



ICMR BULLETIN

Vol. 29, No. 12

December, 1999

CHILDREN AND YOUNG PEOPLE IN CONTEXT OF HIV/AIDS: LISTEN, LEARN, LIVE ! WORLD AIDS CAMPAIGN WITH CHILDREN AND YOUNG PEOPLE

"You have to start from the ground (Children and youth) with education, so the youth will grow fruitfully and be protected from AIDS. If not, the tree will die,"—*Youth delegate to the 4th International Congress on AIDS in Asia and the Pacific, Manila, 1997.*

"In my country Botswana, there is serious problem of communication between parents and their children. This is a cry from our hearts. Parents talk to us. Without your communication, guidance, dialogue, we are a lost generation. Come to our aid" — *A 14 year old girl addressing the International Conference on STD/AIDS in Africa, Kampala, 1995.*

"We strongly believe that our energy, idealism and commitment can be used to stop the future spread of the AIDS epidemic that is devastating the social and economic fabric of our own countries" — *Delegation of young people to the International Conference on STD/AIDS in Africa, Marrakeh, 1993.*

These are voices of children and young people who constitute nearly a half of the world's population and they represent the future of all the nations facing the AIDS pandemic. In the last two years, the theme for the World AIDS Day has focussed on children and the young people. The third year reiterates the relevance of protecting

children and the youth from this fast spreading epidemic with an apt slogan: *Listen, Learn and Live! World AIDS Campaign with Children and Young People.* The UNAIDS acknowledges these voices of the young giving three reasons to single out young people¹:

- (i) Special vulnerability of young people to the epidemic; of all those infected after infancy, at least half are young people under 25 years.
- (ii) Young people account for hundred millions of people in the developing world, where the epidemic is concentrated.
- (iii) Young people are a force for change, at a stage of experimentation, can learn more easily than adults to make their behaviour safe or to adopt safe practices from the start.¹

Recently, it has been emphasized, "Young people must most importantly be treated as major actors in the response to this epidemic, not just objects of education campaigns. This is to be brought through society-wide movement"². It becomes imperative thereby, that prevention efforts should focus on children and young people who would impact on the future of any community or a nation. In

Division of Publication & Information, ICMR, New Delhi - 110029

This issue commemorates the World AIDS Day (December 1, 1999)

56
24/4/2000

some countries including India initiatives in that directions have already been made. It is pertinent to learn and share experiences from other countries *vis-a-vis* the global situation in developing policies and plans for our own country.

Children and Young People in a World of AIDS Pandemic

According to estimates by UNAIDS, by the end of 1999 there were already over 33.6 million people world-wide living with HIV. Of these 46% are women; with a significant number of pregnant women attending antenatal clinics in urban areas being HIV infected³. Altogether, more than 4 million children under the age of 15 yr and more than 10 million young people (15-24 yr) have been infected with HIV since the epidemic began. During 1998, more than 8500 children and young people became infected with HIV each day, six every minute. Of the 2.5 million people who died of AIDS in 1998, 510000 were children under the age of 15 yr. An estimated 6.2 million orphans under the age of 15 were alive at the end of 1997, struggling to survive after the death of their mother or of both parents from AIDS. More than 95% of these children live in Africa⁴.

Around half of all new HIV infections occur in young people. This is an age when most people start their sexual lives. In 1998 nearly 3 million young people became infected with the virus⁴. In societies like India, where the epidemic is heterosexually driven, young women are more exposed to the risk of HIV infection than young men for both physiological and societal reasons. This is especially true of women (both married and unmarried) who have sexual relationships with men for socio-economic survival. For some women a major source of earning is through commercial sex *eg* women in prostitution and the *devadasis* in India. As a tradition these young adolescent girls from lower socio-economic strata are called *devadasis* when they are given away by the parents to the temple through the practice of theogamy, *ie* being married to gods. After getting this ritual sanctity they move outside to bigger cities and engage in commercial sex activity⁵.

Another route of transmission in the young is through drug-use where, drug injectors in developing countries are mostly males, although women drug users are now being reported⁶. Major behavioural interventions for

the children and youth are required in the absence of an affordable cure or likelihood of a vaccine in the near future. This is a formidable task as sex behaviour and motherhood are related to basic instincts and rights of the individual needing a multi-faceted approach working at several levels.

Concerns for Children and Young People

The children of the world face a lifetime of risk from HIV infection at different life stages as they grow into adulthood due to circumstances such as sexual exploitation and abuse or simply due to violation of their rights to information, education and services⁷. Also, it is being realized that there is ignorance and general lack of respect for young people's basic rights *eg* exploitation through child labour, lack of opportunity to access formal education, health services; compounded further with gender discrimination favouring males that begin at an early age. All these factors have contributed in some degree in making children and young people vulnerable to infections like sexually transmitted diseases/HIV (STDs/HIV).

Figures reported at the 1996 World Congress against Commercial Sexual Exploitation of Children indicated that more than 1 million children world-wide enter the sex trade every year. An unknown number of children are at risk of sexual abuse by relatives, other members of the child's community or strangers. Very few concrete steps are being taken except for making noises through the media about the safety of a child in the family. A large number of children and adolescents in the world, working or living on the street, face physical and mental abuse, increasing the likelihood of engaging in risk taking behaviour and thus their vulnerability to HIV⁵.

A UNAIDS review of over 50 studies has shown that sexual health education programmes among young people do not encourage sexual experimentation. When quality criteria such as responsible decision making are met, such programmes actually help to delay the age of first intercourse. They also reduce sexually transmitted diseases and unwanted pregnancies in sexually active adolescents. Success stories of school AIDS education programmes that include family life, life skills education and sexual health education are reported, for example, in parts of India, Zimbabwe and the Caribbean⁴.

