# SEXUAL HEALTH PROGRAMS AT ONTARIO HEALTH UNITS

## Part A

## DOWNLOADING: FIRST-YEAR IMPACT, 1998

## Part B

## MOST EFFECTIVE COMBINATIONS

## OF SEXUAL HEALTH PROGRAM ELEMENTS, 1997

### AT ONTARIO BOARDS OF EDUCATION AND HEALTH UNITS

**RESEARCHERS**
**Deborah Hardwick, M.A., Maureen Jessop Orton, Ph.D., Emmanuel Koku, M.A.**

**Sexual Health Network Of Ontario (SHNO)**

**June, 2001**

# TABLE OF CONTENTS

**INTRODUCTION***

As of January 1, 1998, the Ontario Government transferred responsibility for public health funding down to municipalities. This study, conducted at the request of the Sexual Health Network of Ontario, examines the impact upon only three vulnerable programs: Family Planning, Sexually Transmitted Disease, and HIV/AIDS.

However, to expect municipalities to bear the total or even major financial responsibility for any public health program, is essentially counterproductive to achieving public health goals--to promote health and prevent disease. Unlike the provincial government, few municipalities are equipped for the task. Municipalities are extremely unequal in three crucial characteristics: in their poverty rate, which in turn is related to their incidence of various health and social problems, and in their property tax base which is their only tax resource for raising necessary funds. Moreover, municipal powers to adjust this tax rate, as needed, apply only to residential property. The Ontario government sets the tax rate for business property across the province.

In the local financial crunch, preventive programs quickly become low priority. We all lose. More people experience health problems and social crises.[1] Provincial and federal governments fail to use the well-documented cost-benefit effectiveness of public health programs to reduce provincial and federal expenditures on health treatment services and social welfare.

Just prior to the mid-1999 election, the Ontario government abruptly amended its new policy and assumed 50% of financial responsibility for public health programs. Previously it had paid approximately 75% of overall funding for the three Sexual Health programs. They gave back much less than they took away. The Family Planning program lost the most. It had received 100% provincial funding to promote equitable access across the province. It may still be necessary.

For this study we surveyed all health units concerning their programs of Family Planning, Sexually Transmitted Disease, and HIV-AIDS, in two successive years: in 1997 (prior to the download) and in 1998 (first year after the download). We received data for both years from 37 of the 42 health units (88%). The data allowed analysis for two complementary issues--hence this report is in two parts.

PART A, on immediate effects within health units from the download, analyses change in selected program elements from 1997 to 1998. These changes did not occur to the same extent at all health units. To clarify the pattern of change and facilitate understanding of the implications, we compared these changes between health units in three ways, grouping health units according to the following criteria:

---

1. Unplanned pregnancy may occur at any age. Pregnancy at age 17 or less is associated with higher health risks to both mother and child: preeclampsia, anaemia, urinary tract infection, postpartum hemorrhage (in the mother) and low birthweight (including preterm birth) which in turn has a higher rate of perinatal mortality or neuro-developmental impairments (Health Canada..Perinatal (2001). Untreated chlamydia may lead to pelvic inflammatory disease and infertility, increasing demand for expensive reproductive technologies. HIV/AIDS is life-threatening. Teen pregnancy and parenting interrupts a young woman's life development, and education which is related to avoiding poverty in both two-parent and one-parent families.

- Percentage of their population living in poverty, that is, with income below Statistics Canada's Low Income Cut-Off (LICO) level in 1995: LOW Poverty Group of health units (9-12% of their population below LICO), Medium Poverty (13-17%), HIGH Poverty (18-32%). See Table 1.

- Direction of change in their Sexual Health budget per capita over 1997/1998: decline, rise, not reported;

- Geographic location: Ontario's seven regions.

PART B reports on the most effective combination of Sexual Health program elements at boards of education and the health unit, associated with LOWEST local 1997 rates of genital chlamydia and adolescent pregnancy, within each of the three Poverty groups of health units. This analysis includes the cumulative effect of comprehensive Sexual Health curriculum at local boards of education by 1991, upon youth six years later in 1997, by then ranging in age from 13 to 20. These findings may be useful concerning prevention of other sexually transmitted diseases including HIV/AIDS, for which it is not feasible to develop rates at the local level.

Our findings should prompt serious concern. They also identify more effective program combinations. We offer a number of recommendations for immediate action.

The download to municipalities of greater responsibility for funding public health programs is a major, one-time event and it triggered extensive changes. The effects may be short and long-term, and upon both the service system and outcome rates in sexual health of the population. Previous Ontario studies allow us to view the immediate effects of the download documented here, within Ontario's historical trends in adolescent pregnancy rates in relation to developing preventive programs. There are important implications for the Ontario Ministry of Health and Long-Term Care, the Ministry of Education and Training, as well as other policy areas of both the Ontario and federal governments which affect population poverty rates. **Our response to the findings on effects of the download (Part A of this study) will determine our capability to respond to the findings on effective combinations of program elements (Part B).**

* These findings have been presented to:
Canadian Public Health annual conference, Ottawa, October 23, 2000.
Sexual Health Network of Ontario, regional meeting, Toronto, May 14, 2001.
Ontario Sexual Health Network annual conference, Guelph, June 18, 2001.

A preliminary report was emailed to the contact person of the Sexual Health program at all health units (requesting they forward a copy to their Medical Officer of Health) in mid-February, 2001, since findings were relevant to their budget process at that time.

**PART A**

**DOWNLOADING: FIRST-YEAR IMPACT, 1998**

**SUMMARY OF FINDINGS**
(See Detailed Findings following this section, and Tables and Figures in Appendix)

**1. The first-year of downloading (1998)** imposed severe pressures and weakened sexual health programs at many health units (HUs). Program budget per capita declined at a large majority of reporting health units. Almost half the health units experienced organizational restructuring, and half of these in conjunction with massive municipal amalgamation. A majority of the health units undergoing organizational restructuring, experienced decline in budget per capita. Among all reporting health units, decline in budget per capita was related to decline in rates of HIV tests and Sexual Health promotion activities.

**2. What was the extent of the budget cutbacks?**

Program budget per capita declined at 79% of health units (22 out of 28 who reported budget data for both years). The mean budget per capita for all 28 reporting health units declined from $3.23 in 1997 to $3.09 in 1998. This is a large one-year decline of 5.2% in budget per capita, compared to a decline of 4% over the previous five years 1992-97 (42 HUs). See Tables 3 and 2.

**3. Were program services affected at many health units?**

Among all reporting health units the next most frequent declines, after the budget per capita, were in HIV tests (50% HUs), health promotion activities (47% HUs), full-time staff-equivalents (39% HUs), clinic and counselling-only visits (32% HUs), and clinic hours (10% HUs). Service charges to clients increased at 32% of health units, further reducing access to the most disadvantaged. See Table 5 and Figure 12.

**4. Were there other factors, besides the downloading, which imposed change upon Sexual Health programs in 1998?**

As noted, almost half the health units (46%) had to cope with the massive impact of municipal amalgamation and/or restructuring of their health unit organization. In part, amalgamation and restructuring were intended to reduce administrative costs preparatory for the download of a range of programs (public health, social welfare, social housing, public transit). See Figure 15.

