A B S T R A C T

Issues: Cases of discrimination occur in Quebec daycares towards HIV-positive children as well as HIV-negative children born to seropositive parents.

Objectives: Offer three-hour information sessions on bloodborne diseases, specifically HIV and hepatitis B, universal precautions, as well as legal, ethical and psychosocial aspects of HIV/AIDS to: 1) ensure that daycare workers have basic medical information on transmission of HIV and other bloodborne infections, 2) review basic hygiene including universal precautions, 3) link daycares to HIV/AIDS resources in their communities, and 4) facilitate the development of pro-active daycare policies for the integration of HIV-positive children.

Results: In total, 108 information sessions were given, in which 349 daycares participated. Results show an important difference in terms of knowledge and attitudes of the participants. Of the daycares which participated in the information sessions, 37% have developed their own pro-active policy.

A B R É G É

Enjeux : Des cas de discrimination surviennent dans les garderies du Québec à l'égard des enfants séropositifs ainsi que des séronégatifs nés de parents séropositifs.

Objectifs : Organiser des sessions d'information de trois heures sur le VIH et l'hépatite B, sur les précautions universelles de même que sur les éléments juridiques, éthiques et psychosociaux du VIH/sida, afin de : 1) s'assurer que le personnel des services de garde possède les connaissances médicales de base sur la transmission du VIH et d'autres infections transmissibles par le sang, 2) revoir les données concernant l'hygiène de base, incluant les précautions universelles, 3) identifier des personnes-ressources afin qu'elles apportent un appui soutenu aux services de garde dans leurs régions, et 4) faciliter l'élaboration des politiques pro-actives, pour qu'aucun enfant ou travailleur de service de garde ne fasse l'objet de discrimination.

Résultats : Au total, 108 sessions d'information ont eu lieu, auxquelles 349 services de garde ont participé. Les résultats révèlent une différence significative sur le plan des connaissances et des attitudes des participants. Parmi les services de garde qui ont participé à une session d'information, 37 % ont élaboré leur propre politique pro-active de santé.

Knowledge and Attitude Assessment of Quebec Daycare Workers and Parents Regarding HIV/AIDS and Hepatitis B

Anne Renaud, BA,¹ Bill Ryan, MEd, MSW,² Diane Cloutier, RN,³
Anna Urbanek, RN,⁴ Nancy Haley, MD³

Quebec is home to more than half of all Canadian children living with HIV and AIDS, and close to 85% of these children live in Montreal.¹ Isolated cases of discrimination have occurred in Quebec towards seropositive children, as well as seronegative children born to seropositive parents. Due to lack of information, some daycare settings may still discriminate against children with HIV infection and refuse them access because of their serostatus. HIV/AIDS education of daycare workers and parents is an important step toward integration of HIV-infected children in daycare settings.

OBJECTIVES

In January 1995, 966 licenced Quebec daycares and 132 family daycare agencies were sent a written invitation to participate in a three-hour information session. The main objectives of this daycare project were to:

1. ensure that daycare workers have basic medical information on the modes of transmission of HIV (human immunodeficiency virus) and HBV (hepatitis B virus), as well as information on HIV infection in children;
2. review basic hygiene including universal elementary precautions;

3. sensitize boards of administration, composed primarily of parents, to the issues of HIV/AIDS in daycare settings. This would facilitate the development of pro-active daycare policies so that no child or daycare worker is discriminated against on the basis of their serostatus;
4. link daycares to HIV/AIDS resources in their communities.

METHOD

Each session was limited to a maximum of 30 people to foster group participation and discussion, and all were held in the evening to facilitate the participation of parents, particularly those on administrative boards and parent committees. Nine Montreal-based nurses facilitated the information sessions. All had experience with treating children or adults infected with HIV/AIDS. When possible, sessions were held in the CLSCs (local community health clinics) to strengthen the relationship between the CLSC and the daycare centres, and each CLSC was asked to identify a community health nurse who would attend the session. This nurse would subsequently provide ongoing post-session support, as needed.

Before the sessions, all participants were asked to fill in a pre-test questionnaire to assess their knowledge and attitudes regarding HIV/AIDS and hepatitis B. During the first part of the session, participants were given medical information about the seroprevalence of HIV and hepatitis B, the evolution of these infections, their modes of transmission, and elementary precautions to prevent their spread. Finally, participants

1. McGill AIDS Centre, Montreal
2. Batshaw Youth & Family Centres, Montreal
3. Ste-Justine Hospital, Montreal
4. Montreal Chest Institute, Montreal
Correspondence and reprint requests: Anne Renaud, McGill AIDS Centre, 3755 Côte Ste-Catherine, LDI 318, Montreal, QC H3T 1E2.
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were presented with hypothetical daycare scenarios which could lead to possible concern about HIV or HBV transmission (i.e., sharing a toothbrush, a bite with breakage of the skin). The session finished with "Come Sit by Me", an educational video about AIDS and HIV infection for small children ages 4 to 8.