Children and HIV/AIDS

Children are infected with HIV through all the modes of transmission at different stages of their life. This begins while they are in the womb, at the time of delivery, while being breast fed or when they get a blood transfusion in case of thalassaemia or haemophilia or as a result of sexual abuse. Irrespective of the mode of transmission, HIV infected children face great trauma of being isolated, discriminated, and stigmatized in formal and informal settings. In communities where power dynamics works on the basis of gender, age, class, caste, *etc.* the vulnerability of children to HIV infection increases as sexual relationships are unequal and negotiating for safe sex is not possible. Uninfected children who have lost one or both parents due to AIDS may be discriminated and denied the basic rights that other children enjoy *eg* schooling and health care facility. Also, sometimes parents have a problem of disclosing the HIV status to a child for societal fears.

In India, the response to HIV and AIDS in children is still in its infancy with only a few interventions to check transmission being reported. Scientific developments have contributed to the possibility of reduction in transmission from mother to child through medical interventions. Such intervention though possible may not be available for most women. In India, pregnant women from lower socio-economic backgrounds are more vulnerable to HIV infection and bear the burden of passing the infection to their new-born child. This results in having infected children, which can possibly be avoided if subsidized AZT for reducing HIV transmission is available in the government run hospitals often accessed by those from these lower socio-economic groups.

Children in Special Circumstances

Thalassaemia is a fatal combination of hereditary and acquired disease with repeated blood transfusions increasing the risk of HIV infection. In India more than one tenth of the patients from Mumbai, Manipur and Delhi with haemophilia and thalassaemia are at increased risk of AIDS as they approach adolescence⁸⁻¹¹. In order to reduce the risk of transmission of HIV virus policy of universal voluntary blood donation, screening of blood for hepatitis B virus (HBV) and HIV by sensitive tests need to be strictly adhered^{10,11}. Future studies should stress on the importance of early recognition and therapeutic intervention in this high risk paediatric population as in the coming decade India is certain to

face a major problem of paediatric HIV/AIDS. The time has come to plan and equip ourselves to effectively manage these children^{11,12}.

There is a need for training of paediatricians and paediatric surgeons to handle paediatric HIV infected cases without discrimination. Also, trained counsellors catering for this specialized category of the population are urgently required for improving counselling services for HIV positive children and their parents. The HIV/AIDS epidemic has affected the men, women and children and has resulted in their stigmatization, isolation and discrimination. It is imperative that response to this epidemic changes. This is specially so in relation to children, as Munro puts it, there is a need for "normalization of HIV in society"¹³. The children are resilient and have the capacity for understanding and care. Major challenges for programmes for children are to ensure that children themselves participate in a manner that is appropriate, ethical, and culturally sensitive. The breadth and diversity of interventions required to respond adequately to the needs of children in families affected by the HIV epidemic present particular challenges to programme development and implementation. Networks, and shared experiences cutting across cultural and ethnic differences at the local to global level may prove to be valuable^{13,14}.

Adolescence in the Era of AIDS

Adolescence refers to the developmental period between childhood and adulthood, a time of rapid biological, cognitive, and psychosocial maturation. Ingersoll¹⁵ defines adolescence as a period of personal development during which a young person must establish a personal sense of individual identity and feelings of self-worth which include an alteration of his or her body image, adaptation to more mature intellectual abilities, adjustments to society's demands for behavioural maturity, internalizing a personal value system, and preparing for adult roles. An individual is identified as a sexual being through these qualities. Youth and adolescents are at an increased risk of developing AIDS because of their sexual curiosity, an urge for exploration, drug experimentation and lack of knowledge.

Depending on the culture and the context, adolescents are commonly known as teenagers, young people, or youth, and the age range varies, 10-20+ years being the widest definition in common use. A perspective plan for the next 25 years for the young population starting from the preadolescent stage and onwards is being made by experts from different fields in India under the Ministry

of Human Resource Development. This focusses on youth development and their involvement in life style education including substance abuse (alcohol, drugs, smoking), reproduction health, sexuality education/sexual health for safer sex practices to avoid unwanted pregnancy, STDs/ HIV/AIDS. It is based on the premise that given a chance young people have a great deal to contribute to a community response to HIV/AIDS epidemic as they are a "Force for Change"¹⁶.

Youth Sexuality in Context of AIDS

While adolescence is either the end of childhood or the start of adult life, it reinforces the notion of adolescence as the healthiest period. This is also the period of sexual experimentation which puts the young to health risks through drugs, alcohol, smoking, irresponsible sexual behaviour, etc. There is a need to help young people delay initiation of sexual activities and increase condom use among those who choose to be sexually active. There are encouraging results from the National Youth Risk Behaviour Survey (YRBS) in USA where it has been shown that preventive education through schools, family and community produced leveling of sexual intercourse rates and increase in condom use. However, in this study it was worrying that many high school students from lower income groups chose to be sexually active putting themselves at risk of HIV infection. These students require specific interventions to delay initiation of sex and increase in condom use¹⁷. On the other hand in rural areas more resistance to AIDS and sexuality education is seen due to lack of cultural relevance to the potential stakeholders.