Some health units had to deal with cutbacks at other community agencies which increased the need or demand for health unit services. A few health units experienced organized opposition within the community to their sexual health programs, now more vulnerable via local pressure upon municipal councilors, resulting in major cutback of services at one health unit.

More health units moved to combine clinical services for all three Sexual Health programs--perhaps for financial as well as service reasons.

**5. Did budget cuts more frequently impact upon certain program elements?**

As noted, health units with declining budget per capita more frequently experienced decline in their rates of HIV tests and health promotion activities. Both declines in services are cause for particular concern. There is evidence that the incidence of HIV infection in Ontario has stopped declining, and

possibly increased in the past two years among adults, especially men who have sex with men (Remis et al, 2000; and Health Canada, Centre for Infectious Disease Prevention and Control, 2000). Even in 1997, preceding the download, the level of health promotion activities across all health units was considerably lower than the level of their clinic and counselling visits, and apparently declining. See Part B of this study concerning the importance of particular program elements. See Figure 13.

**6. Were budget cuts related to local level of population poverty?**

Both the frequency and severity of budget cuts determine the impact upon a service system across the province. Budget cutbacks occurred most frequently and deeply in the LOW Population Poverty Group. It had the largest mean decline in budget per capita (-16%), compared to –4% and -3% in the MEDIUM and HIGH Poverty groups respectively. This LOW Poverty group of eight health units most frequently experienced decline in its rates of HIV tests, clinic and counselling visits, and Sexual Health promotion. See Table 3 and Figure 14.

In 1997 the LOW Population Poverty Group had the lowest mean rates among adolescents of pregnancy (39.2 pregnancies per 1,000 females age 15-19) and genital chlamydia (628.3 reported cases per 100,000 females, 15-19). However, that adolescent pregnancy rate in 1997 was only just below their mean rate a decade earlier in 1986 (40.3). The large budget cuts in 1998 certainly were not justified by any argument of sufficient effectiveness. The cuts point to a problem with the 2005 rate objective for adolescent pregnancy, as set by the Ministry of Health and Long-Term Care Program Guidelines, 1997. See Table 9.

Organizational restructuring and especially municipal amalgamation occurred more frequently at health units in the HIGH population Poverty Group. A large majority of these 10 health units also experienced budget cuts, but they were smaller than in the LOW Poverty group. Consequently, decline in the various program elements never occurred in more than half the HIGH Poverty health units. In 1997 the HIGH Poverty Group had the highest mean rates among adolescents of pregnancy (46.8 pregnancies per 1.000 females 15-19) and genital chlamydia (1068.6 reported cases per 100,000 females 15-19). Moreover, 1997 rates of adolescent pregnancy are under-estimated and probably especially in this HIGH Poverty Group. See Data Caution 3. In the HIGH Poverty group, pregnancy and chlamydia rates among female adolescents were 19% and 70% higher, respectively, than rates of the LOW Poverty Group. If these structural changes (at municipal and/or health unit levels) fail to produce administrative cost-savings, then program budgets are likely to decline further. This could quickly become a crisis issue since rates of adolescent pregnancy and genital chlamydia at all age groups are so much higher in the HIGH Poverty Group of health units, which service over 44% of all the people in Ontario. See Tables 9, 10, 11 and Figure 15.

Consequently a greater proportion of health units in the LOW and HIGH Poverty Groups experienced major as well as multiple changes, although the major change in each group was different: deep budget cutbacks and structural changes respectively. The long-term effects on program elements and rates of genital chlamydia and adolescent pregnancy may become most visible in these two groups.

**7. Did these changes affect data recording for program planning and evaluation?**

These contractions in budget and staffing were accompanied by a decline in record-keeping, thus threatening capability to plan and evaluate programs. We used 1997 program elements in our analysis of Sexual Health outcome rates because data on 1998 programs were even less complete for more health units. However, our analysis would have benefited by more complete 1997 data and common categories on health promotion activities and clinic and counselling clients and visits. Incomplete records at many

health units on their Sexual Health promotion activities at schools, together with their comments, suggest a decline in such activities.

**8. How does this decline in programs fit within Ontario's policy commitment over the last twenty-five years to develop equitable access to Sexual Health services across the province?**

Beginning in 1975 the Ontario Ministry of Health moved beyond its focus on sexually transmitted disease, to promote sexual health more broadly, especially among women and youth, and provided 100% funding for public health units to establish family planning programs. Since 1978 the Ministry of Education has slowly expanded guidelines for the Health Curriculum, immediately mandating topics of sexually transmitted disease at grades 7 and 8, but only suggesting topics of adolescent pregnancy and contraception might be introduced at grades 9 or 10. In 1985 they developed and mandated a teaching module on AIDS. Finally, in 1998, the Ministry of Education and Training mandated topics of abstinence and contraception at grade 8.

During the first decade of these policies 1976-1986, when health unit family planning services developed much more rapidly than school Sexual Health education, the Ontario adolescent pregnancy rate declined by 23%. Moreover, one-fifth of Ontario localities demonstrated that with an even larger decline in rate of adolescent pregnancy (group mean decline -38%), simultaneously they achieved decline in both rates of birth to single adolescents (-20%) and abortion among all adolescents (-21%). See Table 9 and Other Data Sources 1.

However, the second decade saw a rise in Ontario's adolescent pregnancy rate between 1987-1995 parallel with economic recession and dramatically rising rate of family poverty. The most recent dip in adolescent pregnancy rate over 1995-1997 has accompanied an improving economy and small decline in the child poverty rate. However, this dip in pregnancy rates also reflects a loss of data on some births, due to a new user-fee for birth registration initiated by many financially overburdened municipalities. See Data Caution 3**.** Rates of genital chlamydia have continued to rise, partly due to improved diagnostic techniques. See Tables 9, 10 and 11.

**9. Which COMMUNITY characteristics currently are associated in Ontario with higher outcome rates in sexual health?**

In 1997, our benchmark year prior to the download, 19 health units with rates of adolescent pregnancy higher than the Ontario mean rate (41.7 pregnancies per 1,000 females age 15-19), had either a large population (400,000+) or a northern location -- and usually in combination with a higher rate of population poverty. The majority of health units with these higher rates of adolescent pregnancy also constituted the majority with higher rates of chlamydia among females, age 15-19. See Part B concerning PROGRAM characteristics currently associated with LOWEST outcome rates in each of the three Poverty Groups. See Tables 9,10 and 11.

**10.** These changes in budget, program elements and organizational structures all potentially affect the quality of programs and equitable access to them. Major initiatives at both local health units and the Ontario Ministry of Health and Long-Term Care are necessary to reverse current weakening of Sexual Health programs by the download. Financial, policy and organizational resources are essential to support staff in revitalizing development of more effective, evidence-based programs at all health units across the province.

**PART A. DETAILED FINDINGS (See METHOD)**
(Paragraph numbers relate to those in the preceding section, Part A, Summary of Findings)

**1.1** In the first year after downloading, 1998, the majority of health units experienced changes in one or two basic structures of their Sexual Health programs: decline in program budget per capita (22 of 28 health units reporting that data = 79%) and organizational restructuring (17 of 37 = 46%).

