

# Adolescent Sexual Health Services and Education: Options for Nova Scotia

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## Executive Summary

Adolescence can be fraught with challenges of many sorts for young women and men, not the least of which is that of maintaining their sexual health, defined by the World Health Organization as, "... integration of the somatic, emotional, intellectual and social aspects of sexual beings in ways that are positively enriching and that enhance personality, communication and love." While adolescents must address this wide range of sexual health issues, this paper focusses on the somatic ones, especially avoidance of pregnancy and sexually transmitted infections (STIs).

Young people are often able to develop the knowledge and skills required to protect these aspects of their sexual health, and frequently are also able to take the action required to do so. Unfortunately, many experience barriers to both accessing information, and acting upon it, with the result that unintended pregnancy and STIs occur at needlessly high rates. Both of these conditions have immediate and long-term health, economic and social implications for young women and men, their children, and their communities.

Rates of adolescent pregnancy in Nova Scotia are slightly lower than the Canadian average, with about four per cent of women aged fifteen to nineteen becoming pregnant each year. STIs affect young people disproportionately, with most infections occurring in adoles-

## Contents

Introduction .....	2
Sexual Activity in Adolescents .....	4
Sexually Transmitted Infections in Adolescents .....	5
International Comparisons of Rates of Sexually Transmitted Infection .....	7
Adolescent Pregnancy in Canada and Nova Scotia .....	8
International Comparisons of Rates of Adolescent Pregnancy .....	10
Costs of Adolescent Pregnancy and Sexually Transmitted Infections .....	11
Effective Sexual Health Services and Education Programs .....	12
Sexual Health Services and Education Policy and Programs in Nova Scotia ...	15
Options for Adolescent Sexual Health Services and Education .....	22
Conclusion .....	27
Acknowledgments .....	28
References .....	28

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cent females. International data indicate that there is a great deal of potential for improvement in these outcomes, especially adolescent pregnancy, and that much of that potential resides in our ability to take more concerted and thoughtful action to address adolescent sexual health issues through health services and education. Experience in other jurisdictions has demonstrated that sexual health services do well when they are of a multiple component nature, i.e., make use of and are supported by a wide variety of community resources, including health and educational professionals, parents, community organizations, and adolescents themselves. It is also the case that school sexual health education must be focussed on health outcomes, theory-based, sufficiently intense, and staffed by motivated and well-trained teachers. In order to more effectively reach and help our young people through these means, examination of Nova Scotia's health and educational policy is required.

Actions for promoting adolescent sexual health indicate a genuine interest in the health outcomes mentioned above. Such interest is reflected in the Department of Health's policy targets, but these targets are not accompanied by details outlining how a decentralized system is to be supported in attaining them. Services themselves rely on primary care physicians, with whom many adolescents experience access barriers, an *ad hoc* group of youth health centres, a public health system with a mandate to promote sexual health but without strong central or regional supports to do so, and Planned Parenthood, which has limited accessibility. Educational policy is not specific about sexual health and related targets, but curriculum documents are more focussed. Examination of these documents and related research findings reveals that sexual health education provides, in terms of content, too little, too late. Sexual health education is also seen by students as lacking support from the educational system itself. This lack of support, viewed from an ecological, or total systems, perspective, is a crucial missing piece, since it is unreasonable to expect young people to take action to protect their health without believing that they are genuinely supported in so doing.

The options for promoting adolescent sexual health represent a continuum, ranging from the *status quo* to a major system change which would make adaptations compatible with theories of health promotion and education, and consistent with progressive policies evolving elsewhere. Such changes involve establishing dedicated youth health services with an appropriate focus on sexual health and related issues, restructuring of and renewed focus on sexual health education, and coordination of community resources to reach and help adolescents through community action. The experiences of the town of Amherst in using these approaches demonstrates that they are both feasible and acceptable in Nova Scotian communities, and that they have the potential to have a positive impact on sexual health outcomes.

## **Introduction**

Adolescence is the period of development during which most of us become more acutely aware of our sexuality, and begin to explore it. Most adolescents make this transition without negative health outcomes, but many do not,<sup>1,2</sup> raising the question of how the sexual health of young Nova Scotians can be best protected and enhanced through our systems of health services and education. This ques-

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tion is an important one, deserving thoughtful analysis and concerted action on the part of policy makers, health services providers, and educators. While some progress has been made, young people in Nova Scotia, as will be seen, continue to suffer from less than adequately developed health and educational policy related to sexual health. This is not to say that thought has not been given to this important area of health, or that policy and service initiatives which have the potential to influence adolescent sexual health in a positive way are not developed or under way, but simply to indicate that such progress has been less than optimal. This paper attempts to identify the outstanding health and educational policy issues concerning adolescents and their sexual health, so that action to address this very important area can be considered for Nova Scotia.

### **Gender and Sexual Health**

Gendered issues are of particular concern for the sexual health of adolescent women. Constructs of masculinity and femininity have dramatic impacts on sexual relationships, determining to a significant extent, health outcomes.<sup>3</sup> Women are subject to both subtle and overt sexual pressure from men,<sup>4</sup> and younger women in particular may defer decisions about sexual health to their male partners.<sup>5</sup> Sexual coercion is not uncommon among young women in Nova Scotia,<sup>6</sup> as is seen in other locations.<sup>7,8,9</sup> Research in Nova Scotia has also shown that sexual relationships among adolescents can be characterized by significant age differences, with young women often being markedly younger than their male partners,<sup>10</sup> again as is seen elsewhere.<sup>11</sup> The power structures of such relationships can play a significant role in sexual risk taking and in negative outcomes such as pregnancy.<sup>12</sup> This dynamic plays out in an environment (in particular a media environment) which promotes being sexually active, and defines the value of young people, especially young women, in sexual terms, without promoting safer sexual practices.<sup>3</sup> Sexual coercion and violence are recognized as key issues to be addressed through health services and education.<sup>13</sup>

Young men also have many issues with which to deal. They are sent messages from many sources, including peers, about the need to demonstrate their masculinity by experimenting sexually with multiple partners and by talking about their "conquests". Failing to live up to this peer norm can result in ridicule which may be of a homophobic nature.<sup>14</sup> Contraceptive decisions, especially about condom use, involve both partners in decision making, a fact often neglected when considering contraceptive behaviours.<sup>15</sup> Health and educational policy must address factors related to both young men and young women in order to maximize the success of efforts to promote sexual health.

### **Socio-economic Factors and Sexual Health**

Socio-economic disadvantage is a major factor related to adolescent sexual health. More equitable income distribution is negatively correlated with the birth rate of women under age eighteen.<sup>16</sup> Research has shown that several related factors are predictive of adolescent pregnancy. These include having a mother who was a teenage mother herself, having had emotional problems, and having low educational attainment at age sixteen.<sup>17</sup> Not only are these factors felt to be causes of poor sexual health outcomes; they themselves are also felt to be outcomes: adolescent pregnancy is associated with subsequent decreased educational attainment,

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unemployment, increased reliance on welfare, and higher divorce rates for those who marry.<sup>18</sup> Some argue that lack of education in today's increasingly technological and sophisticated society will mean that the impacts of these issues will increase in their severity,<sup>19</sup> while others feel such predictions will prove inaccurate.<sup>20</sup>

### **Policy Focus**

This paper, while acknowledging the breadth and depth of sexual health issues, including those outlined above, will focus on policy meant to promote and protect physical health, in particular avoidance of sexually transmitted infections (STIs) and unintentional pregnancy. The validity of such an approach is confirmed through examination of several definitions of sexual health. It is clear, for example, in the third definitional statement of the World Health Organization (WHO) guide on sexual health promotion for professionals, "freedom from organic disorders, diseases and deficiencies that interfere with sexual and reproductive functions".<sup>21</sup> Goldsmith's definition of sexual health<sup>22</sup> names three essential components, of which two relate to the above outcomes: i) absence and avoidance of STIs, including human immunodeficiency virus (HIV); and, ii) control of fertility and avoidance of unwanted pregnancy. A third definition relevant to this approach is that of Greenhouse, who indicates that "Sexual health is the enjoyment of sexual activity of one's choice, without causing or suffering physical or mental harm."<sup>23</sup>

The paper will therefore examine: i) the extent of sexual activity, risk-taking and negative sexual health outcomes for adolescents in Canada and in Nova Scotia, making international comparisons where appropriate; ii) existing health and educational policies in Nova Scotia; iii) the nature and scope of sexual health services and education currently offered in the province; and, iv) options for addressing this important aspect of health. Since sexual health services and health education are necessarily directed at both young women and young men, issues related to both will need to be considered, though emphasis will be placed on issues of concern to young women.

