a marked behaviour change, such as sleepiness, irritability or excessive crying. People who have had a sudden onset of these symptoms should contact their doctor immediately or go to a hospital emergency for diagnosis.

### **What happens when an individual becomes infected?**

When a case of meningococcal infection has been reported, public health nurses carry out contact tracing of the family, friends, schoolmates and workmates of the individual infected. People who have had contact with the saliva or nasal secretion of a person infected may be provided with an antibiotic called Rifampin to reduce the spread of the infection. Casual contacts, who include contacts at work and school have no greater risk of being infected.

## How can meningococcal infection be prevented?

Avoid contact with saliva by not sharing drinks, cigarettes, lipstick, lip balm, straws, water bottles and kissing.

## Is there a vaccine to prevent meningococcal meningitis?

Presently, there is a vaccine that will protect against the most common strains of meningococcus, but it is normally only recommended in outbreak situations or for travel to areas of the world where high rates of the disease are known to occur.

## Who should be vaccinated?

When unusually high numbers of cases are found, or in an outbreak situation, public health officials will choose the targeted age group to be vaccinated, based on who is at risk. The decisions will be widely publicized in the news media. For other individuals, the vaccine is not necessary.

## Is the meningococcal vaccine safe?

Yes. Some persons may have mild pain, swelling and redness on their arms for a few days after the immunization was given. Occasionally, persons may have more general symptoms that include chills, tiredness, headache and fever. However, you should contact your local public health office or your doctor if you or your child have any severe reactions following immunization.

## Who should not get the vaccine?

- Individuals who have received the vaccine in the last 5 years.
- Individuals who are sensitive to thimerosal (mercury derivative) should not receive the vaccine.
- Individuals with a history of anaphylaxis to meningococcal vaccine.

## What should you tell the public health nurse before getting the vaccine?

- If you are, or think you might be pregnant.
- If you or your child receive immunosuppressive therapy.
- If you or your child are HIV positive.
- If you or your child are ill with anything more severe than a cold.
- If you or your child had a previous dose of meningococcal vaccine.

There is no harm in receiving the vaccine even with these conditions. However, it is very important to talk to the nurse prior to receiving the vaccine.

## Is this a new disease?

Meningococcal disease is not a new disease and remains relatively rare. It is important that you see a doctor immediately if you or your child develops the symptoms which include severe headache, stiff neck and/or a reddish-purplish tiny bruise-like skin rash.

## What should you do if you have a local reaction to the vaccine?

- Apply a cool moist towel where the needle was given.
- Use acetaminophen (eg. Tylenol) if a fever (over 38°C/100.4°F) and/or pain develops.

**Note:** Aspirin (ASA) is not recommended for persons less than 18 years of age.

## Meningococcal Radio Ad SCRIPTS

Please Note:

- For those tagging their own information, your radio commentator may wish to add “Spread the Word, Not the Disease” time permitting. This is consistent with the poster and newspaper advertisements.
- If translating into another language, please keep message as close as possible to the English version.

### **Target Group 1: Youth between 18 – 24**

**Script 1:** Male voice – about 22 –24. Mature but youthful. Calming and clear.

Male:

- If you are under 24 years old, Alberta Health and Wellness has some important messages for you about Meningitis.

Meningitis is an infection caused by bacteria that are transmitted in saliva.

To protect yourself, get vaccinated and avoid contact with other people’s saliva by not kissing, sharing food, drinks, cigarettes, lipstick, and water bottles.

TAG: The (*health authority*) is offering free vaccination clinics so call XXX-XXXX for dates and times of the clinic in your area.

Distribution: Tags were created for Aspen, Chinook, Crossroads, David Thompson, East Central, Peace Health and Westview with the information each provided.

Male Generic:

- If you are under 24 years old, Alberta Health and Wellness has some important messages for you about Meningitis.

Meningitis is an infection caused by bacteria that are transmitted in saliva and can produce two rare but serious diseases of the blood and brain.

To protect yourself, get vaccinated and avoid contact with other people’s saliva by not kissing, sharing food, drinks, cigarettes, lipstick, and water bottles.

TAG: The province is offering free vaccination clinics so call your local health unit for location, dates and times.

Distribution: This may be used by stations covering a wide broadcast area and may overlap various RHA areas. It is also going to Northern Lights (no dates, time etc. available at time of production).