**2.1** For 1998, nine health units did not report their program budget--several due to integration within another program. Among the 22 health units with decline in budget per capita (79% of 28), all but one reduced their absolute budget dollars from 1997. This pervasive decline in budget per capita was not due solely to the small rise in provincial population (1.2%). Budget per capita rose at the remaining six reporting health units (21% of 28). The amount of change in budget per capita varied widely among health units. The largest decline was 55% and the largest rise was 45%. This increased the gap in 1998 between the lowest and highest program budget per capita: $1.17 and $6.88 respectively (a ratio just under 1: 6). See Tables 4 and 2.

**2.2** This one-year decline in budget per capita over 1997/1998 was greatest in the Southwest region (-15%). Two regions experienced a rise: Central West (+10%) and East (+15%). See Table 4.

**3.1** Among all reporting health units, decline was the most frequent change in rates of HIV tests (14 of 28 = 50%) and health promotion activities (16 of 34 = 47%), and in number of Full-Time Equivalents (FTEs, 13 of 33 = 39%). However, a rise was the most frequent change in the clinic and counselling visit rate (15 of 34 = 44%). "No change" was most frequently reported in the clinic hour rate (17 of 31 = 55%) and in number of charges for services to clients (10 of 28 = 36%). See Table 5 and Figure 12.

**4.1** Organizational restructuring at health units (17 of 37 = 46%) sometimes ensued from amalgamation of their municipalities (9 of 37 = 24%). Sometimes it resulted in less sexual health expertise in either management or front-line staff (8 of 37 = 22%). Both organizational restructuring and municipal amalgamation occurred more frequently in the HIGH Population Poverty Group (9 out of 10, and 6 out of 10, respectively).

Organized community support (13 of 37 = 35%) and changes to meet new provincial standards, usually in clinic hours, (14 of 37 = 38%), were most frequently reported by the LOW poverty group (4 out of 8, and 5 out of 8, respectively). This was the only group NOT to report cutbacks in other community services which increased the need/demand for health unit services. Overall there were three reports of organized local opposition, leading to major service cutback at one health unit. See Figure 15.

**4.2** By the end of 1998, 11 health units were delivering services concerning all three Sexual Health programs within a "combined clinic". However, apparently this structure has not proved satisfactory at all sites. In 1997, seven health units had reported combined clinics, four of these also maintaining one or more single-program clinics. In 1998, three of these seven health units reverted to all single-program clinics, but another seven health units changed to combined clinics.

We surveyed "contracted" clinics, services or centres in four health units. They appear very effective in reaching groups with identified needs, for example, youth, immigrant women, gays and lesbians.

**5.1** The direction of change in program budget per capita (decline or rise) appears to impact directly upon health promotion activities. Health units with declining budget per capita experienced most frequently a decline in rates of health promotion (12 of 22) and HIV tests (11 of 18), compared to the groups with rising budget or budget not known. However, health units with declining budget per capita did have a rise in clinic and counselling visit rate (8 of 20). Health units with rising budget per capita had a rise in both rates of health promotion (3 of 6) and clinic and counselling visits (4 of 6) but, curiously, the most frequent decline in number of FTEs (4 of 6). Health units with unknown change in budget per capita had the most frequent rise in health promotion rate (4 of 6), and the most frequent decline in clinic and counselling visit rate (4 of 8). See Figure 13.

**6.1** Nine health units in the LOW poverty group (mean poverty rate 11%) serve approximately 14% of the Ontario population. Twenty-two health units in the MEDIUM poverty group (mean poverty rate 15%) serve approximately 42%. Eleven health units in the HIGH population poverty group (mean poverty rate 24%) provide services to more than 44% of the Ontario population. See Table 1.

The LOW population poverty group of health units was the most volatile in changes to program elements. All reporting health units in the LOW poverty group had a cutback in budget per capita (5 of 5), and also most frequently (compared to the other two poverty groups) experienced decline in rates of HIV tests (6 of 6), clinic and counselling visit rate (5 of 8) and health promotion (4 of 7). The LOW poverty group also most frequently experienced a rise in number of staff FTEs (4 of 7), clinic hour rate (3 of 6) and number of services charged to clients (3 of 6).

A majority of health units in the MEDIUM poverty group had a cut (but smaller) in budget per capita (9 of 13). Compared to the other two poverty groups, they most frequently experienced decline in number of charges to clients (6 of 14) and rise in clinic and counselling visit rate (10 of 17).

A large majority of health units in the HIGH poverty group had a cut (but smaller) in budget per capita (8 of 10). Compared to the other two poverty groups, they most frequently experienced decline in staff FTEs (4 of 9) and rise in health promotion rate (5 of 10). See Figure 14.

**8.1** Compared to all other provinces over the period 1989-97, Ontario experienced by far the greatest increase in both number of poor children (+118%) and depth of household poverty. By 1997, one in five Ontario children was poor (19.9%). Ontario also had the largest "poverty gap"--the average poor household income was $7,634 below the Low-Income Cut-Off (Ross et al, 2000, p. 105, 167). Data on 1998 shows Ontario's child poverty rate declined to 17.5% (Campaign 2000).

**PART B**

**MOST EFFECTIVE COMBINATIONS
OF SEXUAL HEALTH PROGRAM ELEMENTS, 1997
AT ONTARIO BOARDS OF EDUCATION AND PUBLIC HEALTH UNITS**

**ASSUMPTIONS CONCERNING THIS ANALYSIS**

1. There are **different levels of need** for Sexual Health programs in the population served by each health unit, depending upon:

- **Factors** influencing special needs and/or high-risk sexual behaviours (eg. poverty rate), and

- **Availability** of other supportive and preventive resources in the community (for example, from parents, schools, churches, youth recreational programs, health and social services).

2. The **effectiveness** of Sexual Health programs -- sufficient to reduce local outcome rates -- may be evaluated in terms of:

- **Quality**, to affect individual change toward behaviours protective of sexual health, and

- **Access**, which includes:
  -- Outreach to identified groups with special needs and/or high-risk behaviours, and
  -- Proportion of individuals reached in local high-risk AGE groups.

The following findings pertain primarily to **access** and we use that term throughout the discussion. The rate of clinic and counselling visits actually reflects usage within the limits of access provided by health units. Access to school sexual health education, as defined, includes one aspect of **quality** -- comprehensive content (including contraception as well as other topics).

**SUMMARY OF FINDINGS**
(See Detailed Findings following this section, and Tables and Figures in Appendix)

**1. Which combinations of program elements were associated with the LOWEST local rates of genital chlamydia and adolescent pregnancy in 1997, among health units with either LOW, MEDIUM or HIGH rates of population poverty?**

We analysed rates of adolescent pregnancy, and genital chlamydia among women age 15-19 and 20-24, and among men age 20-24 and 25-29 at 32 health units for which we had 1997 data on all of three program elements:

- Comprehensive Sexual Health education at boards of education

- Sexual Health promotion activities by the health unit

- Clinic and counselling visits at the health unit.