### **Sexual Activity in Adolescents**

Several studies have indicated that many Canadian adolescents are sexually experienced (i.e., have had sexual intercourse), often at an early age. The Canadian Youth and Aids Study was a large national study of more than 38,000 young Canadians in Grades 7, 9 and 11, and first year college and university students. Those who had dropped out of school and street youth were also represented.<sup>24</sup> Twenty-six per cent of Grade 9 and slightly fewer than 50% of Grade 11 students had had intercourse at least once. Slightly higher levels of sexual experience were seen among Nova Scotia respondents to the survey.<sup>25</sup>

A province-wide survey of British Columbia students in Grades 7 through 12 involving 15,549 participants found that 52% of Grade 12 females and 55% of Grade 12 males had had sexual intercourse on at least one occasion. In this study, only 53% of females and 64% of males indicated having used a condom at their last intercourse. Twenty-four per cent of females indicated having had no contraception at their last intercourse.<sup>26</sup>

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Similar results have been seen in work carried out in Nova Scotia. The 1996 Nova Scotia Student Drug Use Survey found that 37% of Grade 10 and 61% of Grade 12 students had had sexual intercourse,<sup>27</sup> and that 15% of Grade 10 and 25% of Grade 12 students never used condoms for intercourse. More than 1,300 students in Grades 9 to 12 were surveyed in Cumberland County in 1992. Fifty-five per cent had had intercourse, including 82% of those 18 to 19 years of age. Only 35% indicated always having used condoms for intercourse.<sup>28</sup> In Amherst, Nova Scotia, a 1996 survey found that 51% of students in Grades 9 to 12 had had intercourse; 29% of women aged 13 to 15 and 24% of those aged 16 to 17 had used no contraception during their last intercourse.<sup>10</sup>

Not only are young people often sexually active without contraception or barrier protection; many also place themselves at risk by having multiple partners. In the above-mentioned survey conducted in Cumberland County, approximately 40% of those students who were sexually active indicated that they had had two or more partners in the past year, and this high risk behaviour was seen equally in females and males.<sup>28</sup> A recent study of 2,374 high school students in two counties in northern Nova Scotia found that of the 45% of boys and 49% of girls indicating that they had had intercourse, 35% and 32% respectively had had more than one sexual partner in the year prior to the survey.<sup>29</sup> Results similar to these were seen with the 1996 Nova Scotia Student Drug Use Survey.<sup>27</sup>

It is clear that adolescents are often sexually active at young ages, and that lack of contraception and having multiple partners are common. Policies related to sexual health services must recognize these factors as basic realities, rather than ignoring them, or wishing this situation were not the case. As will be seen with comparisons of adolescent sexual health outcomes internationally, having a pragmatic and realistic approach to this social reality is thought to result in very real payoffs for protecting and promoting the health of young people.

## **Sexually Transmitted Infections in Adolescents**

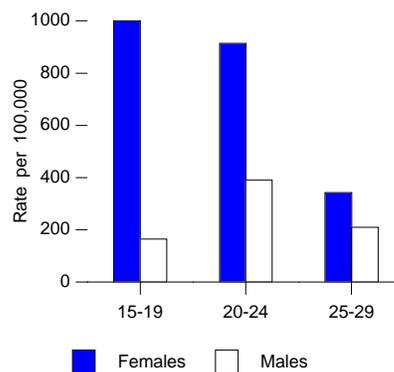
STIs are common in adolescents, often asymptomatic, and may lead to pelvic inflammatory disease, infertility, and ectopic pregnancy.<sup>1,30</sup> *Chlamydia trachomatis* is the STI which is most often reported; 64% of tubal infertility and 42% of ectopic pregnancies are thought to be attributable to chlamydia.<sup>31</sup>

Other important infections include gonorrhoea, an STI which is reported most commonly in 15 to 19 year old women and 20 to 24 year old men. In 1980, the reported rate for gonorrhoea was 219.8 per 100,000 population; in 1999, the rate was 16.4 per 100,000.<sup>32</sup> This decline has been attributed to improved diagnosis, contact tracing and effective treatment. Syphilis has become a rarity. In 1997, four provinces and two territories reported no infectious syphilis cases, and all provinces and territories with the exception of British Columbia had reached the Year 2000 National Goal of <0.5 cases per 100,000 total population.<sup>33</sup> Reported HIV infections in those aged 15 to 19 are relatively uncommon and quite stable, comprising one per cent of overall reports from 1985 to June 2000 in males and 3.7% of those in females.<sup>34</sup> However, the fact that significant numbers of AIDS cases are reported in those aged 20 to 29 is reason to believe that many HIV transmissions occur

during adolescence. Data about some STIs are simply not available – several viral infections, including herpes simplex (HSV) and human papillomavirus (HPV) – are not regularly reported in Canada.

The highest reported rates of infection with *Chlamydia trachomatis* in Canada and Nova Scotia are seen in 15 to 24 year old females,<sup>32,35</sup> who are for several reasons at increased risk compared with males and older females. These include factors related to physiological development of the cervix,<sup>36</sup> and the fact that young women often have older partners who are more likely to be infected than younger males.<sup>10,11,12</sup> Though cases of chlamydia may be being missed in large numbers of females, it is probable that proportionally even more males with chlamydia are not being detected simply because young women are more likely than young men to be screened when consulting physicians for contraception.<sup>37</sup> The estimated prevalence of cervical infection in female adolescents in Canada varies with the population under study, and has been reported to be as high as 15% in some settings.<sup>38</sup> Cumulative incidence has been found to be especially high among vulnerable populations such as street youth.<sup>39</sup> Figure 1 shows reported rates of genital chlamydia infection in Canada for 1999.<sup>32</sup>

**Figure 1**  
Reported Genital Chlamydia Rates/100,000 in Canada  
by Age Group and Sex, 1999



Source: Reference 34; Laboratory Centre for Disease Control, 2000

Reported rates of chlamydia infection in young women in Nova Scotia follow a pattern similar to those noted nationally, with the data reported for 1997 indicating a slightly higher rate in 20 to 24 year old women in that year (Table 1). Rates of chlamydia infection in Nova Scotia have fallen in recent years, the reported rate of female chlamydia infection having dropped from 390/100,000 in 1991 to 185/100,000 in 1997.<sup>35</sup> This could reflect increased protective behaviours, including use of condoms, or more successful efforts to detect and treat this infection.<sup>40</sup> Despite this decline, chlamydia infection represents a serious public health concern, especially for young women.

**Table 1**  
Chlamydia Infection by Age Group and Sex, Nova Scotia, 1997

Age Group	Males		Females	
	Cases	Rate*	Cases	Rate*
10-14	0	0	6	19.1
15-19	57	177.9	332	1056.5
20-24	96	283.2	357	1095.1
25-29	47	134	101	300.8
30-39	30	37	67	82.2
40-5-	8	6.7	13	10.8
60+	0	0	3	3.3
Total	241	51.9	885	185

\* Rate per 100,000 population. *Source:* Reference 35; N. S. Department of Health, 1998

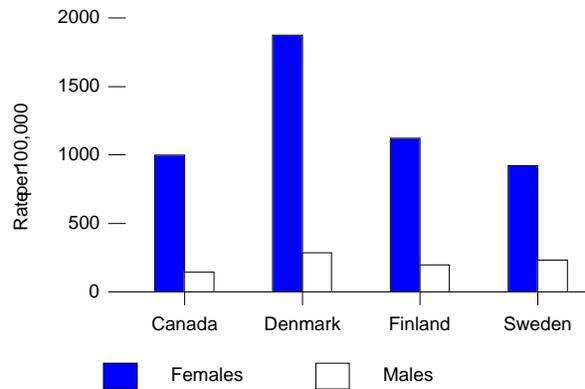
Human papillomavirus is an STI with special significance for young women. Certain types of HPV have been epidemiologically linked to the development of cancer of the cervix, and at least 80% of invasive carcinoma of the cervix is thought to be associated with HPV.<sup>41</sup> HPV is not nationally notifiable in Canada, and national incidence rates for HPV are therefore difficult to estimate with accuracy. Though it may serve more as a marker of cervical screening than of prevalence of HPV infection, the incidence of cancer of the cervix has fallen from a rate of just over 12/100,000 in 1985 to slightly more than 8/100,000 in 1998.<sup>42</sup>

## International Comparisons of Rates of Sexually Transmitted Infection

Comparisons of reported rates of STIs among countries are made difficult by differing systems of data collection, differences in data quality, and differences in completeness of reporting. Few comprehensive efforts at comparison have been made, though a recent assessment does allow some to be considered.<sup>40</sup> This study showed that, for countries where reporting was considered high and where chlamydia infection was reported separately for 15 to 19 year olds (Canada, Denmark, Finland and Sweden), rates of female chlamydia for Canada in 1996 were lower than in the first two of the aforementioned Nordic countries, and higher than in the last mentioned (Figure 2). Canadian adolescents (both genders combined) represented 33% of the infection found, compared with 22% to 25% in the other three countries.