Drishtikon Study on Youth of Delhi

This study was prompted by a chance finding when after an intervention, 3 out of 8 male students between the ages 16-19 yr who opted for testing were found to be positive for mixed STD infections. The free sexual services were provided by the housewives in the conventional residential areas, who were apparently positive for STDs. It was seen that 88% students perceive AIDS threat as real in India, sexual activity is common among students, heterosexual encounters are considered as a greater risk for HIV transmission than homosexual ones. A large number were unaware of link of STDs with AIDS; and do not have a clear concept of STD symptoms. It is significant to note that adolescent youth are sexually active and is at a potential risk of contracting STDs and HIV infections. Therefore it is imperative to integrate the STDs related information with all interventions, targeted at adolescent youth to prevent AIDS in India.¹⁸

NARI Study in Pune

This study using insider's perspective (emic viewpoint) aimed at understanding college youth (from rural and urban areas) sexual behaviour and possible risks to AIDS/HIV using qualitative and quantitative methods and strict ethical procedures of maintaining confidentiality, informed consent and anonymity. Interactions of both boys and girls ranged from social to physical relationships; sexual experience reported with those of same and opposite gender, more so by boys including having sex with CSWs. One-third reported condom use, only a fifth its consistent use. Knowledge of STDs was limited; few seeking treatment for their reported STDs. The youth expressed a need for interactive communication on reproductive health issues to clarify their doubts and worries. It is of major concern that despite adequate knowledge of AIDS, youth reported risky behaviour. AIDS awareness needs to be integrated with youth programmes where sexuality, gender relationships, reproductive health matters and responsible behaviour are openly discussed with boys and girls. Participatory approaches like workshops for information dissemination through peer leaders representing both genders should be planned for youth enabling democratic and responsible decision making by both, boys and girls¹⁹.

This comes from the top-down approach with a lack of involvement of young people in the project design and implementation. In both urban and rural areas it is seen that once these aspects are taken into account then the youth in even rural communities do not want to be left out in the programme^{17,20}.

Some interventions to increase AIDS awareness were initialized in India among youth. These were covered in urban areas through the University Talk AIDS Programme in more than 160 universities, and in rural areas by the Nehru Yuvak Kendra for the rural youth (personal discussion). Some experiences of working in the field have shown, that despite increase in knowledge levels, HIV as a problem has not been perceived by youth as risky behaviour.

The two studies mentioned above among the youth in India highlight the need for developing interventions for the youth that need to be integrated with other health and youth programmes. They may serve as an aggressive advocacy tool involving the youth at varied levels.

Drug Use and Young People

Innovative interventions to prevent HIV infection and substance use are necessary in both formal sector and informal settings. Street children, and other especially

vulnerable youth population (EVYP), in which HIV and substance use risk practices are prevalent are a difficult to reach population²¹. Evaluation of WHO programme on substance use in 25 countries, including India indicated that this programme targeted to street children in differing circumstances is well suited for operationalizing HIV/AIDS prevention. Consequently, in association with UNAIDS, this programme has been expanded to strengthen HIV prevention interventions. It is emphasized that the general training package aimed at EVYP can be effective in particular sites if it is not too proscriptive, but allows for local adaptations based on rapid assessment, youth participation, community involvement and informal strategic planning activities. Trained service providers are needed to work with drug abusers and offer a range of services that do not require abstinence from drugs but expand services that treat all men and women with respect and dignity eg syringe/needle exchange^{22,23}.

Planning Intervention for Young People

Youth can be influenced to change their current levels of knowledge, attitudes, behaviour and practices towards HIV and AIDS if they are provided correct scientific knowledge. The youth also need to be imparted sex education which is lacking both in non-formal and formal settings. This involves developing the communication skills of parents, teachers, AIDS programmers and also through peer educators. The education programmes are found to be more successful when they actively involve the youth and children and are tailored to their needs and suggestions.

Base-line studies help in understanding the target population and its knowledge, misconceptions and fears. This database is useful for developing indigenous intervention strategies. Also, keeping with gender composition and sensitivities is essential for successful implementation of the programme targeted for the youth. This includes involvement of both boys and girls and ensuring that both genders meaningfully contribute in the programme as also the use of local language, as acquaintance with local sexual language facilitates behavioural change. The involvement of people living with HIV/AIDS (PLWA) as change agents in youth programmes to spread information about the disease, has also shown relevant impact^{19, 24-27}.

Special Groups

Street children, an EVYP are particularly important as they are vulnerable to HIV/AIDS infection through

frequent change of sex partner, negligible condom usage, unfriendly medical systems, lack of sufficient infrastructure for a social support and addictions including drug use. Empowering children to run programmes, after adequate training and using them as peer educators is a useful method for spreading awareness about HIV/AIDS and reducing the risk taking behaviours among street children. It is, however, pertinent to note that the success of any programme designed to educate the youth requires strong political support and an understanding and commitment of the local authorities^{28,29}.

Intervention for the young requires their direct involvement using participatory approaches like peer education and encouraging dialogue between parents, teachers and young people. AIDS education is required at varied levels. It can be provided through electronic and print media to cover a large population with specific goals. The media should find out which social and cultural norms increase vulnerability to HIV in a community, undertake an analysis of negative stereotypes, create messages that do not stereotype but develop new norms, promote positive male and female role models and also encourage children and young people to make their views known on HIV related issues through young people's media. These should be done in keeping with the ethical norms of the society and help in projecting a partnership with the community rather than creating fear that works negatively with the young population³⁰.

Communication between Parents and Children

In the context of HIV/AIDS communication between parents and children needs to be understood at several levels. At the very start, parents talking with children on issues related to sexual health, gender and responsible sexual behaviour helps children to be better prepared for their future. On the other hand parents find it difficult in communicating their own HIV status and that of their children within the family. If one parent or both the parents are positive then the anguish of informing the child of their HIV status is obvious. The children may not understand the future implications this disease may have on their own lives. Where no other social support is available, children from lower socio-economic background sometimes may assume the responsibility of taking care of a single parent without knowing about the consequences of the disease sometimes at great personal cost. The preadolescent child could be the

caretaker of seropositive parents, where support is not available, at the cost of their studies without even knowing about the disease and its consequences.