Access to school-based Sexual Health education was defined as HIGH if more than 60%, or defined as LOW if less than 60%, of local students were enrolled in 1991 at boards of education which had passed a policy integrating comprehensive sexuality topics into their Health curriculum (in line with Ministry of Education guidelines at that time), introducing topics of sexually transmitted diseases at grades 7 or 8, and contraception at grades 9 or10. Six years later in 1997 approximately the same proportion (more or less than 60%) of local youth, by then ranging in age from 13 to 20, probably had encountered that school Sexual Health education, assuming no regression in local board policy or practice, and minor population mobility.

Access to the two program elements based at health units -- Sexual Health promotion, and clinic and counselling visits -- was defined as HIGH or LOW if the health unit rate of each of these activities was above or below the mean rate of activity for all reporting health units.

Within each poverty group of health units (LOW, MEDIUM, HIGH population poverty), a cluster of health units with a particular combination of two of these program elements in 1997 had a much lower mean rate of adolescent pregnancy or genital chlamydia in 1997, compared to the mean rate of their poverty group as a whole.

**Our analysis found** that 1997 rates of adolescent pregnancy (females age 15-19) and genital chlamydia (females 15-19 and 20-24, and males 20-24 only) were by far the LOWEST at health units which had:

- **HIGH** access to comprehensive Sexual Health education at boards of education**, regardless of the health unit's level of population poverty**;

- in combination with **HIGH or LOW** access to clinic and counselling visits at health units:

    a) in the LOW and MEDIUM Poverty groups,
    b) in the HIGH Poverty group, only with regard to chlamydia rate for **males** age 20-24;

- OR in combination with **HIGH** access to Sexual Health promotion at health units in the HIGH Poverty group, only with regard to chlamydia rates for **females** age 15-19 and 20-24.

This apparent impact of the most effective combination of two program elements (at schools and the health unit) was greatest in the MEDIUM Poverty group and smallest (but still substantial) in the HIGH Poverty group. See Table 6 and Figures 16 and 17.

**2. Which program elements with LOW access NEVER appeared in these most effective program combinations 1997, at any poverty level?**

Neither LOW access to comprehensive Sexual Health Education nor LOW access to Sexual Health promotion ever appeared in the program combination (at a cluster of health units) with LOWEST mean rate of genital chlamydia or adolescent pregnancy in 1997, compared to the mean rate of all health units in their poverty.group.

**3. Could LOWEST rates be achieved by HIGH access to only one program element, at either boards of education or the health unit?**

No. At each poverty level, the most effective combination of two program elements was associated with much LOWER mean rates of genital chlamydia and adolescent pregnancy than when we controlled solely for only one of the three program elements -- and access to the other two program elements, although invisible, was varied.

The combination, as well as the strength and access of each, of these three program elements appear to be crucial factors. This should not be surprising, given the complementary roles of (potentially) universal Sexual Health education in schools, and public health programs to the community at large. These findings also suggest that linkage between the three program elements should be assessed and developed at each health unit, to maximize outreach and effectiveness with their local population.

**4. What was the level of access to these program elements across all health units in 1997?**

Only a minority of reporting health units had HIGH access to any one of the three program elements and, least of all, to Sexual Health promotion. Moreover, HIGH access to each of these three program elements was found more frequently within a different poverty group of health units. **Consequently, only eight health units had HIGH access to even two program elements, one at the boards of education and one at the health unit (8 of 32 HUs = 25%).**

In the LOW and MEDIUM Poverty groups there were no health units at all with a combination of HIGH access to both comprehensive Sexual Health education in the schools and Sexual Health Promotion. In the HIGH Poverty group, the only three health units with HIGH access to this program combination had the LOWEST mean rate of genital chlamydia among females (ages 15-19 and 20-24). Within the HIGH Poverty group, some health units either did much more Sexual Health promotion and/or they recorded it more completely. See Tables 7 and 8.

**5.** These findings confirm the **importance** and **necessity** of:

- School-based sexual health education--comprehensive content, and universal access via all local schools and over the long term to reach the total youth population and potentially affect peer norms of sexual responsibility.

- Sexual health promotion, and clinical and counseling services by health units to reach a greater proportion of their population in the high-risk groups (special needs, high-risk behaviours or age groups).

- Collaboration and coordination between local public health units and boards of education to strengthen and ensure HIGH access to program elements in **both** sectors and the students' awareness of links between them. In communities with high population mobility, extended strategies are needed to reach incoming students, their parents and the general population.

- Reduction of poverty as a national priority supported by a comprehensive range of policies at provincial and federal levels. This is an essential policy base upon which local strategies to reduce rates of a range of problems can be much more effective.

**PART B. DETAILED FINDINGS (See METHOD)**
(Paragraph numbers relate to those in the preceding section, Part B, Summary of Findings)

**1.1** The HIGH Poverty group of health units had the HIGHEST mean rate in 1997 for adolescent pregnancy (46.8), and by far the HIGHEST in all four selected chlamydia rates (females, age 15-19, 20-24; males, age 20-24, 25-29). Group mean rates for all these outcomes rose consistently from LOW to MEDIUM to HIGH Poverty groups. See Tables 9, 10 and 11.

**1.2** By "apparent impact of the most effective combination of program elements" within each poverty group, we mean the difference between the LOWEST mean rate (of genital chlamydia or adolescent pregnancy) for a cluster of health units with the same combination of program elements, and the mean rate for all health units in their poverty group.

For example, with regard to the 1997 rate of chlamydia among females age 15-19:

- Within the **LOW Poverty group**, health units with **HIGH access to Sexual Health education and LOW access to clinic and counselling visits** had the lowest mean chlamydia rate, which was **39% lower** than the mean rate for all health units in that LOW Poverty group.

- Within the **MEDIUM Poverty group**, health units with the same combination of **HIGH access to Sexual Health education and LOW access to clinic and counselling visits**, had the lowest mean chlamydia rate, which was **45% lower** than the mean rate for all health units in that MEDIUM Poverty group.

- Within the **HIGH Poverty group**, health units with a different program combination of **HIGH Sexual Health education and HIGH access to Sexual Health promotion** had the lowest mean chlamydia rate, which was **13% lower** than the mean rate for all health units in that HIGH Poverty group.

This pattern of variation of impact, in relation to level of population poverty and specific program combination, was found with regard to chlamydia rates for females 15-19, 20-24; and males 20-24:

- The apparent impact of programs was greatest at the MEDIUM Poverty level and smallest at the HIGH Poverty level;

- At the HIGH Poverty level, Sexual Health promotion became more important (along with HIGH access to school Sexual Health education) in order to achieve lowest chlamydia rates among females only.

Similar analysis of rates of adolescent pregnancy was not feasible for health units in the HIGH Poverty group. The composite pregnancy rate for amalgamated Toronto results in too few cases for analysis in this group. See Table 6 and Figures 16 and 17.

**1.3** For older men age 25-29, within each poverty group, the combination of program elements associated with LOWEST mean chlamydia rate was different from the younger age groups. This is to be expected since the older men were outside the age range potentially influenced by school-based Sexual Health education since 1991.

**1.4 What might account for this apparently varying importance of either Sexual Health promotion, or clinic and counselling visits, within "most effective program combination"?**

- Ten of 42 health units are missing from this analysis, as they did not report all the necessary data in 1997. It would be useful to do this analysis again in a few years with complete data from all health units.