Such data should be interpreted with caution, since these statistics are strongly related to the intensity of screening in the countries involved, and Denmark, Finland and Sweden began policies for active chlamydia screening in the early 1990s. It is of note that while rates of chlamydia are similar to or lower in Canadian female adolescents than in these Nordic countries, pregnancy rates are lower in Sweden and Finland (see Figure 6), perhaps reflecting a bias in reported chlamydia infection due to differing methods of data collection.

**Figure 2**  
Genital Chlamydia Rates/100,000, Ages 15–19, in Countries with High Levels of Reporting, 1996



Source: Reference 40; Panchaud et al, 2000

It is also noteworthy that reported rates of chlamydia infection in Canada have declined since 1995, while those in the U.S. have increased slightly. However, rates of gonorrhea and syphilis have declined similarly in both countries.<sup>42</sup>

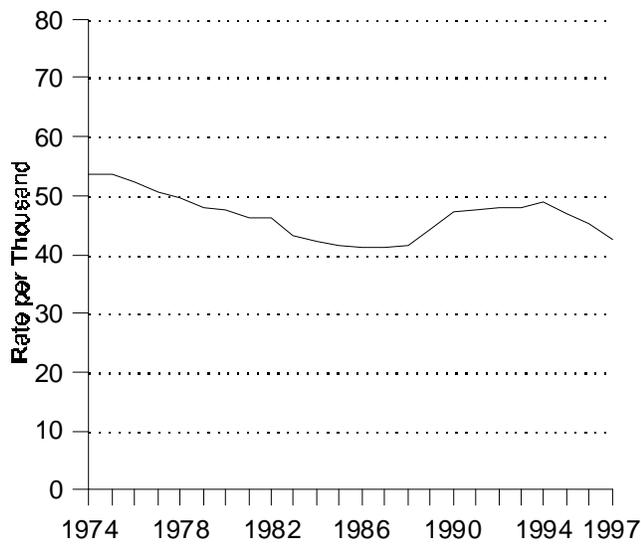
## Adolescent Pregnancy in Canada and Nova Scotia

Adolescent pregnancy can result in low birth weight infants and preterm delivery, and higher infant mortality.<sup>43,44</sup> Contrary to what is often expressed (“they get pregnant for the apartment and the money”), approximately three-quarters of pregnancies among adolescent women are unintended.<sup>19,45</sup> The social consequences for those experiencing adolescent pregnancy include a decreased potential with respect to educational, employment and economic opportunities.<sup>20</sup> Babies born to mothers aged 15 to 17, in comparison with those aged 20 to 21, often have less supportive home environments, and poorer cognitive development and health. They are also more likely to themselves become adolescent mothers.<sup>46</sup>

Figure 3 shows Canadian teen pregnancy rates by year from 1974 to 1997. These rates include all live births, spontaneous abortions presenting to hospitals, therapeutic abortions performed in hospital and government clinics, and stillbirths. Rates of adolescent pregnancy fell from 53.7/1,000 in 1974 to 44.4 in 1989. The following five years showed an increase, with the rate in 1994 being 48.8/1,000. From 1994 to 1997, the pregnancy rate steadily declined, so that in 1997 it was 42.7/1,000. In 1997, 21,233 women aged 15 to 19 had abortions, for the first time surpassing the number of live births.<sup>47</sup>

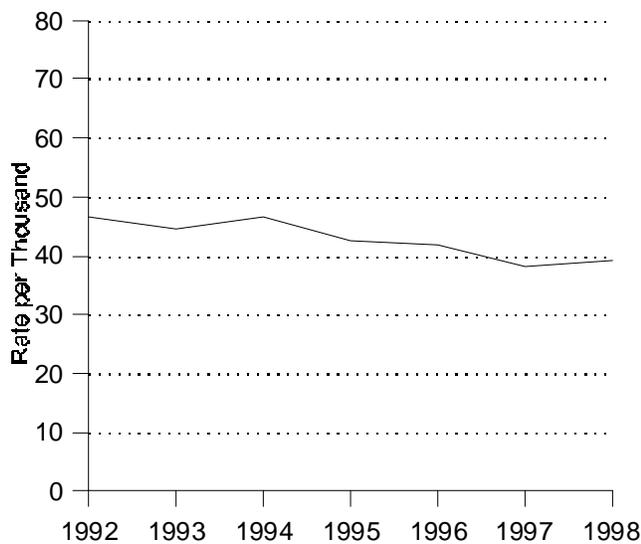
Pregnancy rates in Nova Scotia are slightly lower than the Canadian average, with about four in every 100 adolescents becoming pregnant each year.<sup>48</sup> In Nova Scotia, there has been a decrease in non age-adjusted rates of pregnancy in adolescent women over the years 1992–1998, so that the rate for 1998 was 39.3 per thousand population (Figure 4).

**Figure 3**  
Pregnancies/1000 Women Aged 15–19, by 5 Year Age Period Canada, 1975–1994



Source: Reference 47; Dryburgh, 2000

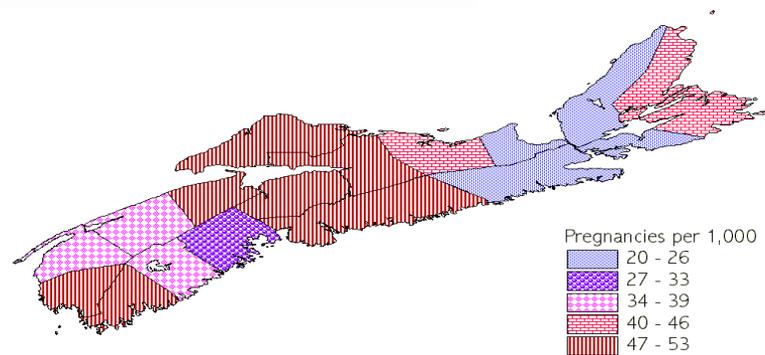
**Figure 4**  
Pregnancies/1000 Women Aged 15–19, Nova Scotia, 1992–1998



Source: Reference 48; Nova Scotia Department of Health, 1999

Pregnancy rates vary considerably by region in Nova Scotia. Figure 5 indicates ranges of non-adjusted rates for 15 to 19 year old women by county, averaged over the five year period 1994–98. Generally, rates are higher in the centre of Nova Scotia, including Halifax County, and in the western area of the province. They are lowest in the eastern mainland. The reasons for such variation are not clear, but are likely to be related to the social and economic environment.<sup>49</sup>

**Figure 5**  
Mean Pregnancy Rates/1000 N.S. Women Aged 15–19 Years, by County, for Years 1994–98



Source: Reference 48; Nova Scotia Department of Health, 1999

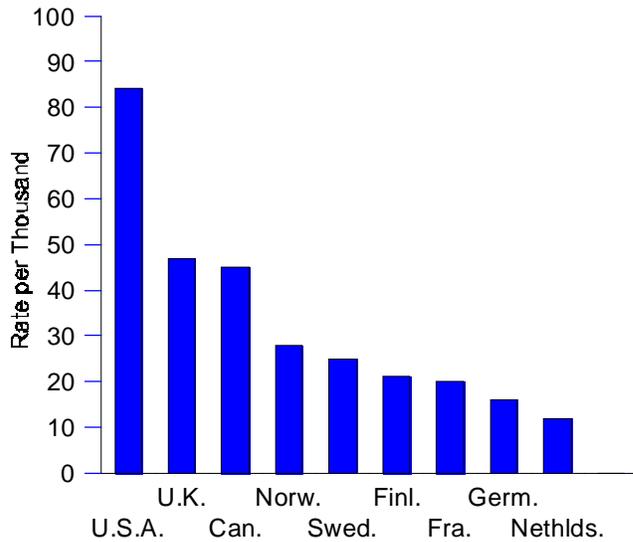
## International Comparisons of Rates of Adolescent Pregnancy

Over the past three decades there has been a decline in adolescent pregnancy rates in developed countries. In 1970, 29 industrialized countries had rates of teen birth of 35/1,000 or more; this number had fallen to 12 by 1995.<sup>50</sup> While this represents part of an overall decline in fertility in such countries, the decline in adolescent fertility has contributed disproportionately.<sup>51</sup>

As seen in Figure 6, Canada could be doing much better with respect to this important health outcome for young women. Scandinavian countries and the Netherlands, in particular, have rates of adolescent pregnancy substantially lower than those seen in Canada. Unicef's *The Progress of Nations* indicated a global average of 65 live births per 1,000 women aged 15 to 19; Canada's 1995 rate of 24 live births per 1,000 women was higher than all the countries seen in Figure 6, with the exception of the United States. (Data for the United Kingdom were not available.) On the positive side, adolescent pregnancy in Canada in 1995 compared favourably with Australia's rate of 22/1,000, and was observed to be some-

what better than New Zealand's, which was 32/1,000.<sup>52</sup> It is clear that while Canada compares well with some developed countries, comparison with others indicate a tremendous potential for improvement.