In Africa, HIV positive mothers are desperate to communicate with their children on this issue despite the personal anguish the process may have caused³¹. A pertinent issue whether the children should be informed of their parents' HIV sero status has not reached any consensus, but this is a question that haunts many families.

Break down of trust between children and their parents can be avoided if honest and appropriate communication is possible. On the other hand, the parents also have difficulty in letting their adolescent child know his/her own HIV status. They keep this matter confidential in a social system where they fear that the child may be deprived of his basic rights related to educational and health services.

Intervention programmes to establish a dialogue between parents and children should be taken up early. The potential success of these programme would depend on adequate research on parent child communication. More research keeping HIV/AIDS in focus, should be undertaken in this important, yet unexplored area. Further, responses from research must be tailored to specific needs of the community for developing intervention programmes.

Youth: A Force for Change

Youth programmes implemented by youth, the peer educators (PEs), are more successful because sensitive communication barriers such as verbal and non-verbal language, discussions on hitherto tabooed topics like sex, are eliminated. This strategy empowers youth, especially when they can appropriately reflect on their efforts based on the developmental goals through the system and structures that are children and youth friendly³². These youth to youth programmes should also have a component of counselling through peer educators and community influencers to promote harm reduction behaviour like safer sexual practices, responsible behaviour for self, their partner and condom use. Given the prevailing risk factors such as multiple sex partners, homosexuality, sex abuse, rape among children and young people, appropriate action needs to be taken to stem the spread of HIV infection among them. Besides giving information through peer education, the programmes must include intensive

investments in life and decision making skills in the context of HIV/AIDS prevention. Such programmes can have significant and durable impact leading to proactive advocacy for social change, sustained behaviour change and integrated interventions for risk reduction³³.

Things that Work with Young People

Peer education and developing life skills are important aspects that enable young people to make the appropriate choices about their behaviour. Interactive role playing, exercises, puzzles and games help students learn and practice skills such as communication, overcoming peer pressure, decision making, emotional management, relationship skills, self-esteem building, assertiveness, gender sensitivities, *etc.* Evaluating the process of monitoring and training help to understand the changes during the programme. This has been demonstrated among schools where a shift in the behaviour of the students and surprisingly even in the attitude of teachers was observed. The students were actually engaged in the programme and the number of students involved was increasing with every session. This study demonstrates that PE is a powerful tool for the programme and it is imperative that experienced leaders design, manage and evaluate the programme closely to ensure quality of sessions in terms of the messages given, receptivity, participation of youth and gender composition during the sessions³⁴.

Monitoring and Evaluation of Intervention

Assessing the impact of an intervention is crucial in continuing a strategy, making mid-term corrections and also advocating the replication of the knowledge. The most basic form of test in the process of monitoring and evaluation is which intervention is doing what it is supposed to do. This is possible through establishing a monitoring indicator system that develops tests for measuring the efficiency of the specific intervention through the designing and monitoring tools in accordance with the reality in the community; the feasibility and replicability through a pilot model of monitoring. This has been vividly shown through the success story of STAND: Students Together Against Negative Decision, where promising interventions for both virgin and sexually active teenagers in rural areas had a substantial direct diffusion effect. This was seen through the increase in risk behaviour knowledge, modest shift in HIV prevention attitude, decrease in unprotected sex as compared to their peers from non-STAND group³⁵.

Similarly, RAPP (Rochester AIDS Prevention Programme) intervention follow up in short term had, a powerful effect on the knowledge of all students and a moderate effect in sexual self-efficacy and safe behaviour intention for high school students. In this programme the peer educators were found to be equally and for some variables more effective than the highly trained adult educators. This study also indicated the importance of an early implementation of a school based sexuality programme through peer education that can prepare the young better for safer sex practices in future ³⁶.

Youth, AIDS and Condoms

Youth programmes that included condom promotion faced difficulties and hostile resistance as they were perceived to promote sexual behaviour at an early age. In view of the increasing HIV prevalence among youth it is imperative that knowledge of the safer sex practices be imparted to them. One of the safer sex practice is the use of condoms. However, studies to assess the knowledge and attitude of youth indicated that only a small number use condoms. Majority of young people lacked the knowledge about the proper use of condoms. The reasons for not using condoms given by both boys and girls were: (i) they cause embarrassment while purchasing; (ii) it is only used to avoid unwanted pregnancy; (iii) unreliable during usage: can break or there be a spillage; (iv) unaffordable; (v) used only with partners perceived at risk like sex workers/ mobile population; and (vi) a male controlled method (reported by girls). On the other hand the female condom is a new concept in India and are not yet available while in other countries they are reported to be expensive and still not marketed^{19,37}.

The youth need reliable information on proper usage of the condom and also for removal of their misconceptions. It is pertinent that knowledge on condom use must be given to students in culturally appropriate settings and should be ensured that it does not promote sexual behaviour. While providing youth with information on condom usage, it is important to make them responsible about their own behaviour and that of their partner so that they learn to differentiate between love and sex. The involvement of youth in condom education should be encouraged; special education programmes should be designed to enhance condom acceptance in appropriate context through peer educators ³⁸.