- Health units varied widely in their record-keeping, but most had far less reportable data on Sexual Health promotion activities, compared to clinical services. However, the mean rate of reported Sexual Health promotion activities rose sharply from LOW to MEDIUM to HIGH Poverty groups of health units. The record-keeping was sufficient to reflect a pattern of activity one would expect, that is, more Sexual Health promotion at health units with greater poverty.

- As our measure of access, rates of clinic and counselling visits were far higher than rates of Sexual Health promotion, even when taking into consideration that the visit rate concerns individuals whereas the health promotion rate concerns group sessions, consultation, and communication via community networks or the media. Does this imply that Sexual Health promotion is undervalued or under-funded at most health units? See Tables 7 and 8.

- In the HIGH Poverty group, only one health unit had the program combination of HIGH access to **both** Sexual Health education, and clinic and counseling visits.

- Sexual health promotion strategies at some health units in the HIGH Poverty group may reach more women than men and/or be more effective with women. This might explain in part our finding that health units there with HIGH access to Sexual Health Promotion as well as HIGH access to comprehensive Sexual Health education, had the lowest mean chlamydia rate for females but not for males.

**1.5. What might account for the more frequent appearance of LOW, rather than HIGH, access to clinic and counselling visits in the most effective combination of program elements?**

- HIGH access to clinic and counselling visits appeared in the most effective program combination only in relation to the adolescent pregnancy rate, in the LOW Poverty group. For the LOW and MEDIUM Poverty groups their mean rate of adolescent pregnancy is actually six times their rate of genital chlamydia for the same population group (females 15-19). The adolescent pregnancy rate is calculated per 1,000 population (females 15-19), whereas the genital chlamydia rate is per 100,000 population (females 15-19). Logically, higher access to services would be necessary to reduce a much higher rate, in the same or different population group. However, this did not apply in the MEDIUM Poverty group, where a cluster of health units with the program combination of HIGH access to Sexual Health education and LOW access to clinic and counseling visits, had the lowest adolescent pregnancy rate.

- Within each of the three poverty groups, there are still considerable differences between health units in poverty rate, as well as population size, population mobility, geographic location, and socio-cultural factors. All these community characteristics affect both the level of local need and the level of other supportive resources, including alternative clinic and counselling services. See Table 1.

- Health units were much more similar in the level of access they provided for clinic and counselling visits, than for their Sexual Health promotion activities. Small differences between health units in access to visits give greater weight to differences in service quality of visits, which our survey did not allow us to measure. See Tables 7 and 8.

**4.1** In 1997, only a minority of health units had HIGH access to any one of the three program elements, as follows:

- HIGH access to school-based comprehensive Sexual Health education was present in 18 of 42 HUs (43%)

- HIGH access to clinic and counselling visits in 15 of 35 HUs (43%)

- HIGH access to Sexual Health promotion in 10 of 34 HUs (29%).

Moreover, HIGH access to each of these three program elements was found more frequently within a different Poverty group of health units, as follows:

- HIGH access to comprehensive Sexual Health education, more frequently in the LOW Poverty group

- HIGH access to clinic and counselling visits, more frequently in the MEDIUM and HIGH Poverty groups

- HIGH access to Sexual Health promotion, more frequently in the HIGH Poverty group.

This relatively small proportion of health units with HIGH access to any one of the program elements, together with the skewed pattern of distribution, resulted in few health units with a combination of HIGH access to two program elements. Only six health units had the combination of HIGH access to both comprehensive Sexual Health education, and their clinic and counselling visits. Only three health units had the combination of HIGH access to both comprehensive Sexual Health education and their Sexual health promotion.

**4.2** In 1997, the mean rate of access to Sexual health promotion at health units in the HIGH Poverty group was twice that of the MEDIUM Poverty group and four times that of the LOW Poverty group. In contrast, mean access to clinic and counselling visits was similar in the three poverty groups. The mean rate of clinic hours was also similar in the three poverty groups. See Table 7.

Both these measures of access (clinic and counseling visits, and clinic hours) may be limited by the standard for clinic hours set by the Ministry of Health and Long-Term Care, Mandatory Guidelines (1997).

Are these large differences in Sexual Health promotion actually in the level of activities or in the recording of them? We had to exclude the important strategy of school activities from the health promotion rate because many health units reported Data Not Known in most categories--apparently either not recorded or the records were not on computer and therefore not readily retrievable.

## CONCLUSIONS

**1.** Downloading 100% of financial responsibility for public health to municipalities had a serious impact on Sexual Health programs at the province's public health units in the first year, 1998. Sexual Health budgets were reduced at a large majority of health units. At other health units, budgets for Sexual Health services became invisible as programs were merged or budgets simply combined. Key program elements, such as Sexual Health Promotion and HIV testing, were reduced at half the health units. One-third of health units increased the number of services charged to clients. These program cutbacks and increased charges for services all reduce public access.

**2.** Staffing (full-time equivalents) was reduced at just under half the health units. Simultaneously with downloading, half the health units experienced municipal amalgamation and/or organizational restructuring, which sometimes also resulted in less sexual health expertise among management or front-line staff.

**3.** There was a decline in reportable data at many health units, thus threatening their ability to monitor activities and evaluate strategies.

**4.** This survey data also provided an opportunity to analyse, for comparative effectiveness, various combinations of access to two program elements at health units in 1997, together with the cumulative effect of local student access to comprehensive Sexual Health curriculum at boards of education documented in a 1991 survey. High access to a combination of school-based and certain health unit-based Sexual Health programs are associated with much lower local rates of adolescent pregnancy and genital chlamydia, regardless of the population poverty level of the health unit. The effective combination of program elements includes high access to: long-term comprehensive Sexual Health education at school and either Sexual Health promotion or clinic and counselling services from the health unit. Relatively few health units had high access in 1997 to such a combination of two programs, one of which is school-based. However, the majority of health units already have high access to either a school-based or one of the health unit-based programs. To develop high access to both types of programming would greatly increase the potential to reduce rates of adolescent pregnancy and genital chlamydia. Linkage between all three program elements would maximize outreach and increase effectiveness. Increased resources and political will are essential to develop collaboration between the education and public health sectors aimed at improving access to an effective combination of programs.

**5.** Health units with high poverty rates have much higher rates of adolescent pregnancy and genital chlamydia. The fact that they service 44% of Ontario's population adds urgency to their even greater need for increased resources.

**6.** There are serious problems in data collection at health unit, provincial and federal levels. These problems include:

- Lack of standardized data collection on Sexual Health promotion activities, and clinical and counselling services and, at many health units, lack of computer-retrievable data.

- Incomplete Ontario birth and pregnancy rates due to a new user-fee for birth registration in most municipalities, resulting in registrations too late for inclusion in that year’s database.

- Incomplete population data and poverty rates due to non-participation in the census by many Native reserves.

If not rectified, these problems will increasingly compromise our capacity to monitor trends in local rates of adolescent pregnancy, let alone evaluate effectiveness of all Sexual Health programs.

**7.** The Ministry of Health standard for clinic hours (8 hours per 150,000 total population) is inadequate. If applied only to the age-range with highest rates of adolescent pregnancy and genital chlamydia, it allows only 9 minutes per week per 1,000 population age 15-39. The particular type of Ministry objectives for 2005 (a specific rate level of adolescent pregnancy and genital chlamydia) appears to be counter-productive, given the wide range of rates of adolescent pregnancy and chlamydia among health units.