**Figure 6**  
Pregnancy Rates in Women 15–19 Years, by Country, Most Recent Available Year



Source: Reference 50; Singh and Darroch, 2000

Differences in international rates of adolescent pregnancy are thus seen to be quite substantial, and this has led to speculation concerning the factors which have brought them about. A pragmatic attitude towards adolescent sexuality, reflected in well-thought out and well-resourced sexual health education, the availability of contraceptives to adolescents, and confidential and accessible sexual health services are thought to be the major factors which explain differences between those countries which are doing well in this area and those which are not.<sup>19,53,54</sup> Notably, these attitudes and policies are not reflected in increased sexual activity, nor in earlier onset of sexual activity. For example, U.S. teens are seen to have the earliest age of sexual debut and those in the Netherlands the oldest, while the age of first intercourse in France and Germany falls between that of those two countries.<sup>55</sup>

## Costs of Adolescent Pregnancy and Sexually Transmitted Infections

The morbidity, mortality and social costs for adolescent mothers and for those suffering from STIs have been mentioned. While these costs are large, and represent the toll in human suffering, there are also direct financial costs, which are largely borne by the public. For example, in the U.S., estimated overall costs for STIs in 1994 were US\$17 billion. For every dollar spent on early detection and treatment of chlamydia and gonorrhoea, it has been estimated that twelve dollars could be saved in associated costs related to pelvic inflammatory disease, tubal infertility and ectopic pregnancy.<sup>56</sup>

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Sexually transmitted infections are thought to account for 20% of all cases of infertility which occur in Canada.<sup>57</sup> *In vitro* fertilization (IVF) data collected by the Canadian Regulatory Authority in Ottawa have demonstrated that the costs of this medical procedure are very high. In 1995, five thousand IVF treatments were carried out in Canada, each costing approximately CDN\$6,000, for a total annual cost of thirty million dollars.<sup>13</sup>

The financial costs of adolescent pregnancy include those directly related to pre and post natal care, abortion services, and the social support very often required by adolescent mothers and their babies. In 1993, there were approximately 2,700 families headed by teenage mothers (or those who were teenagers when they first became mothers) receiving family benefits in Nova Scotia.<sup>58</sup> It has been estimated that each dollar spent on the prevention of adolescent pregnancy would result in ten dollars saved.<sup>13</sup>

## **Effective Sexual Health Services and Education Programs**

### **Effective Sexual Health Services**

There has been a significant effort, particularly in the United States, to study sexual health services aimed at reducing adolescent sexual risk. Many types of program have been implemented and many have been the subject of evaluation. Types of program available to adolescents include family planning services, school condom availability programs, school-based health centres, and multiple component interventions. A major review<sup>59</sup> outlines the salient findings of the many studies of programs directed at increasing access to condoms and other contraceptives, concluding as follows:

- the impact of family planning clinics on contraceptive behaviours is unclear because studies have been few, and results inconsistent;
- availability of contraceptives and/or condoms in schools with health centres does not hasten onset of sexual debut;
- school-based centres have not been proven to increase use of contraceptives and/or condoms in school populations and have not been shown to decrease school-wide pregnancy or birth rates;
- multi-component programs involving many community partners and intensive community involvement can have an impact on risk-taking and pregnancy rates, but these studies have been inconsistent, implying that the simple presence of multi-component approaches is no guarantee of success;
- multi-component programs need to be sustainable to achieve ongoing success.

This potential for multiple approaches involving the community broadly in sexual health protection and promotion efforts is reflected in Health Canada's *Report From Consultations on a Framework for Sexual and Reproductive Health*. Principle 8 of that document indicates that "families and communities share responsibility in providing a physical and psychosocial environment that enables all its members to maintain their sexual and reproductive health."<sup>13</sup>

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## Experience with a Multiple Component Approach in Nova Scotia

Nova Scotia has an example of such a multiple component intervention, as seen in the results of the Amherst Initiative for Healthy Adolescent Sexuality. This project, grounded in social-ecological theory,<sup>60,61</sup> social learning theory,<sup>62</sup> and social marketing,<sup>63</sup> and relying on the multiple intervention strategies thought to have a great deal of promise,<sup>59,64,65</sup> was carried out between 1996 and 1999. A community group consisting of schools, Cumberland County Family Planning, Public Health, parents, teenagers, health care professionals and interested citizens, assisted by a paid coordinator, organized community activities to promote sexual health. These included use of mass media to increase community awareness of adolescent sexual health issues, enhancement of school-based sexual health education, professional development, parent education, and the provision of a clinical nursing service which could dispense condoms and make referrals to other health care professionals for additional sexual health services.

Comparisons between 1996 and 1999 show important knowledge, attitude and behaviour change in students in Grades 9 to 12 attending Amherst Regional High School. For example, students of both genders had increased sexual health knowledge scores, and both younger (ages 14–16) and older (ages 17–19) females had significantly increased perceptions of support from their parents, partners, friends, physicians, and the community for their use of condoms, while older females had significantly improved attitudes towards use of condoms. The age-adjusted rate of condom use at last intercourse was increased for all age groups except older males, for whom use fell. Use of oral contraception at last intercourse was significantly increased in younger women, and the proportion of younger females without contraception at last intercourse decreased from 32% to 14% between 1996 and 1999. Finally, the age-adjusted trend in pregnancy rates in Amherst women in 1998, compared with the period 1995 to 1997 (1998 being the year intervention would have first been able to affect pregnancy rates), was decreased by 31%. Comparison with the provincial trend for the same time period did not reach statistical significance ( $p=0.07$ , one-tailed), probably due to the small numbers of pregnancies involved.<sup>66</sup> The results of this pilot project, carried out with only a modicum of financing for community efforts, are very encouraging, and support the conclusions drawn by Kirby<sup>59</sup> about the potential for such multi-component approaches.

## Multi-component Sexual Health Services in the United Kingdom

It is of note that the United Kingdom, after thorough consideration of the evidence for such approaches, has adopted a multi-component strategy for addressing teen pregnancy. This approach incorporates interventions at many levels, stating that "...there needs to be nothing less than a common national effort to change the culture surrounding teenage pregnancy, involving government and professionals, opinion formers and the media, communities, parents and teenagers themselves...".<sup>17</sup> This campaign is being coordinated by the Social Exclusion Unit, established by Prime Minister Blair to help improve government action to reduce social exclusion through "joined up solutions to joined up problems". The Unit's work relates to specific projects, chosen by the Prime Minister after consulting with other Ministers and interested groups. The adolescent pregnancy campaign will make extensive use of print and broadcast media, and will involve

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the national government closely through an independent national advisory board. At the local level, community coordinators will work to pull together all existing local services and resources with a role to play in preventing adolescent pregnancy in the process of “joined-up action”. Preventive efforts will occur through:

- new guidance for schools on sex education which helps young people deal with the pressures to have sex too young, and encourages them to use contraception if they do have sex;
- better training for teachers;
- a new emphasis on consulting parents about what their children should be taught about sex and relationships, and practical help for them to talk to children about sex themselves;
- information campaigns to explain what support is available to parents in talking about sex and relationships with their children;
- implementation of local funding for integrated and innovative programs;
- new health services standards for effective and responsible contraception advice for adolescents;
- clear and credible guidance for health professionals on the prescription, supply and administration of contraceptives to under 16s, including a duty to counsel them when they seek advice on contraception;
- a new national helpline to give advice to teenagers on sex and relationships and to direct them to local services; and,
- a national publicity campaign to inform teenagers about talking with health professionals.