Decision Making in Youth

In making sexual choices today, young people must consider not only issues of identity, personal growth, and relationships, but also the growing danger of AIDS. These need to be understood in the context of young people's meaning of sexuality, the process of male-female friendship network and implicit negotiations and perception of danger. A ten year study of the sexual behaviour of college students in Canada shows that students choose among three sexual subcultures: celibacy, monogamy, and free experimentation. Since 1980, there has been some shift from casual sex toward committed partnerships, but the basic outline of this sexual "plural society" has remained unchanged. Despite having the knowledge of AIDS, most students have not adopted careful sexual practices, either in the number of partners or use of condoms. This evaluation paves the way for modification in intervention strategy that addresses harm reduction. This study explored the reasons behind sexual choices and investigated whether the possibility of contracting AIDS will eventually lead adolescents to balance better their needs for information on sexual matters, expressing their emotions through love yet differentiating between love and lust, the freedom to express their needs in an ambience free from fear, discuss matters without embarrassment, and self-preservation of their identities through responsible decision making³⁹.

Working against the choice of caution is the fact that, sexual expression is an important element of becoming an adult and young people do not perceive problems that may come in the future, especially when they concern them as sexual beings. This is compounded by the fact that decisions related to choosing a marriage partner are not made by the young people themselves and often are prescribed by parents in India. This may later affect the individual's family life and limit the young as sexual beings in marital relations¹⁹. There are several examples where lack of reliable information on STDs/ HIV, lack of timely treatment and counselling and socio-cultural pressures in young men are detrimental for their decision making through narrowing of their options. Discussions during counselling sessions subsequently help these young people to make relevant decisions related to marriage, disclosing HIV status to spouse; safe sex practice, *etc.*

Decision making is not only about having information, but this is done within a social and culture

setting keeping with the ethical sensitivities, values and rights. Empowering young boys and girls for responsible decision making through information, developing communication skills, with gender and ethical sensitivities within a cultural setting can help them change their behaviour and prevent harm to themselves and their partners.

Rights of Children and Youth

The rights of groups considered to be vulnerable such as women, children and HIV infected come to limelight when they are violated and someone fights for them to get what they are entitled to. People living with HIV/AIDS, women and children are the major victims of AIDS because of ignorance of their rights. The information on rights of the children and young people is also lacking with the health care providers (HCP). Provision of knowledge about these rights to the HCP is helpful; counsellors and other HCP can clearly think and operate for the benefit of the client in all situations, especially when it concerns PLWAs, women and children. It has been demonstrated that providing knowledge on rights related to AIDS has promoted the status of HIV positive women to gain more and equal power with men⁴⁰.

Similarly, the challenge to promote children's right is a process that begins with the acknowledgment of their rights followed through with persistent advocacy with the group who are meant to serve children's welfare⁴¹. Certain conflicts emerging between therapeutic and preventive goals and rights can be avoided by maximizing the convergence of the tools, that is by developing legal instruments, procedures and rights that promote therapeutic and prevention efforts without compromising rights and also the normative and cultural concerns in the society.

Those campaigning for the rights of children affected by HIV should use the UN Convention on the Rights of the Children which guarantees right to life, survival, social benefits and development. The rights and freedom of children should be respected, with emphasis on removing policies which may result in children being separated from their parents or families. Children should have access to HIV/AIDS prevention education and information both in school and out of school, irrespective of their HIV/AIDS status. Measures should be taken to remove social, cultural, political or religious barriers that block children's access to these. Advocacy programmes that promote the fulfillment of the rights

of children are required at different levels where the programmes for children are carried out, such as addressing the issue of child labour, sexual abuse and blood safety initiatives, *etc.* Campaigns to promote the rights and its full implications in the context of HIV/AIDS in a social setting are important and they should be strengthened by involvement of children, youth and their families⁴¹⁻⁴⁴.

Participation of Youth in Policy Planning, Research and Development and Implementation of Intervention

Although youth participation is effectively realized in peer education, no examples of youth participation in the policy making process are reported. Initiatives in that direction have been made in Africa and some of the developed countries where the youth are infected and affected by the AIDS pandemic in large numbers⁴⁵. A youth network, with representatives from Kenya was initiated in 1995. Since then, this network has spread to include the entire continent. Advocacy, lobbying, and securing resources were network's initial endeavours. Some lessons from Africa may be useful in the Indian context. Training programmes were not adequately monitored to ensure that lessons are shared with those from other countries, who may be at risk of HIV/AIDS for different reasons. It is significant to realize that this nascent network of inspired youth throughout Africa has already begun to address the vital issues related to youth's increased vulnerability⁴⁶.

Community planners on the other hand, struggle with how to effectively involve youth as equal partners in decision making processes, even for programmes targeting youth. A pilot programme was initiated with support from the Centers for Disease Control and Prevention (CDC) to enable five U.S. communities to apply a research based prevention marketing process to design HIV prevention programmes for youth. Each community was encouraged to involve youth in the planning and decision making processes in varied and significant ways. Youth were involved in the planning process of developing a HIV prevention programme in their community by constantly monitoring their efforts and continuing a strong commitment to youth involvement. The key components of this programme's success were established through developing and monitoring a youth involvement plan, entrusting one person to provide leadership to youth involvement activities, organizing a parallel youth advisory team and providing incentives. These lessons have been translated into technical assistance workshops and documents on youth involvement for programme

planners^{47,48}. In India informal networks of youth through the National Service Schemes and Nehru Yuvak Kendra exist but their potentials have yet to be realized in the context of AIDS. Lessons from other countries can be replicated in the Indian situation as well if the process is viewed from a youth development perspective.

Listen, Learn and Live with Children and Young People

It is imperative that we:

Listen to children and young people, hear their views and concerns, and understand what is important in their lives.

Learn from one another about respect, participation, support and ways to prevent HIV infection.

Live in a world where the rights of children and young people are protected and where those living with HIV/AIDS are cared for and do not suffer from discrimination.

Important Life-Skills in the HIV/AIDS Era

***How to** make sound decisions about relationships and sexual intercourse, and stand up for those decisions and to deal with pressures for unwanted sex or drugs.