**8.** Also counter-productive is the apparently declining presence and activities of public health nurses providing Sexual Health promotion in schools. Such collaboration between the schools and public health has the potential to strengthen the program in each sector. Equally important, such collaboration is a visible demonstration to students of the necessary **linkage** they must make between their personal learning, decision-making and (when appropriate) accessing clinical/counselling services. Early awareness of this linkage is essential for youth to ensure healthy sexuality throughout their lifetime and avoid early problems, some of which have serious, long-term and even fatal consequences.

## RECOMMENDATIONS

### 1. RE: DEVELOPMENT OF THE MOST EFFECTIVE COMBINATION OF SEXUAL HEALTH PROGRAM ELEMENTS

All health units should pursue strategies to strengthen and increase access to, and linkage between, all three local program elements identified here as related to much lower rates of: (a) pregnancy in adolescents, and (b) genital chlamydia in males and females age 15-24. The three local program elements are:

- Comprehensive school-based Sexual Health education including the topic of contraception
- Health unit Sexual Health promotion
- Health unit Sexual Health clinic and counselling services.

### 2. RE: PROVINCIAL FUNDING

To this end, the Ontario Ministry of Health and Long-Term Care should re-examine the current funding formulation for Sexual Health programs at public health units and increase the provincial portion. The financial resources of municipalities are very unequal and currently overwhelmed by the extra programs recently downloaded from the province.

### 3. RE: HEALTH UNITS WITH HIGH POVERTY RATES

The Ontario Ministry of Health and Long-Term Care should provide extra resources to health units with HIGH poverty rates and HIGH rates of genital chlamydia and adolescent pregnancy, to enable them to reach and serve that larger proportion of their population at greater risk.

### 4. RE: BARRIERS TO ACCURATE DATA COLLECTION

The Ontario Government should remove as soon as possible current barriers to accurate data collection. We are stunningly ill-equipped for this much-heralded Age of Information. These barriers include:

- Lack of standardized data collection across all health units on Sexual Health promotion activities and clinical services and, at many health units, lack of computer-retrievable data. The Ontario Ministry of Health and Long-Term Care should assist health units to develop consensus on a common base of categories for data records on their Sexual Health Programs.
- Incomplete Ontario birth and pregnancy rates, due to a new user-fee for birth registration. The Ontario Government should repeal that section of the Omnibus Bill, 1995, which allows municipalities to charge a user-fee for birth registration.
- Incomplete population data and poverty rates. These data are essential for health and social research. Statistics Canada's population figures and percentage of population below Low Income Cut-Off levels are under-estimated for 16 Ontario health units, due to the fact that 73 native reserves did not participate in the 1996 Census. This year's 2001 Census began mid-May. The Ontario Ministry of Health and Long-Term Care should request that Statistics Canada estimate the number of missing Native persons in each locality wherever Native Reserves decline to participate in this 2001 census.

**5. RE: REVIEW OF PROVINCIAL MANDATORY STANDARDS FOR SEXUAL HEALTH PROGRAMS AT PUBLIC HEALTH UNITS**

The Ministry of Health and Long-Term Care should review its standard for Sexual Health clinic hours (8 hours per 150,000 population) contained in the Mandatory Guidelines (1997). If applied only to the age-range with highest rates of adolescent pregnancy and genital chlamydia, it allows only 9 minutes per week per 1,000 population age 15-39. Clinic hours, and clinic and counselling visits need to be increased at health units with high rates of genital chlamydia and adolescent pregnancy. The current standard for Sexual Health clinic hours appears inadequate for any serious attempt to reduce high rates. The Ministry of Health and Long-Term Care should increase its standard of clinic hours and apply it to the population at greatest risk, age 15-39.

The Ministry should also review 2005 objectives for adolescent pregnancy and genital chlamydia. The current adolescent pregnancy objective for 2005 (a rate of 40.0 pregnancies per 1,000 females age 15-19) is only one point below the rate Ontario achieved in 1986! The deep budget cuts reported here in 1998 occurred at health units where adolescent pregnancy rates were already close to that objective. To set a specific rate as a future objective is always too HIGH and easy for some health units and too LOW and unachievable for others, given the wide range between lowest and highest of local rates.

An alternative type of objective, specifying a percentage reduction in rates by 2005, would stimulate all health units to strengthen their programs, reduce their rates of genital chlamydia and adolescent pregnancy, and broaden the pool of learning from that experience for the benefit of all.

**6. RE: SEXUAL HEALTH EDUCATION IN THE SCHOOLS**

Schools are an essential partner with health units in promoting sexual health among youth. The Ministry of Education and Training should provide the necessary policy and financial resources to ensure that all boards provide quality and comprehensive education in Sexual Health, as in any other curriculum area. Records at many health units on Sexual Health promotion activities in the schools, together with comments on the reduced time of teachers for collaborative activities, suggest a declining collaboration between schools and public health staff concerning sexual health. Our research findings support the recommendations (especially on the need for intersectoral collaboration and coordination) of the 1999 "Status Report on Schools, Public Health, Sexuality and HIV" to the Council of Ministers of Education, Canada.

**7. RE: REDUCTION OF POVERTY RATES**

Research has repeatedly documented that poverty is strongly related to higher rates of illness, stress, and high-risk behaviours. Public health programs can provide information, support and services to people, but they cannot change conditions of poverty, which often impose physical, social and psychological constraints on a person's decisions and behaviours. The Federal and Ontario Governments should provide resources for comprehensive policy strategies (housing, social welfare, education, employment, child care, social services, as well as public health) to reduce poverty rates across the province and ameliorate the effects of poverty especially upon families with children, and youth separated from their families.

**8. FURTHER RESEARCH FOR DEVELOPMENT**

In view of our findings on budget cut-backs, data weaknesses and more effective combinations of program elements, we recommend the following issues for further research.

**A**. **To continue monitoring local sexual health budgets over 1999 and 2000, we have requested each health unit to complete and return the one-page questionnaire attached to the preliminary report emailed to all health units in February, 2001.**

**B**. If consensus can be reached by all health units on a common base of data categories, it would be useful to do a follow-up survey (smaller version) of programs for the year 2002, to monitor trends and re-examine effectiveness of various program configurations in relation to outcome rates 2002.

**C.** With more complete data on Sexual Health education programs in schools, public sexual health promotion strategies and clinic and counselling services, it would be possible for local health units and boards of education to improve coordination of their programs and to monitor the effect upon their local outcome rates.

**D.** Study the interconnections between the three program elements (Sexual Health education programs in schools, public sexual health promotion strategies and clinic and counselling services) in relation to maximizing outreach and effectiveness.

**E.** This would enable research to study more intensively health units with the most effective combination of program elements (lowest outcome rates 2002) within each poverty group -- characteristics of their programs and communities.