### **Effective School-based Sexual Health Education**

In the context of this paper, the effectiveness of school sexual health education means curricula which have demonstrated a capacity to delay onset of sexual intercourse and/or to increase sexually active young peoples’ condom and contraceptive use.<sup>67</sup> Two major reviews in the United States have examined what contributes most to the effectiveness of school-based sexual education,<sup>59,68</sup> and have identified the major characteristics of effective programs as follows:

- a clear focus on reducing one or more sexual behaviours that lead to unintended pregnancy or HIV/STI infection, avoiding a dilution of the curriculum;
- incorporation of behavioural goals, teaching methods, and materials that are appropriate to the age, sexual experience, and culture of the students;
- being based upon theoretical approaches that have been demonstrated to be effective in influencing health-related behaviours;
- a time frame which lasts long enough to allow participants to complete important activities;
- provision of basic, accurate information about the risks of unprotected intercourse and methods of avoiding unprotected intercourse;
- employment of a variety of teaching methods designed to involve the participants;

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- inclusion of activities that address social pressures related to sex;
  - provision of models of and practice in communication, negotiation, and refusal skills; and,
  - selecting teachers who believe in the program and providing them with appropriate training.

The first of the above, referring to the need to focus to get results, requires further comment. What is being said here is that programs which have focussed on goals such as delaying onset of intercourse or encouraging contraceptive use have fared better than those which have not. However, it is unclear how educational programs would be able to maintain such a focus, and yet also be able to include other important topics, since few such comprehensive programs have been evaluated.

According to Health Canada's *Canadian Guidelines for Sexual Health Education*,<sup>69</sup> sexual health education programs are to be targeted at *both* sexual health enhancement, including positive self-image and self-worth *and* prevention of unintended pregnancy and STIs, emphasizing that sexuality is a central and positive part of the well-being of young people. Clearly, material related to the nature of rewarding, meaningful relationships, sexual assault/coercion, sexual orientation, and changing gender-role expectations in the work place, social life and interpersonal relationships should be integrated effectively into the curriculum. However, it also appears to be the case that if a desired result is pregnancy and STI prevention, clear focus on such health outcomes is essential.

## **Sexual Health Services and Education Policy and Programs in Nova Scotia**

### **Sexual Health Policy and Services**

Health is a provincial jurisdiction, and therefore individual provinces are responsible for development of policy for adolescent sexual health services. However, the federal government has indicated its concern and support for adolescent sexual health through the development of several documents. The first of these, the *Report on Adolescent Reproductive Health*,<sup>70</sup> made recommendations meant to overcome barriers to sexual health services for youth through creation of comprehensive, accessible, community-based sexual health services for adolescents in all Canadian communities. A second document, the *Report From Consultations on a Framework for Sexual and Reproductive Health*,<sup>13</sup> resulted from national discussions concerning an action framework to promote and protect the sexual and reproductive health of Canadians, and is intended to guide collaborative action both within and without government. The report indicates strategic directions which focus on the determinants of sexual health, and provides a foundation for construction of specific initiatives, addressing the multiplicity of influences on sexual health throughout the lifespan. The Report was developed as a response to *Proceed With Care: Final Report of the Royal Commission on New Reproductive Technologies* which recommended a coordinated national approach for promoting sexual and reproductive health.<sup>57</sup>

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The Nova Scotia Government also recognizes the importance of adolescent sexual health. For some years, the Department of Finance planning document, *Government by Design*, has mentioned teen pregnancy as a target for government action, indicating in 1996 that the goal was to reduce the rate from 4.5% to 3.6 by 2005.<sup>71</sup> The importance of this outcome is also recognized in the 2000–2001 business plan for the Nova Scotia Department of Health, which indicates that a performance measure of the Department's success in achieving enhanced health status in Nova Scotia will be the extent of reduction in pregnancies per 1,000 females under age 20.<sup>72</sup> In addition, the Nova Scotia Health Standards developed in preparation for regionalization were signed off by the regions in March 1997. These outline a need for STI prevention, reduction in teen sexual activity and pregnancy, and establishment of regional sexuality initiatives to build self-esteem and positive body image.<sup>73</sup>

These issues are thus identified as key targets by the Department, though how this translates into concrete action is difficult to determine. Policy direction regarding adolescent sexual health provided to the health regions/districts in the Nova Scotia Health Standards is minimal; the above outlined targets related to teen pregnancy and STI are not accompanied by indications of how the regions/districts will be supported by the Department in reaching them. Thus, they are best viewed as target outcomes for the regions/districts. At the regional/district level, it appears that Public Health is meant to address these targets, without a comprehensive regional/district strategy requiring the involvement of other necessary players, including physicians, hospitals and youth health centres.<sup>74</sup> Without central policy direction and comprehensive regional/district planning, it is clear that efforts to enhance sexual health services for youth will continue to be less than optimal.

The need for planning for action in this area of health has been articulated by others in Nova Scotia. The Well Women's Health Study Group of the Grace Maternity Hospital, in its 1995 progress report *Improving the Health Status of Women in Nova Scotia*, placed emphasis on outcomes such as STIs and pregnancy in adolescents, and called for the creation of an action plan which would establish a multidisciplinary task force, identify specific gaps and information needs, and develop goals and objectives related to outcomes.<sup>75</sup> In addition, Planned Parenthood Nova Scotia, in a proposal to the Department of Health to reorient services, emphasized the barriers faced by youth to sexual health education and services, and proposed solutions based on community development and broadly-based action.<sup>58</sup>

Several government initiatives have been undertaken in order to address adolescent sexual health needs. A system of "Sexuality Education Resource Nurses", or "SERNS", was established through local health units in the late 1980s. These nurses, with a special interest in sexual health and aided by workshops provided by the Department of Health, were mandated to provide public and school-based sexual health education in their local areas. Much of what was accomplished related to individual capacity and the success each nurse had in being able to build relationships, especially with schools. With cutbacks in funding and with regionalization, this way of assigning nursing duties gradually decreased in most regions. In most areas of the province, schools are assigned specific public health

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nurses who look after general health concerns, including those related to sexual health, while in others, nurses perform their duties by incorporating school-related activities into their daily activities on an as needed basis.<sup>76</sup>

The Government of Nova Scotia also provides modest funding for organizations with a mandate to address adolescent sexual health. These include Planned Parenthood affiliates in Nova Scotia and the Amherst Association for Healthy Adolescent Sexuality. Of the school- and community-based youth health centres which have been established in Nova Scotia, many receive government funding. However, their histories are variable and evaluation of associated sexual health outcomes is not often carried out. These centres represent a variety of strategies for meeting the health needs of Nova Scotia youth. Most do not have full-time staff, and are coordinated by individuals with either a nursing or health education background.<sup>77</sup> Little in the way of published data is available to judge the capacity of such centres to impact sexual health outcomes.

The Department of Health was involved in funding a recent Emergency Contraception Campaign.<sup>78</sup> As of the spring of 2000, the campaign has become an annual one, with the Department of Health providing all of the print campaign resources. The Department also worked with Planned Parenthood Nova Scotia in funding and supporting a research effort to explore the sexual health services and education needs of youth in the province.<sup>79</sup> Finally, the Department is involved in the Nova Scotia Round Table on Youth Sexual Health, a broadly-based group of community and government partners with the self-defined mission of working collaboratively to promote and protect the sexual health of Nova Scotia youth. The Round Table is involved in several promising projects, including an inventory of outcomes-oriented initiatives under way in the province.

Of all organizations which deal with adolescent sexual health as the major part of their mandate, the Planned Parenthood Federation of Canada (PPFC) and their affiliates is perhaps the most visible and active across the country. Almost 40% of PPFC clients are younger than age 19.<sup>80</sup> Services provided include contraceptive counselling, counselling for unplanned pregnancy, and dispensing of contraceptives, though these services vary across the country. In Nova Scotia, services are available in Amherst, Bridgewater, Halifax, New Glasgow and Sydney, though full clinical services are available only in Halifax. Such limited reach creates access issues, and operational funding is not optimal, though Nova Scotia is one of the few provinces from which Planned Parenthood receives a substantial portion of its budget from government.