***How to** recognize and avoid a situation that might turn risky or violent.

***How to** negotiate protected sex or other forms of safer sex when ready.

***How to** show compassion, solidarity and care towards young people with HIV/AIDS.

Source: *UNAIDS: Key Issues and Ideas for Action. 1999 World AIDS Campaign with Children and Young People.*

Experiences with interventions have shown that by following the youth recommendations that include frank two way discussions on sex, peer-to-peer approach with adult leadership as backup, integration of HIV/AIDS awareness education into other programmes, appropriate sex education to start by age 10; education of parents; involvement of persons with HIV/AIDS in prevention education, a variety of innovative education material and interactive methods would pave the way for the success of the programme. Scarce tactics do not work according to youth as they are away from reality.

Lessons Learned

It is important to emphasize that the young adults are the pillars of society. Any investment on them from an early age goes a long way for the future. Youth can be prepared to have positive health attitudes that enables them for better mental, physical and spiritual health. They are also successful in building community leadership and human resources.

To build up this significant human resource, young people must be provided reliable information in both formal and informal settings. This should start early where parents and teachers are involved in giving information on hitherto tabooed topics such as sex, so that they develop positive attitudes to face obstacles of child abuse, rape, etc. This should be done in culturally appropriate situations where values are inculcated in young people that encourages responsible behaviour.

Involving youth in the planning of multi-faceted HIV prevention programme requires providing youth with opportunities to learn and build skills and to meet other developmental objectives. Additionally, adults must be prepared to respect and be cognizant of their actions and language which can unintentionally be detrimental to youth involvement.

Youth participation should start from the planning to the implementation stage. Empowering children to run programmes through training and using them as peer educators has demonstrated to be a useful method for spreading awareness about HIV/AIDS for reducing risk taking behaviour among the vulnerable young people.

Where they have been able to acquire appropriate knowledge, skill and means, today's young people have shown a remarkable propensity to adopt safer behaviour, more so than previous generation or older adults.

However, the role of young people does not stop there. They can help take the sting and shame out of AIDS where it is still stigmatized; they can bring kindness and practical help to those already infected with HIV or living in households touched by AIDS. If they get support from the adults in their lives and from society at large, young people can change the course of the epidemic.

Conclusions

At the turn of the century, it is significant to realize that the AIDS pandemic has globally affected the children and young people who are the harbingers of change and their involvement can strengthen the future of a nation. An investment in youth through their development and meaningful participation from planning to implementation would serve as a useful strategy. Provision of basic services like education, health, protection from exploitation of children and young people without gender discrimination should be initiated early. Such plans would enable a strong foundation to establish the good practices of providing basic rights within a cultural value system that young people are entitled to. Experiences from other countries

have demonstrated that interventions programmes with such approaches are more sustainable. However, this may require advocacy within the health, educational and political system for appropriate response. As Peter Piot of UNAIDS recently said³, "...there is a need for intervention strategies to promote a supportive, enabling environment. governments have a choice, they can make a policy that promotes the virus or they can make policies that promote the response." It is time to respond to this important challenge to stem the epidemic.

There is an urgent need to open a dialogue in response to this epidemic, a dialogue between children, young people and adults, between adults and among children and youth to foster HIV prevention among this young population who represent almost half the global population. It is imperative that a world-wide campaign of AIDS prevention be made by listening, learning and living with the children and young people who are a force for change!