**METAPHOR**

"Sexual Health programs at Ontario public health units, hobbled by budget cuts and reduced program activities following the download, are running after an accelerating train. We should expect a rise in rates of adolescent pregnancy, sexually transmitted diseases, including HIV/AIDS, among youth now struggling to grow up amidst three interacting, destructive conditions:

- HIGH rates of poverty
- Increasing numbers of homeless families and street youth
- A public education system in serious decline: impoverished by five years of deep budget cuts; demoralized by the government's attacks upon teachers (our major partners in the education of youth); and about to be divided even further than it already is, by class and religion.

This 19C train of gross inequalities and religious divisions is accelerating and it is heading away from our vision of the Canada we want: a healthy, well-educated, caring, and therefore highly-creative as well as productive society."

**METHOD**

? **Comparative survey of programs in 1997 and 1998**: the year preceding and the year following download of responsibility for public health funding from the Ontario Government to municipalities.

? **Separate questionnaires for health units and contracted clinics or centres** were drafted by a task group of Sexual Health staff from several locations, field-tested, revised, and mailed to contact persons in Sexual Health programs at all health units in 1998 and 1999.

**Response rate**: data for both years from 37 of the 42 health units (88%). For consistency, Metro Toronto was counted as six separate cities for both years, although amalgamation (and downloading) began January 1, 1998.

**Analysis of health unit data by three variables: poverty level, change in budget and geographic region.**

- Distribution by three levels of population poverty--LOW poverty (group mean: 11% of population below 1995 Low-Income Cut-Offs of Statistics Canada); MEDIUM poverty (15%); and HIGH poverty (24%);
- Distribution by three directions of change in budget per capita (decline, rise, not known);
- Distribution by seven Ontario regions.

**1. Analysis of Change in Program Elements 1997/98:**

**A**. CALCULATION OF SEVEN PROGRAM INDICATORS at each health unit.

Budget per capita, 1997 and 1998: total budget for all three Sexual Health programs, per total population.

Staffing, 1997 and 1998: number of Full-Time Equivalents (FTEs) in practice.

Charges to clients, 1997 and 1998: number of types of clinic services (excluding prophylactic materials) and health promotion activities charged to clinic clients or community groups.

Rate of sexual health promotion, 1997 and 1998: total number of sessions (not individuals) and activities, including outreach to special-needs groups, training updates to community agency staff or peer counsellors, public media activities; but excluding school activities since data frequently incomplete. Rate calculated per 1,000 population age 15-39 (age range with highest incidence in selected sexual health outcomes).

Rate of clinic hours, 1997 and 1998: clinic defined as "physician in attendance or nurses working under medical directives". Total number of hours per week, per 1,000 population age 15-39.

Rate of clinic and counselling visits, 1997 and 1998: total of clinic visits plus counselling-only visits. Rate per 1,000 population age 15-39.

Rate of HIV tests, 1997 AND 1998: Total of HIV tests. Rate per 1,000 population age 15-39.

**B.** CALCULATION OF CHANGE IN PROGRAM INDICATORS

Percentage change between 1997 and 1998 values was calculated for all seven indicators of program elements. "No change" in the four rates (health promotion, clinic hours, clinic and counselling visits, and HIV testing) was defined as less than 5% change (rise or decline).

**2. Analysis of Current Effectiveness of HIGH/LOW Access to Comprehensive Sexual Health Education in Schools together with HIGH/LOW Health Promotion Rate or HIGH/LOW Clinic and Counselling Visit Rate in 1997.**

**T**his analysis includes 32 health units (76% of 42) for which we had values for all three program elements. Within each poverty group, health units were selected according to all pair combinations of HIGH or LOW access to school Sexual Health education together with HIGH or LOW Sexual Health promotion rate 1997 and, alternatively, HIGH or LOW access to school Sexual Health education together with HIGH or LOW clinic and counselling visit rate 1997. Mean rates were calculated for each cluster of health units for adolescent pregnancy and the four selected age groups for genital chlamydia, to identify the combination and level of program elements with the lowest mean rate in each poverty group for each sexual health outcome. This was not feasible for adolescent pregnancy rates for the HIGH poverty group due to the small number of cases now that pregnancy data are combined for Metropolitan Toronto. Within each poverty group, the lowest mean rate for HIGH access to a pair combination of school and health unit program elements was always lower than mean rates obtained when controlling for only one of the three program elements. Due to the small number of health Units in each poverty group, it was not possible to test the combination of all three program elements together.

Following is a description of the program indicators and outcome rates:

HIGH/LOW access to comprehensive sexual health education in schools: data from a 1991 survey of Ontario boards of education, adjusted to fit current health unit boundaries. HIGH Sexual Health education was defined as follows: in 1991, a minimum 60% of students were enrolled at boards of education which had approved integration of sexuality topics into the Health curriculum, including teaching re sexually transmitted disease at grades 7 or 8 and re contraception at grade 9 (as permitted by Ministry of Education guidelines at that time). It is assumed that, given board approval of a specific curriculum, schools would be more likely to teach in accordance with it. Content was most frequently introduced in grades 8 and 9, when the average age of students is 13-14. Six years later in 1997 approximately 60% of youth, by then age 13-20, probably had encountered that core education, assuming minor retrenchment in policy and practice and minor population mobility.

HIGH/LOW Sexual Health promotion rate 1997: greater or less than mean rate (1.00 per 1,000 population age15-39) for all reporting health units in1997.

HIGH/LOW clinic and counselling visit rate 1997: greater or less than mean rate (58.5 per 1,000 population age 15-39) for all reporting health units in1997.

Adolescent pregnancy rate 1997: per 1,000 females age 15-19.

Four rates of genital chlamydia 1997**:** two rates per 100,000 females age 15-19 and 20-24, and two rates per 100,000 males age 20-24 and 25-29..

**DATA CAUTION**

**1.** The following rates calculated from the survey data should be considered partial, minimum estimates rather than maximum measures.

**A.** The **health promotion rate** does not include activities in the classroom since only half the health units could report this data. Also excluded are several health units which reported data by inconsistent categories (some activities by number of individuals and others by number of sessions) or reported "Data Not Known" in more than two categories.

**B.** The **clinic and counselling-only visit rate** is a composite because some health units did not report separate data. A few health units reported data only by client, but most by visit. Several health units noted the lack of any data from their STD clinics and/or re male clients/visits. Analysis by age or gender of clinic and counselling visits proved impossible, in the absence of any common categories.

**2. Low Income Cut-Off rates** are under-estimates of population in poverty for 16 health units, since 73 Native Reserves declined to participate in the last 1996 census. Only two of these health units are included in our HIGH poverty group in accordance with their published LICO rate, but another 1-6 health units might be included if full data were available.

**3. Adolescent pregnancy rates** 1996 and 1997 are under-estimates, since they do not include all births. In 1996 new Ontario legislation allowed municipalities to charge a fee for birth registration (among other revenue-generating measures aimed to balance the upload of education and download of a number of programs). Some 83% of municipalities now charge a fee and obviously any fee may be a burden to low-income parents. "Late" registrations arriving after a certain cut-off period, are not included in the year's birth statistics. In 1997 approximately 3% of births in fee-charging municipalities were lost from the database, compared to 1% in municipalities with no fee. However, the loss was greater in large municipalities (up to 9%), especially concerning low-birthweight babies and births to teen parents (Woodward, 2000). This range of loss in local number of births (1-9%) would result in local rates of adolescent pregnancy being under-estimated by approximately 1-3 rate points. The loss of rate points is less if the local number of births is usually much lower than the number of abortions among adolescents. Conversely, the loss of rate points is greater if the number of births is usually much higher than the number of abortions among adolescents.