Because youth health centre and Planned Parenthood activities are not available in many communities, many adolescents must rely on the physician services system to meet their sexual health needs. This "usual care" system theoretically provides access to a wide range of services, including contraception, STI testing and treatment, prenatal services and therapeutic abortions.<sup>81</sup> There are some difficulties with this aspect of the system, including a limited ability to reach and help youth because of gaps in professional training,<sup>82,83,84</sup> less than optimal proactive concern for adolescents' sexual health,<sup>85</sup> limitations on the services offered to youth,<sup>86</sup> and perceptions by adolescents of lack of respect and confidentiality from practitioners.<sup>79</sup> One Nova Scotia survey administered to students in a large high school found that, of students overall (i.e., whether sexually active or

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not) who had a family physician, only 9% of male students and 38% of female students had discussed with their physician whether they were sexually active. Sexually active students of both genders were more likely to have discussed with their physician whether they were sexually active, though only 16% of sexually active males and 56% of sexually active females had done so.<sup>87</sup> In this survey, most females (93%) who were sexually active and who had discussed this behaviour with their family physician had also discussed oral contraception, but difficulties in accessing birth control have been seen in Nova Scotia studies.<sup>88</sup>

### **Sexual Health Education Policy and Programs**

Knowledge is an essential (though not in itself sufficient) component for adolescents to be able to take action to protect their sexual health, and the educational system plays a major role in creating that knowledge. As with health, education is a provincial matter, though here the federal government also provides guidance. For example, the *Canadian Guidelines for Sexual Health Education*, developed by Health and Welfare Canada in 1994, proposed a framework that would accommodate general principles for the development and delivery of sexual health education. The document emphasizes that schools are essential for providing sex education and are to be seen as the primary vehicles for ensuring that young people have access to effective sexual health programs.<sup>69</sup> Since federal policy influence is limited, discussion is focussed on sexual health education policy in Nova Scotia.

In its *Goals of Public Education*, the Nova Scotia Department of Education indicates that the public school program “provides opportunities for fostering students’ growth as collaborative and independent lifelong learners who can take responsibility for their own health and lifestyle”. The document emphasizes the learning environment’s role in assisting students to acquire knowledge, skills and attitudes for healthy living including, presumably, healthy sexuality.<sup>89</sup>

Implementation of the framework for physical and health education, *Foundation for Active, Healthy Living: Physical and Health Education Curriculum*,<sup>90</sup> which articulates the overall scope of health and physical education for Nova Scotia, began in 1998 with the physical education curriculum for Grades Primary to 6, and continued in 1999 with that curriculum for Grades 7 to 9. Despite the fact that the framework underwent an extensive review by school boards, schools, teachers, students, parents and academics, it is of note that the document refers infrequently to sexuality, reflecting perhaps a reluctance to deal with these sensitive, yet vital, topics.<sup>91</sup> To accommodate budget restraints, the schedule for curriculum development and implementation in a number of subject areas, including health education, has been changed. Curriculum initiatives in health education have been frozen for 2000–2001; as a result, a planned validation and subsequent revision and implementation of both the health education curriculum for grades primary to six, and Personal Development and Relationships (PDR) for Grades 7 to 9 have been postponed.<sup>92</sup>

Education about some aspects of sexual health begins in elementary school in Nova Scotia, and is guided by the teaching guide *Health: A Program Promoting Active Healthy Lifestyles*.<sup>93</sup> Rules for personal safety, including sexual abuse, are

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dealt with in Primary, and reinforced in later grades. Discussion of “private parts”, and their proper names, is also introduced in Primary. Beyond this, sexual abuse is the only sexual health topic covered in Grades Primary through 3.

Reproduction, differences in male and female reproductive systems, and fertilization as a result of sexual intercourse are discussed in Grade 4. Discussion of AIDS is also first introduced in this grade, under the concept of communicable diseases – teachers are advised that discussion of AIDS may be pursued by some children since it is a communicable disease about which “some questions may be asked”. It is not suggested as a learning experience for the teacher to introduce. Grade 5 is where the physical, social and emotional changes seen during adolescence are brought up for the first time. These include production of sperm, growth of sex organs, breast development, menstruation, and the concept of healthy sexuality (but the latter only as part of healthy body image). In Grade 5, HIV as a communicable disease is suggested as a learning experience, and teachers are advised they “not avoid” discussion of AIDS because of the natural interest it will hold for students. In Grade 6, discussion of feelings towards the opposite sex and curiosity around sexual matters appear as part of the teacher notes for having children review changes which occur during adolescence. STIs, in addition to HIV, are discussed in Grade 6 for the first time. Discussion of HIV transmission is suggested as a sample learning experience, but the words “condom” and “prevention” do not appear here, nor elsewhere in the document. A video, “AIDS and Youth” from the Canadian Home and School and Parent-Teacher Federation is suggested, however. The subject of contraception is never mentioned.

Of all sexual health issues, sexual abuse is that most frequently mentioned in the above document. Concepts of personal safety are recommended to be taught at the beginning of each school year, and in all grades. The guide provides a lengthy introduction to this important issue for teachers, and several pages are provided concerning it for each school year from Grades Primary to 6. It is noteworthy that “key concepts” for students to learn about sexual abuse are exactly the same for all Grades, from Primary to Grade 6. Otherwise, and aside from the topics mentioned above, for most of which little detailed advice is provided to teachers, sexual health receives cursory attention. A new curriculum guide in draft form appears however to be addressing some of these deficiencies.<sup>92</sup>

The most recent draft of the Personal Development and Relationships (PDR) curriculum guide (Grade 7 to 9),<sup>94</sup> which, as mentioned, is currently officially on hold, is more specific about sexual health. Since it is being used by PDR teachers in some schools, it is reviewed here. The guide follows reasonably closely a recently developed series of draft departmental educational outcome statements.<sup>95</sup> The first mention of sexuality occurs in the “My Body, My Self” section in Grade 7, where students are asked to discuss how adolescent sexuality is handled at home. Safety issues (sexual abuse/harassment) are introduced in this section. In the “Lifestyle Choices” section, drugs and alcohol are emphasized, but not their relationship to sexual risk taking.<sup>27</sup>

In Grade 8, in the “My Body, My Self” section, a number of issues related to the influence of the social environment on sexual decision making is introduced, including the influence of media and peers. Discussion of sexual orientation is begun here, and helpful suggestions are made for teachers, including needs

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assessment and question boxes so that students can make inquiries anonymously. Grade 8 also introduces STI prevention in the “My Body, My Self” section, stipulating that “students will be expected to identify and practise strategies for preventing sexually transmitted diseases (and HIV)”. No mention is made of chlamydia, a subject of which Nova Scotia students have poor knowledge.<sup>96</sup> Similarly, no mention is made of condoms, though resources listed for teachers appear to be appropriate. In Grade 8, in the section called “Lifestyle Choices”, students identify the risks of sexual activity, options/consequences related to teen pregnancy, sexual identity, and issues related to self-esteem and sexual decision making. No mention is made of contraception, nor of prevention with respect to teen pregnancy. This section emphasizes risks related to drug and alcohol use and gambling, again with no connection to sexual risk taking.

In Grade 9, students learn about contraception, seemingly for the first time, in the “My Body, My Self” section, despite the fact that as many as 30% will be sexually experienced.<sup>25,27,28</sup> Emergency contraception is not discussed, though adolescent females in Nova Scotia are poorly informed about this important intervention.<sup>97</sup> Normal pregnancy and factors affecting the health of pregnant women and the foetus are introduced. Disease prevention is also discussed in this section, though no mention is made of STIs. Sexual harassment and rape in dating relationships are discussed. The “Risk Taking” section in Grade 9 also limits itself largely to discussion of drugs and alcohol, and to problem gambling, with the word “AIDS” appearing once in relationship to the subject of drug use.

In sum, the PDR program content, while it attempts to address many important facets of sexual health, is often short on specifics, especially those related to condom use and contraception. Contraception, which does not include emergency contraception, is introduced far too late, when many adolescents are already sexually experienced. Also notably lacking is any integration of the effect of substance use on sexual behaviours. It is considered that where specific health results are desired programmatic outcomes, ways of attaining these need to be emphasized.<sup>59</sup> This curriculum will clearly need to provide more support for students for reaching these outcomes, perhaps at the expense of more peripheral issues.