References

1. *Children and HIV/AIDS*. UNAIDS Briefing Paper, UNAIDS Geneva, 1999.
2. *Young People and HIV/AIDS*. UNAIDS Briefing Paper, UNAIDS Geneva, 1999.
3. Piot, P. AIDS in the new millennium : A critical time for Asia and Pacific. (Excerpts from speech). V International Congress on AIDS in Asia and the Pacific, Kuala Lumpur, 1999.
4. *AIDS Epidemic Update : December 1999*. UNAIDS, Geneva, 1999.
5. *Facts and Figures, 1999 World AIDS Campaign*. UNAIDS Geneva, 1999.
6. Mawar, N., Divekar, A.D., Tripathy, S.P., Bagul, R.G., Swamy, M., Banerjee, K. and Rodrigues, J. J. Commercial sex workers risk to HIV in Pune. X International AIDS Conference, Yokohama, 1994. Abstract No.448D.
7. Thangsing, C. HIV/AIDS in women. *AIDSNET III* : 68, 1999
8. Juju, N., Gharpure, H.M., Salunke, S. R., Jagtap, M. R. and Hira, M. HIV seropositivity in multitransfused thalassaemics and blood donors during window period in Mumbai. XII International AIDS Conference, Geneva, 1998. Abstract No. 23263.
9. Umiel, T., Friedmen, E., Luria, D., Cohen, I.J., Kaphlinsky, H., Netzer, L., Pecht, M., Trainin, N. and Zaizov, R. Impaired immune regulation in children and adolescents with haemophilia and thalassaemia in Israel. *Am J Pediatr Hematol Oncol* 6: 371, 1984.
10. Kumar, R.M., Hamo, I.M. and Morrison, J. Transfusion related AIDS in thalassaemic children. IX International AIDS Conference, Berlin, 1993. Abstract No. WS-B22-6.
11. Khan, M.A. Behavioural assessment including the neurodevelopment and cognitive function of HIV seropositive AIDS children. X International AIDS Conference, Yokohama, 1994. Abstract No. P.O.480.
12. De, M., Banerjee, D., Chandra, S. and Bhattacharya, D. K. HBV and HIV seropositivity in multi-transfused haemophiliacs and thalassaemics in eastern India. *Indian J Med Res* 91: 63, 1991.
13. Munro, V.J. Mobilising resources, experience and support networks to assist parents in disclosing HIV status. XII International AIDS Conference, Geneva, 1998. Abstract No. 60847.
14. Lalit Kant. Children with HIV/AIDS: Challenges and opportunities. *ICMR Bulletin* 27: 117, 1997.
15. Ingersoll, G.M. *Adolescents*, (2nd edition). Perntice-Hall, London, 1989.
16. Lalit Kant and Mawar, N. Campaign against HIV/AIDS: Youth as force for change. *ICMR Bulletin* 28: 117, 1998.
17. Kann, L., Lowry, R., Kinchen, S. and Collins, J. Eight-year trends in HIV risk behaviours among US youth. XII International AIDS Conference, Geneva, 1998. Abstract No. 14110.
18. Sengupta, S., Chaturvedi, P. and Shastri, S. Adolescent Indian youth, sexuality and need to enhance the STD related information in AIDS prevention programmes. XI International AIDS Conference, Vancouver, 1996. Abstract No. Tu.D.2798.
19. Mawar, N., Tripathy, S.P., John, J. K., Sinha, S.K., Quraishi, S.Y., Bagul, R. and Gadkari, D.A. Youth sexuality study for behaviour change interventions for AIDS/ HIV in college youth, Pune, India. XII International AIDS Conference, Geneva, 1998. Abstract No 14333.
20. Alvarez, R.R., De Moya, E.A., Acosta, S., Romero, J., Cruz, V. and Gutierrez, R. Introducing participatory AIDS and sexuality education into a reproductive rural health project for adolescents and youths. XII International AIDS Conference, Geneva, 1998. Abstract No. 13561.
21. Ball, A., Howard, J., Donoghoe, M., Rana, S., Riley, L., Weiler, G. and Widdus, D. Substance use and HIV prevention among especially vulnerable young people (EVYP). XII International AIDS Conference, Geneva, 1998. Abstract No. 43244.
22. Acero, D. Get real: A humane approach to serving drug-using women living with HIV. National Conference on Women Living with HIV, Pasadena. 1997. Abstract No. P2.68.
23. Haven, G.G. and Stolz, J.W. Students teaching AIDS to students: Addressing AIDS in the adolescent population. *Public Health Rep* 104: 75, 1989.
24. Wasonga, J. Role of publications in disseminating correct AIDS/ HIV information and influencing behaviour among the youth. XI International AIDS Conference, Vancouver, 1996. Abstract No. Pub.D.1393.
25. Okuda, F. and Ekwau, J.T.I. Sensitizing people living with HIV/AIDS on STDs and other infectious diseases. XII International AIDS Conference, Geneva, 1998. Abstract No. 60025.
26. Wessels, R., Claypool, C., Singh, S. and Praz, V. Innovative mass media campaigns key to disseminating AIDS messages. XI International AIDS Conference, Vancouver, 1996. Abstract No. Tu.D.2884.
27. Misra, P.C. Peer education for youth groups/NGOs. XII International AIDS Conference, Geneva, 1998. Abstract No. 60763.

28. Caceres, C.F., Cabezudo, C., Jimenez, O., Valverde, R. and Perez Luna, G. Sexual health in a young city: A community-based intervention on youth sexual health in Lima. XII International AIDS Conference, Geneva, 1998. Abstract No. 39/43170.
29. George, B. Reducing risk taking behaviour in the field of HIV/AIDS among street children through peer education and empowerment. XII International AIDS Conference, Geneva, 1998. Abstract No. 33529.
30. *Key Issues and Ideas for Action. 1999 World AIDS Campaign with Children and Young People.* UNAIDS Geneva, 1999.
31. Sims, R. Children living in a world with AIDS. XII International AIDS Conference, Geneva, 1998. Abstract No. 2248.
32. Manacap, A. and Fonacier Ellizar, I.F. Child-friendly systems/structure for monitoring and evaluating programmes and services. XII International AIDS Conference, Geneva, 1998. Abstract No. 44318.
33. Boontan, A. Strong youth, strong barriers to HIV. XII International AIDS Conference, Geneva, 1998. Abstract No. 33561.
34. Munthall, H. Life skills+ an innovative approach to behaviour change. XII International AIDS Conference, Geneva, 1998. Abstract No. 13548.
35. Smith, M., Archer, M.E., Devereux, R.S., Dane, F.C. and Katner H.P. STAND – A teen peer educator course in the rural south: Direct and diffusion effects (1 year post). Students Together Against Negative Decisions. XII International AIDS Conference, Geneva, 1998. Abstract No. 33525.
36. Siegel, D.M., Aten, M.J., Roghmann, K. J. and Enaharo, M. Early effects of a school-based human immunodeficiency virus infection and sexual risk prevention intervention. *Arch Pediatr Adolesc Med* 152: 961, 1998.
37. Nakiyinci, I. The no. 1 AIDS prevention strategy: Condom? XII International AIDS Conference, Geneva, 1998. Abstract No. 34203.
38. Mcauliffe, E., Zingani, A. and Ntata, P. Barriers to adopting HIV risk-reduction behaviours in Malawian youth. XII International AIDS Conference, Geneva, 1998. Abstract No. 14195.
39. Netting, N.S. Sexuality in youth culture: Identity and change. *Adolescence*, 27: 961, 1992.
40. Barrozo, D. and Fonacier Fellizar, I.P. Living in a world with HIV/AIDS. XII International AIDS Conference, Geneva, 1998. Abstract No. 44156.
41. Intarajit, O., Karinchai, N., Panatung, A. and Charoensap, A. The promotion of Thai women's rights and status through hotline technique in HIV/AIDS counselling training course. XII International AIDS Conference, Geneva, 1998. Abstract No. 60077.
42. WHO-GPA: The role of the committee on the rights of the child and its impact on HIV/AIDS: Problems and prospects. Presentation by the WHO-GPA at the Conference on AIDS and Child Rights: The Impact on the Asia-Pacific Region, Bangkok, November 21-26, 1995.
43. Flood, M.F. Preventing perinatal transmission of HIV through the Ryan White CARE amendments of 1996: Therapeutic policy? National Conference on Women Living with HIV, Pasadena. 1997. Abstract No. P2.4.
44. Honigsbaum, N. and Orr, N. The UN convention on the rights of the child and children affected by HIV. XI International AIDS Conference, Vancouver, 1996. Abstract No. Tu.D.462.
45. Crener, S., Reinders, J.M. and Vermeer, V. The process of policy making for HIV/AIDS prevention for youth in the European Union. XII International AIDS Conference, Geneva, 1998. Abstract No. 44283.
46. Okejda, J.O. Pan African youth network and AIDS XI International AIDS Conference, Vancouver, 1996. Abstract No. Pub. D. 1474.
47. Brown, M., Clayton, Davis, J., Jacobs, R., Love, J., Wilson, B. and Word, E. Involving youth in decision making and development of HIV prevention programmes. The Nashville prevention marketing initiative. XI International AIDS Conference, Vancouver, 1996. Abstract No. We.D. 3793.
48. Martin, C., Love, J. and Stover, D. Reaching and involving youth: A prevention marketing approach. XI International AIDS Conference, Vancouver, 1996. Abstract No. Tu.D.2881.