**4. Chlamydia rates** are under-estimates, based on reports of diagnosed cases, but chlamydia is frequently asymptomatic. Consequently, greater case follow-up of identified sexual contacts can be expected to first raise the local chlamydia rate before reducing it in the long term.

## OTHER DATA SOURCES

**1.** Provisional **adolescent pregnancy rates** 1996 and 1997; numbers of reported cases of genital chlamydia, 1997 and 1998; Sexual Health Program budgets, 1992-1997: all from Ontario Ministry of Health and Long-Term Care. Adolescent pregnancy rates 1986 include data on abortions performed in free-standing clinics in Canada and U.S. border states, obtained by a survey of such clinics at that time. These 1986 rates of adolescent pregnancy have been recalculated to exclude pregnancies to girls under age 15, in accordance with current statistical practice. Source: Adolescent Pregnancy in Ontario 1976-1986: Extending Access to Prevention Reduces Abortions, and Births to the Unmarried, Report 3, Maureen Jessop Orton and Ellen Rosenblatt, 1991, P.29, Table 16. Copies sent to all health units, boards of education, Children's Aid Societies and their three ministries in 1991.

**2.** **Population estimates** for Ontario health units, 1997 and 1998: HELPS Data, produced by Health Information Team, Toronto Public Health, May, 2000.

**3.** **Poverty data**: Low-Income Cut-Off data by census division, 1995: Statistics Canada, 1996 Census Report, Cat. 95-187-XPS. For increase in number of poor children, see Report Card on Child Poverty in Canada 1989-1999, National Report Card 1999, Campaign 2000, c/o Family Service Association, Toronto. For 1998 child poverty data, see Report Card 2000. For increase in depth of household poverty, see Canadian Fact Book on Poverty ( Ross et al, 2000, pp.105, 167) and Progress of Canada's Children 2001 (Canadian Council on Social Development, 2001, pp 18-22).

**4.** **School Sexual Health Education data**, 1991, see Sexual Health for Youth: Creating a three-Sector Network in Ontario, Maureen Jessop Orton and Ellen Rosenblatt, Report #4, 1993, especially Appendix B, Table B-3 **which reports this indicator for each health unit**. There, 66% student enrolment was used in the definition but, since there were no localities between 60-66%, we are using 60% here. Copies of Report #4 were sent to all health units, boards of education, Children's Aid Societies and their three ministries in 1993.

## REFERENCES

Campaign 2000. Report Card on Child Poverty in Canada 1989-1999. Also, Child Poverty in Canada, Report Card 2000. Toronto: c/o Family Service Association

Canadian Council on Social Development (2001). The Progress of Canada's Children 2001.. Internet: www.ccsd.ca

Council of Ministers of Education, Canada (1999). Schools, Public Health, Sexuality and HIV: A Status Report, pp. 273. Toronto: Council of Ministers of Education, Canada. Internet: www.cmec.ca

Health Canada, Centre for Infectious Disease Prevention and Control (2000). HIV and AIDS in Canada, Surveillance Report to June 30, 2000, Table 5b, p.12. Internet: www.hc-sc.gc.ca/hpb/lcdc/publicat.html

_____ (2001). Canadian Perinatal Surveillance System – Fact Sheet. Internet: www.hc-sc.gc.ca/hpb/lcdc/brch/factshts/pterm_e.html

Orton, MJ and Rosenblatt, E (1993). Sexual Health for Youth: Creating a three-Sector Network in Ontario, Report 4. Available via Planned Parenthood Ontario. Email: paserk@hotmail.com

_____ (1991). Adolescent Pregnancy in Ontario 1976-1986: Extending Access to Prevention Reduces Abortions, and Births to the Unmarried, Report 3. Available via Planned Parenthood Ontario.

Remis RS, Major C, Calzavara L, Myers T, Burchell A, Whittingham EP (2000). The HIV Epidemic Among Men Who Have Sex with Other Men: The Situation in Ontario in the Year 2000. Department of Public Health Sciences, University of Toronto.

Ross DP, Scott KJ, Smith PJ (2000). The Canadian Fact Book on Poverty. Ottawa: Canadian Council on Social Development.

Woodward G, Central East Health Intelligence Program, Ontario. Presentation to Canadian Public Health Conference, Ottawa, October, 2000.

**OUR THANKS** to:

- The hard-working task group who developed the questionnaires: Amina Rawji (Immigrant Women's Centre, Toronto), Jennifer Fuller (North York Health Unit) and Jeff Bamford (independent consultant), along with Deborah Hardwick and Maureen Orton.

- All the health units and selected contracted services who participated in the study, and their staff who found the time to provide the data and answer our questions about it.

- Sexual Health Network of Ontario for financial support of our print, mail, and phone expenses.

- Ellen Rosenblatt, former partner in sexual health research, for consultation and editorial assistance.

**RESEARCHERS**

Deborah Hardwick, M.A., Program Evaluator, Toronto Public Health
Maureen J. Orton, Ph.D., Social Policy Researcher
Emmanuel Koku, Doctoral Candidate, Dept. of Sociology, University of Toronto.

**CONTACTS for further information**:

Researcher: Maureen Orton. Tel: 416-927-7732.
Fax: 416-927-8764. Email: maureen.orton@utoronto.ca

Research Auspices: Sexual Health Network of Ontario. Ruth Miller. Tel: 416-338-7992.
Ann Barrett. Tel: 416-338-1602.

# APPENDIX

## DEFINITIONS FOR TABLES AND FIGURES

**a.** **POVERTY RATE**: Percentage of local population below 1995 Low Income Cut-Off (LICO) levels of Statistics Canada in 1996 Census

**b.** **MISSING NATIVE RESERVE(S):** Population numbers and poverty rates are under-estimated for Ontario health units with "Missing Native Reserve(s)"-- which declined to participate in the 1996 Census.

**c.** **PROGRAM ELEMENT RATES:** Rates of 4 program elements (Sexual Health Promotion, Clinic and Counselling Visits, Clinic Hours, HIV Testing,) are calculated per 1,000 population age 15- 39.

**d.** **GENITAL CHLAMYDIA RATE:** Number of reported cases of genital chlamydia per 100,000 population by gender and age group

**e.** **ADOLESCENT PREGNANCY RATE:** Number of pregnancies (total of live births, still births, abortions performed in hospitals and free standing clinics) per 1,000 female population age 15-19. Some rates for 1996 and 1997 may be underestimated (approximately1-3 rate points) due to introduction of a user-fee by many municipalities which delays some birth registrations beyond the cut-off date for inclusion in the year's birth statistics.

f. **SEXUAL HEALTH EDUCATION:** HIGH or LOW access defined as -- in 1991, a minimum 60% of students (HIGH), or less than 60% (LOW), were enrolled at boards of education which had approved integration of sexuality topics into the Health curriculum, including teaching re sexually transmitted diseases at grades 7 or 8 and re contraception at grade 9 or 10 (as permitted by Ministry of Education guidelines at that time).

# TABLES AND FIGURES