There is also evidence that, due in part to these content issues, but also because of other important factors, PDR can be a less than effective and engaging curriculum. Female students at Amherst Regional High School, interviewed about barriers to effective sexual health education, indicated that there were systemic problems in the delivery of this program, including its being characterized by a repetitive and boring curriculum, avoidance of specific topics, contradictions with teachings from home and church, lack of relevancy, and lack of credibility within schools for sexual health education programs. This latter was seen as a crucial problem – students sensed that PDR was not a priority course, that teaching PDR was assigned to junior teachers and others who would rather not be teaching it, and that those who did the teaching were often not trained in sexual health. PDR teachers were always referred to by participants in relationship to other subject responsibilities (e.g., English teacher, guidance counsellor, etc.), never primarily as the PDR teacher. This confirmed and reinforced the lack of legitimacy which students perceive for the PDR teaching role.<sup>85</sup> Similar difficul-

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ties were revealed in a provincial study carried out by Planned Parenthood Nova Scotia and the Nova Scotia Department of Health, indicating that such issues are to be found in many areas of the province.<sup>79</sup>

Teachers in Nova Scotia have indicated a lack of support for sexual health education from schools, which they saw manifested in not keeping the same PDR teachers year to year, not providing PDR in-service and teaching resources, assigning inappropriate teachers to PDR, and using PDR as a slot for difficult to schedule extracurricular topics and events.<sup>98</sup> Similar findings have been observed elsewhere. For example, a survey of 205 health educators in Texas reported that fewer than 50% of teachers of health education held Bachelor's degrees in the discipline, and that 10% had no health background whatever.<sup>99</sup>

Finally, the one-half credit program Career and Life Management,<sup>100</sup> usually offered in Grade 11, contains a mandatory sexual health component, covering STIs and AIDS, even if not identified as learning priorities through student needs assessments. Many student-centred learning activities are suggested, leading to the goals of students' being able to demonstrate an understanding of accurate information on STIs and AIDS and to make personal behavioural decisions. Sample lessons include discussion of specifics of STIs, including chlamydia infection, risky behaviours (including specific sexual acts), and birth control, including condoms. In short, this program appears to have the specifics lacking in PDR, though it is introduced when approximately 50% of students can be expected to be sexually experienced.<sup>25,27,28</sup>

When the above overview of sexual health education in the province is considered with evidence that teacher comfort in presenting course material correlates with student responsiveness and a positive classroom environment,<sup>101</sup> the question of whether sexual health education in Nova Scotia is working well should be raised. The perceptions that Nova Scotia youth have about the lack of credibility in and value placed on school sexual health education<sup>79,85</sup> are a great hindrance to creating a climate in which young people feel empowered to carry out healthy behaviours. Social ecological thinking considers the entire environment as shaping health behaviours, and infers that efforts to promote well-being need to be based on an understanding of the interactions among diverse environmental and personal factors. The strength of social ecological approaches is integration of strategies of environmental enhancement and behaviour change within a broad systems framework.<sup>60,61</sup> To put this notion simply, if individuals do not feel supported to act in certain ways by their social, including educational, environments, they are less likely to do so. The types of difficulties articulated by young women in Amherst, and by youth throughout the province, indicate that it is unlikely that the Department of Education will be able to realize its goal of having young people "take responsibility for their own health and lifestyle", at least in the area of sexual health, without a major rethinking of sexual health education and the values associated with it.

What lies behind this difficulty in developing and delivering effective sexual health education? MacKay<sup>102</sup> argues that approaches towards sexuality education are influenced by the conflict, often present within individuals, and not just found in groups with opposing points of view, between "restrictive" and "permissive" ideologies concerning sexual health education. Such conflict can restrict

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both political and individual will to provide meaningful educational experiences for students. That sexual health education programs exist at all is evidence that the pendulum is swinging from the former to the latter.<sup>103</sup> However, perceptions of lack of support for sexual health education programs, an ineffective curriculum, and lack of formal teacher training are expressed by young people in Nova Scotia, perhaps as a result of such conflicting values. Those who seek to serve adolescents must work to overcome the barriers young people experience in learning about this essential aspect of their lives.

## **Options for Adolescent Sexual Health Services and Education**

The case for considering action to promote the sexual health of adolescents in Nova Scotia is clear. Pregnancy rates remain unacceptably high, especially in comparison with other developed countries. Adolescent women carry the largest burden of sexually transmitted infection. Both of these outcomes have tremendous implications for the health and social well-being of both young women and young men, as well as their communities, which suffer a very real loss of human potential as a result. The current approach of the health system for dealing with these issues is less than adequate, and substantial difficulties are encountered by adolescents in using the traditional medical care system. Educational policy is well intentioned and certainly an improvement on that of previous years, but it is too little and too late for many adolescents. What follows is predicated on acceptance of the position that the current approach is much less than ideal. Given that acceptance, there are several directions which could be chosen with respect to adolescent sexual health. These are addressed below, with advantages and disadvantages outlined. None is meant to be an absolute “silo”, but their organization by degrees of change allows for thinking along a continuum of improvement.

### **Maintaining the Status Quo**

Clearly, one of the options that could be exercised is to maintain things the way they are, relying largely on a family physician system, with some inputs from Planned Parenthood, Public Health, an uncoordinated system of youth health centres, each performing a unique set of services according to its particular mandate, and a health education system not adequately addressing sexual health issues.

#### ***Advantages:***

(a) *Cost containment.* Nova Scotia spends a significant amount of its resources on health care. The province’s health care budget increased by nearly 38% during the years 1996–97 to 1999–00, but has been slightly reduced for 2000–01. In 2000–01, health expenditures will account for nearly 33.2% of net expenses.<sup>104</sup> The government has little discretionary spending power, and choosing to do nothing would (obviously) put no extra pressure on sparse resources.

(b) *Little political risk.* Given the potentially strong feelings that discussions of adolescent sexual health can bring about in some quarters, there might well be political dangers to taking a stand on such issues. Despite the fact that parents in one Nova Scotia community have declared themselves strongly in favour of sexual health education for their children,<sup>105</sup> any concerted and visible action to

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protect and promote adolescents' sexual health may well carry some element of political risk.<sup>106</sup> Countering this, there is a strong call from some quarters, mostly individuals or local organizations, for strengthening youth access to health services through (mostly) school-based health centres. Youth themselves, however, have little or even no voice – they are inexperienced, do not know the system, have no direct financial power, and most importantly, they, at the age they need help most, cannot vote. Making no effort to do things differently probably creates little political risk.

***Disadvantages:***

(a) *Little potential for marked improvement in the short term.* The negative outcomes seen in adolescents are pressing matters, causing real harm to the individuals affected. However, positive trends have been noted in pregnancy rates since the 1970s, and chlamydia and other STIs are less frequently reported over the last several years. No doubt, with gradual changes in education of health professionals, more open discussion of adolescent sexuality in the media, and progress with sexual health education, these improvements will continue, but slowly. A policy decision not to take concerted action must recognize that important health issues are being left to the vicissitudes of a system that is currently not carrying out a maximally effective effort. A decision to make no change is sufficient for these preventable health outcomes to prevail for quite some time.

**Modifications of the Current System, Keeping Its Essential Structure**

There is a system in place for sexual health services and education. However, there are difficulties and concerns with that system. Many adolescents have difficulty trusting and using physician services for sexual health. School-based clinics and free-standing clinics staffed by nurses and supported by referral to physicians are popular with young people, but these are not standardized and very infrequently evaluated. Most do not have a “full service” component, including STI testing, PAP testing, and prescribing without the presence of a physician. Access can also be an issue, since these centres are not uniformly available throughout the province. Planned Parenthood Nova Scotia is present in only a few communities, most often with a very low staffing level. Sexual health education has many shortcomings, not the least of which is the value placed on it by the system, and the way this lack of value is interpreted by adolescents. Could this system be modified and enhanced? The answer is, of course, an affirmative one. This would involve a number of steps, including:

- reorientation of medical training and practice, such that promotion and protection of adolescent sexual health are seen as important and necessary activities for primary care physicians;
- assurance of a sexual health mandate of existing youth health centres, with adequate evaluation of their performance;
- enhancement of the role of organizations such as Planned Parenthood Nova Scotia, with evaluation of results; and,
- modification of the sexual health education curriculum to make it more content and age appropriate, and able to more effectively work to prevent adolescent pregnancy and STIs.

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***Advantages:***

(a) *Working with established groups.* Each of the organizations involved in the current system has experience with delivery of sexual health services and education to adolescents. These organizations have support at provincial, national and, at times, international levels, and are also often able to access academic support. Service delivery would continue to be implemented by those groups, avoiding confusion of roles and ensuring that adolescents would continue to have available a system well known to them.

(b) *Modest cost.* Such a reorientation of the system could be accomplished with modest cost inputs for most services, perhaps with the exception of those related to enhancement of Planned Parenthood, which would require additional funding for most of its provincial affiliates and for evaluating its efforts. Youth health centres would also require funds for purposes of evaluation.