## Meningococcal Radio Ad SCRIPTS

### **Target Group 2 – Parents / Family**

**Script 2:** Female voice – about 40, mature. Calming, clear and informative.

#### Female:

- Alberta Health and Wellness has important Meningitis information concerning all Albertans aged 2 to 24.

Meningitis is an infection caused by bacteria transmitted in saliva that can produce two rare but serious diseases: Meningococcal meningitis and meningococemia.

To minimize the risk to your family take advantage of the province's free immunization clinics for those aged 2 to 24.

Tag: Call (*health authority*) at XXX-XXXX for dates, times of clinics in your area.

Distribution: Tags were created for Aspen, Chinook, Crossroads, David Thompson, East Central, Peace Health and Westview

#### Female Generic:

- Alberta Health and Wellness has important Meningitis information concerning all Albertans aged 2 to 24.

Meningitis is an infection caused by bacteria transmitted in saliva that can produce two rare but serious diseases: Meningococcal meningitis and meningococemia.

To minimize the risk to your family take advantage of province-wide immunization clinics for those aged 2 to 24.

TAG: The province is offering free vaccination clinics so call your local health unit for location, dates and times.

Distribution: This may be used by stations covering a wide broadcast area and may overlap various RHA areas. It is also going to Northern Lights (no dates, time etc. available at time of production).

## The Bear Radio

Reach Plan = 25% equal rotation throughout each daypart – min. 5 days.

Karl Stark (486-9146) could do the following:  
All ads would be 30 seconds

1 ad per day for 5 days – Karl would match 1 free ad for each purchased ad so

- 10 Ads Monday thru Friday: 3 Breakfast  
2 Mid day  
3 Afternoon Drive Time  
2 Evening

Plus he'd throw in:

- 2 Ads on Sat. daytime
- 2 Ads on Sat. night – Midnight to 5:00am (Sun)
- 2 Ads on Sun daytime
- 2 Ads on Sun night – Midnight to 5:00am (Mon.)

18 ads total X 9 weeks (May & June) = 162 Ads Total

Reach plan would have been 45 Ads (1 per day for a week = 5 X 9 Weeks) or

	45 Ads = \$4,455.00	cost is \$99.00 per ad
Karl will do	162 Ads = \$4,050.00	cost is \$25.00 per ad

More coverage because of the nature of the ad (Karl would view it similar to a public service spot and he has "inventory" space he would fill with free-be ads on Sat and Sunday.)



# meningitis

ALBERTA MENINGOCOCCAL IMMUNIZATION 2001

spread the word  
not the disease

## PROVINCIAL MENINGOCOCCAL IMMUNIZATION PROGRAM

### VACCINATING 2 - 24 YEAR OLDS

- This is an early intervention program to protect the age group at highest risk and to prevent the spread of meningococcal disease in Alberta.
- The vaccine provides 80 to 85 percent protection against contracting meningococcal disease.
- The vaccine is safe with few side effects, unless you have been vaccinated in the last five years. Vaccinating a second time is not recommended.
- Your regional health authority and Alberta Health and Wellness will vaccinate this group as a precautionary measure.
- Please make every effort to be vaccinated in the health region you reside.

### VACCINATIONS FOR 2-24 YEAR OLDS WILL BE AVAILABLE PROVINCE-WIDE ON VARIOUS DATES

#### WHAT IS MENINGOCOCCAL DISEASE?

An infection caused by a bacteria that can produce two serious diseases:

- Meningococcal meningitis, an inflammation of the covering of the brain and spinal cord.
- Meningococemia, a more severe infection of the blood and many parts of the body.

#### PROTECT YOURSELF

- You can contract the meningococcal bacteria by having close contact with an infected person through activities like kissing, sharing water bottles, cigarettes and lipstick. Protect yourself by limiting or avoiding these activities.



for more information call the provincial meningitis information line at  
1-866-411-6578

or visit the alberta health and wellness website at  
[www.health.gov.ab.ca](http://www.health.gov.ab.ca)

REGIONAL HEALTH AUTHORITIES: CHINOOK, PALLISER, HEADWATERS, CALGARY, HEALTH AUTHORITY #5, DAVID THOMPSON, EAST CENTRAL HEALTH, WESTVIEW, CROSSROADS, CAPITAL, ASPEN, LAKELAND, MISTAHIA, PEACE, KEWEETINOK LAKES, NORTHERN LIGHTS, NORTHWESTERN.





# PROTECT YOURSELF

from



***Meningitis***  
It's a **SERIOUS DISEASE**

**S**pread the word  
...not the *disease*

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# PROTECT YOURSELF

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