The second part of the training session dealt with the legal, ethical and psychosocial aspects of HIV infection. Participants were asked to form small groups and to answer a question of a legal, ethical or psychosocial nature. In addition to this exercise, the facilitator explained the difficulties that people experience living with HIV. Furthermore, they stressed the importance of maintaining and respecting confidentiality if a parent discloses the serostatus of their child. Daycare workers were also given possible recourses in the event that the disclosed information was too great a burden for them to deal with. At the end of each session, participants were asked to complete a post-test questionnaire (identical to the pre-test) to evaluate changes in their knowledge and attitudes regarding HIV/AIDS and hepatitis B, as well as an evaluation form. Three months after the information session, follow-up tests were sent to participants to evaluate changes in their knowledge and attitudes since they attended the information session.

RESULTS

In all, 108 information sessions were given between January and June 1995, in which a total of 312 daycares and 37 family daycares participated. On average, 21 people attended each information session for a total of 2,279 participants (Table I).

The pre- and post-test questionnaires were almost equal in the number of respondents. The follow-up questionnaire results were based on a much smaller sample however. A questionnaire was mailed to all regions three months after the information session and only 602 people returned the questionnaire for a response rate of 26% (Table II).

Medical knowledge

Medical knowledge about HIV and hepatitis B transmission was relatively

TABLE I
Daycare Participation by Region

Region	Daycares Which Attended	Total Daycares on Territory	Participation Percentage
1-Bas St-Laurent	20	25	80
2-Saguenay/Lac St-Jean	18	30	60
3-Quebec	17	121	14 †
4-Mauricie Bois-Francs	31	56	55
5-Estrie	26	49	53
6-Montreal	74	397	19 *
7-Outaouais	5	39	13 †
8-Abitibi-Témiscamingue	9	15	60
9-Côte Nord	3	11	27
10-Northern Quebec	2	6	33
11-Gaspé-Iles-de-la-Madeleine	5	15	33
12-Chaudières-Appalaches	10	46	22
13-Laval	16	45	36
14-Lanaudière	23	42	55
15-Laurentides	16	47	34
16-Montérégie	74	154	48
Total	349	1098	32

* If we include the 111 daycares which participated in the 1993 Montreal pilot project, total participation for the Montreal region is 47%.

† Community groups in the Quebec City and Outaouais regions had offered information sessions to daycare centres prior to this project. This explains the low participation rates.

TABLE II
Participants in Information Sessions

	Pre-test (N=2279)		Post-test (N=2207)		Follow-up Test (N=602)	
	n	%	n	%	n	%
Daycare Worker	1564	69	1376	62	364	60
Daycare Parent	234	10	214	10	64	11
Local Public Health Nurse	96	4	92	4	12	2
Unidentified	385	17	525	24	162	27
Total	2279	100	2207	100	602	100

TABLE III
Medical Knowledge Results

Question	Percentage of Correct Responses		
	Pre-test (N=2279)	Post-test (N=2207)	Follow-up Test (N=602)
1. Children infected with HIV are easily recognized. (*NO)	99	99	99
2. The hepatitis B virus can be transmitted by a toilet seat. (*NO)	92	98	96
3. The AIDS virus (HIV) is easier to catch than the hepatitis B virus. (*NO)	89	97	98
4. All children born to mothers with AIDS will be infected with HIV. (*NO)	80	93	91
5. Contrary to AIDS, hepatitis B is easily treated with antibiotics. (*NO)	51	64	48
6. Cleaning a surface stained with blood with Javel water kills all viruses, including the AIDS virus and hepatitis B. (*YES)	46	91	85
7. Daycare workers must use gloves when changing the diaper of a seropositive child. (*NO)	20	41	30

* Indicates correct answer.

good. A high percentage of respondents knew that children with HIV are not easily recognized (Q1, 99%), that the hepatitis B virus cannot be transmitted

by a toilet seat (Q2, 92%), and that HIV is not easier to catch than HBV (Q3, 89%). These percentages did increase slightly at post-test and remained consis-

TABLE IV
Policy Knowledge Results

Question	Percentage of Correct Responses		
	Pre-test (N=2279)	Post-test (N=2207)	Follow-up Test (N=602)
1. A daycare can, by resolution of the Board of Directors, refuse a child because he or she is seropositive. (*NO)	70	98	95
2. Daycare administrators must inform parents of the presence of a child infected with HIV in their child's group. (*NO)	61	99	97
3. A daycare can refuse to hire or can fire a worker when they find out that he or she is infected with the AIDS virus. (*NO)	81	99	98
4. Parents must notify the daycare worker if their child is infected with HIV. (*NO)	37	95	88

* Indicates correct answer.

TABLE V
Attitudes

Question	Percentage of Correct Responses		
	Pre-test (N=2279)	Post-test (N=2207)	Follow-up Test (N=602)
1. I feel ready to work with a child infected with HIV. (*YES)	56	86	88
2. I would allow my child to be in a group that includes a child who is HIV positive. (*YES)	55	82	86
3. A child infected with HIV represents a danger to the other children in the daycare. (*NO)	49	87	88

* Indicates correct answer.

tently high between post-test and follow-up (Table III).

Knowledge about how these infections present was good and improved after the information session. Over three quarters (80%) knew before the session that children born to mothers with AIDS will not necessarily be infected with HIV (Q4), and this increased substantially to 93% at post-test.