***Disadvantages:***

(a) *Too long a time frame.* Such a reorientation would also take considerable time to make a difference. For example, less than warranted adolescent sexual health training appears to be provided currently in Canadian medical schools.<sup>82,83,84,103</sup> The time required to reorient medical education to recognize the need for adequate sexual health training might be substantial, and the established routines of physicians already in practice might be difficult to change in the short term.<sup>107</sup> Other health service organizations, more oriented to delivery of sexual health services, might be quicker, however, to make the required changes. Though still potentially significant, the time to reorient and retrain sexual health teachers and to restructure the PDR and other curricula in sexual health is likely to be a less difficult issue than is the temporal concern related to health services.

(b) *Insufficient change to yield optimal results.* If adolescents' concerns about sexual health services and education are deemed major issues, then a "tweaking" of the current system will perhaps not be sufficient. Issues of service delivery related to trust, safety, relevance and comprehensiveness of services for adolescents need to be addressed in ways which substantially decrease the barriers youth encounter with the current system. In addition, a simple reworking of current sexual health education will not address issues of values and the negative signals sent to youth when these are not supportive of education salient to their needs.

(c) *Services not uniformly available and standardized.* Given the differing operating structures and policies of youth health centres, and their locations in a minority of communities, such centres are not able to reach and help large numbers of youth. Service mandates are also important considerations; there exists the danger of substituting lesser degrees of benefit when services are not comprehensive and expected to meet minimum standards. This could occur, for example, where centres are not well integrated into the primary care system, such that youth cannot, because of this lack of integration, be offered full sexual and reproductive health services.

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## Restructuring of Sexual Health Services and Education

It is perhaps time to rethink completely the way adolescent health services and sexual health education are delivered in the province. Basic to this way of thinking is the recognition that the systems currently in place are sub-optimal *and* that unless entirely new ways of doing things are begun, we are unlikely to see much improvement in the near future. Such a revamping, if it were to involve the multi-component orientation thought to be required for success, would have five major thrusts, these being:

- mobilizing community support through mass media and other campaigns aimed at increasing public awareness of adolescent sexual health issues, and enhancing community input and involvement in helping young people with their sexual health;
- uniting those with a stake in this area of health such that there is agreement about issues, objectives and ways of working together more effectively involving communication, negotiation and sharing of expertise. This will require hiring personnel to carry out coordination at the county level as a minimum;
- establishing dedicated adolescent health services throughout the province which are youth friendly, comprehensive and accessible, and which have a clear and consistent mandate to deal with adolescent sexual health as a priority. This would require consideration of governance, training and level of expertise / skills of personnel, best locations (i.e., in or out of schools), range and comprehensiveness of services, and integration with the current primary care system;
- deciding on an appropriate, effective sexual health curriculum, mandatory for all students, content and age appropriate, and appropriately staffed with motivated, well-trained and adequately supported teachers; and,
- appropriate and timely evaluation of such efforts so that their impacts can be examined and modifications made as necessary.

These types of intervention recently have been extensively reviewed in the United Kingdom<sup>17</sup> and the United States.<sup>59,108</sup> These analyses concluded that such components are those most likely to be able to effectively address youth sexual health issues.

### ***Advantages:***

(a) *Responsive to demonstrated need.* As described previously, youth have expressed the need for changes in the way sexual health services and education are delivered in Nova Scotia. An approach which reorients services and education such that they are delivered in the ways youth have described as appropriate would be more apt to serve young people better.

(b) *Consistent with theory.* Such approaches are consistent with social ecological, social learning, and social marketing theory – people respond in context and an environment in which support for positive health behaviours is created is more likely to work than one that does not provide such support.

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(c) *Inclusiveness*. In keeping with the above theoretical considerations, a multi-component approach would involve those with most at stake in promoting and protecting adolescents' sexual health, including young people and their parents. There is strong evidence that feelings of parental support are very important to the avoidance of sexual risk-taking in adolescents.<sup>109</sup> Such an approach would, because of this realization of the role of parents, involve them, and others, very closely.

(d) *Equity*. As things now stand, some adolescents have access to youth health services, while many do not. Some community groups in the province have made unsuccessful representation to the government for funding of such services, and fail to understand why some youth are served, and others, equally deserving, are not. There is clearly an issue of equity involved here. Addressing these issues of access to youth health services would be a major advantage.

(e) *Appropriate links with the primary care system*. Such a system, if implemented properly, would work well with a reoriented primary care system. Current research into primary care in the province indicates an interest in this type of reorientation, and a multiple component approach is very compatible with this line of thinking.

***Disadvantages:***

(a) *Cost*. A revamping of the system would be costly. There are many high schools and junior high schools in the province, and providing individual schools with health services will be expensive. To the extent that qualified or retrained nursing staff already employed by the Department of Health could take on some of the work, costs would be defrayed. It should be recognized that school health services deal with many issues, not just sexual health, and that, if anything, *more* interaction with the primary care system, *not less*, may result, as adolescents make their needs known through such school-based services, and have them met through appropriate referrals and consultations.

Costs of community coordination would also be substantial since this would necessitate the presence, at a minimum, of highly-trained community workers at the county level. Planned Parenthood Nova Scotia is perhaps best positioned to facilitate coordination of resources, but, as mentioned, is currently very thin on the ground, and would require increased financial support. Costs of reorienting school sexual health education would be less, but would still be substantial if real change is to occur.

Evaluation costs also need to be considered. The literature and the experience in Amherst support the "reorientation" approach. However, there is no guarantee that this approach would be successful. Rigorous evaluation, based on program goals and inputs, establishment of program monitoring, and appropriate data systems and analysis will be required.

As mentioned, these costs can be seen as disadvantages. Seen in another light, and given the fiscal and social costs associated with the negative health outcomes under discussion, these costs are perhaps best described as an investment in the future.

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(b) *Professional issues.* Physicians will be a much needed part of such reorientation, since school or community-based adolescent services will need links for referral for services beyond their scope and mandate. The biggest challenges to reorienting health services for adolescents may be related to physicians' comfort and willingness to work in conjunction with them. Continuity of care is a major value of family practice in particular, and communications between youth health services and primary care physicians will be of paramount concern. The challenge of overall ongoing responsibility for patient care is perhaps the biggest issue to consider.<sup>110</sup> Generally, other concerns, such as delegated medical duties have been worked through by the organizations concerned,<sup>111</sup> but for different circumstances, and will require, as a minimum, reinterpretation.

(c) *Location and access.* Decisions about where to locate services will lead to issues of access, which may create disadvantage for some, depending on the choices made. While schools appear able to reach many youth well with in-house services, it may be difficult for such locations to serve out of school youth, who may be even in more need on an individual level. It has been estimated that there are about 10,000 young people aged ten to eighteen who should, but for various reasons do not, attend school in Nova Scotia.<sup>112</sup> Unless efforts are made to include these young people in youth services, they will be at a disadvantage.

## Conclusion

This paper has laid out the background of adolescent sexual health issues, emphasizing those related to the sexual health of young women. It has taken a fairly narrow focus, analyzing outcomes related mainly to physical health, while recognizing the very real importance of other issues. The paper has demonstrated gaps in health outcomes between what *is accomplished* and what *could be accomplished* with respect to these outcomes, finding that these differences can be very large, especially with respect to adolescent pregnancy.

This analysis has shown that there is little in the way of formal health policy developed for adolescent sexual health, and that health services have significant shortcomings. Research and policy in other countries, as well as policy direction at the national level in Canada, appear to support a broadly-based model which the author feels most appropriately falls under the rubric of "ecological". Nova Scotia has some experience with this model, and results of initial research are encouraging, though more time will be required to see if these are sustainable.

Educational policy is more highly developed, but an analysis of the content in the sexual health curricula of the Department of Education found that what is offered students is often too little, too late, considering where they often are with respect to sexual behaviours. Research in the province also indicates that schools are, because of the lack of value placed on sexual health education by the system itself, not maximally supportive of young people as they seek answers to their questions about this extremely important aspects of their lives.

Finally, several options were presented, from no change to complete revamping of sexual health education and services, each with advantages and disadvantages. The data presented in this analysis clearly support the latter option, which calls for a major change in the delivery of education and services. Such a reorientation

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would be holistic in nature, rooted in social ecological thinking, needs based, youth centred, and outcome focussed. Though it calls for a true shift in thinking about how we can best reach and help adolescents with this extremely important aspect of their lives, it clearly also offers the most promise.

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