About half (51%) knew before the session that hepatitis B cannot be easily treated with antibiotics (Q5). This percentage rose to 64% at post-test and dropped to 48% at follow-up. We believe this is due primarily to confusion in terminology related to hepatitis B vaccination and antibiotic treatment for hepatitis B.

Knowledge on appropriate hygiene in a daycare setting was lacking and improved dramatically after the session. A little less than half (46%) knew that a bleach solution kills the AIDS and hepatitis B viruses

(Q6), but after the session, 91% responded correctly to this statement. This percentage decreased slightly at follow-up to 85%.

Very few respondents (20%) knew before the session that daycare workers do not need to use gloves when changing the diaper of a seropositive child (Q7). This figure more than doubled in the post-test, but was still only 41%. This figure dropped to 30% for the follow-up, however this may be attributed to the fact that many daycare workers are taught or choose to use gloves by personal preference. This is not required, unless there is the possibility of contact with blood or blood-stained body fluids that cannot be contained by another barrier method, or in the presence of dermatitis or hand lesions.

Policy knowledge

Levels of knowledge increased greatly from pre-test to post-test in this category (Table IV). More than two thirds (70%) of

respondents knew at pre-test that a daycare cannot refuse a child because he or she is seropositive (Q1) and most knew that a daycare cannot fire or refuse to hire a worker when they learn that he or she is HIV-infected (Q3, 81%). Correct responses in this category increased to 98% and 99%, respectively, at post-test. One half of respondents knew that daycare administrators do not have to inform parents of the presence of an HIV-infected child in their child's group (Q2). This proportion increased to 99% after the session.

The most important increase in policy knowledge occurred in response to the statement "Parents must notify the daycare worker if their child is infected with HIV" (Q4). Only about a third (37%) responded correctly before the session, but 95% answered correctly at post-test.

There was generally a small decrease in the percentage of correct answers in the follow-up questionnaire, but overall percentages were still very high (over 85%) for responses to all questions in this category.

Attitudinal questions

Attitudes changed markedly after the information session and persisted over time. Close to half the respondents at pre-test stated that they felt ready to work with an HIV-infected child (Q1, 56%) and that they would allow their child to be in a group with a child who has HIV (Q2, 55%). Both these figures increased substantially (to 86% and 82%, respectively) in the post-tests. Interestingly, the percentage of respondents who said they felt ready to work with a child infected with HIV (Q1) increased from 86% to 88% between post-test and follow-up, proportions which were much higher than the 56% response at the pre-test (Table V).

The percentage of participants who responded positively to the statement "I would allow my child to be in a group that includes a child who is HIV-positive" (Q2) also rose from 82% at post-test, to 86% at follow-up. Generally correct responses fall off somewhat from post-test to follow-up. At pre-test 49% knew that a child infected with HIV does not represent a danger to other children in the daycare (Q3). This percentage increased greatly after the session to 87%, and increased slightly at

follow-up to 88%. The fact that these two categories rose from post-test to follow-up indicates an improvement in attitudes related to the integration of HIV-positive children into daycares in Quebec.

CONCLUSION

Prior to the Quebec daycare intervention project, a pilot project was conducted on the island of Montreal in 1993-1994, during which time a child was expelled from a local daycare because she was HIV-positive. The extensive media coverage of this child's case resulted in an increase of 31% in the number of requests for the sessions, as well as an increase of 11% in parent participation.

In comparison with the results from the Montreal pilot project, parents and daycare workers in the Quebec project scored much higher in the percentage of correct responses, and demonstrated a greater openness and acceptance of HIV-positive children, although some daycares still believed they could refuse a child solely on the basis of his or her status.

The three-hour information sessions did not dispel all misconceptions and fears, however they did afford participants access to correct information and an opportunity to clarify many misconceptions regarding HIV/AIDS and HBV. In general, people needed to hear that it is acceptable to be fearful of these diseases, and to have their fears validated. This project helped them to express their concerns regarding HIV/AIDS and HBV and learn about how to prevent transmission of these infections. Participants acquired a clearer understanding of the importance of applying basic hygiene and universal elementary precautions in their daily routine, once they realized that they could be caring for

HIV- and/or HBV-infected children who had not yet been diagnosed or had chosen not to disclose their serostatus. Participants also realized that elementary hygiene should always be followed, not just in their work in a daycare setting. Parents were informed that the risk of transmission of these infections was not through daily contacts, but through risky sexual and drug use activities. This understanding made them more aware of the importance of early sexual health education for their children at home and in schools.

Two other objectives of the project were to identify HIV/AIDS and HBV resource people outside Montreal, and offer them tools to provide continued support to the daycares in their respective regions, as well as support them in the development of pro-active daycare integration policies. As a result of this intervention project, several regions are using the content of the information session and are now responding to requests from daycares on their territories. Although we cannot comment on the generalizability of these results, it is important to note that approximately one third of the daycares in the province of Quebec participated in a session (80% to 13% depending on the region)(Table I). In addition, 37% of the daycares who participated in an information session have developed their own integration policy for children or workers living with HIV.

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