This write up has been contributed by Dr. Nita Mawar, Assistant Director, Dr. Reva M Kohli, Ms. Neelam Joglekar, Scientists and Ms. Rajani Bagul, Research Assistant, National AIDS Research Institute, Pune.

ICMR NEWS

The following meetings of various technical groups/committees of the Council were held:

Meetings of the Scientific Advisory Committees (SACs) of the ICMR Institutes/Centres:

SAC of National Institute of Epidemiology, Mumbai	December 15, 1999
SAC of the Institute of Pathology, New Delhi	December 23, 1999

Meetings of the Task Forces (TFs)/Advisory Group/Toxicology Review Panel held at New Delhi:

TF on Clinical Trial on Stainless Steel Band Material	December 3, 1999
Toxicology Review Panel	December 6, 1999
Advisory Group on Pharmacology and Toxicology	December 7, 1999

TF on Clinical Trial with <i>Vijayasar</i> for Diabetes Mellitus	December 13, 1999
TF on RF/RHD	December 13, 1999
TF on New Initiatives in Genome Research	December 14, 1999
TF on Estimation of Cost of Management of Smoking Related Diseases (COLD and CHD)	December 22, 1999

Participation of ICMR Scientists in Scientific Events:

Dr. Kamala Krishnaswamy, Director, National Institute of Nutrition (NIN), Hyderabad, participated in the International Seminar on Anaemia in South Asia at Kathmandu (December 2-4, 1999).

Dr. Veena Shatrugna, Asstt. Director, NIN, Hyderabad, participated in the seventh South Asian Workshop on Gender and Sustainable Development at Dhaka (December 3-4, 1999).

Dr. T. Ramamurthy, Asstt. Director, National Institute of Cholera and Enteric Diseases, Calcutta, participated in the thirty fifth US-Japan Cholera and related Diarrhoeal Diseases Conference at Baltimore (December 3-5, 1999).

Dr. C.P. Puri, Dy. Director (Sr. Grade), Institute for Research in Reproduction, Mumbai, participated in the Expert Group meeting on Reproductive Health Research Capacity Development, organized by Partners in

Population and Development: South to South Initiatives at Dhaka (December 5-8, 1999).

Dr. C.N. Paramasivan, Dy. Director (Sr. Grade), Tuberculosis Research Centre, Chennai, participated in the WHO Intercountry Training on Laboratory Diagnosis of HIV-Opportunistic Infections at Bangkok (December 13-17, 1999).

Dr. V.M. Katoch, Dy. Director (Sr. Grade), Central JALMA Institute for Leprosy, Agra, participated in the International Colloquium on Tuberculosis in the New Millennium at Antwerp (December 14-17, 1999).

Foundation Day Celebrations:

As part of the ICMR's Foundation Day Celebrations, the Council organised a lecture on "A Holistic Template of Clinical Research in India: Shifting Paradigm of Synthesis and Symbiosis", by Prof. J.S. Bajaj on December 13, 1999.

Workshops:

An Indo-US Workshop on Prevention of Illness and Injury Related to Industrial Accidents was organised on December 17, 1999 at New Delhi.

An IEC Training Workshop on Biomedical Sciences was organised at the National Institute of Nutrition, Hyderabad during December 20-24, 1999.

ICMR AIDED SYMPOSIA/SEMINARS/WORKSHOPS/COURSES/CONFERENCES

Symposium/Seminar/Workshop/ Course/Conference	Date & Place	Contact Address
International Congress on Frontiers in Pharmacology and Therapeutics in 21st Century	December 1-4, 1999; (at New Delhi)	Prof. S.K. Gupta, Secretary General of ICPT-21, Department of Pharmacology, All India Institute of Medical Sciences, New Delhi-110029.
Symposia on (i) Impact of Statistics in Biomedical Research; and (ii) Recent Advances in Statistical Methods and Challenges for the New Millennium	December 2-4, 1999; (at Bangalore)	Dr. D.K. Subbakrishna, Organising Secretary of the Annual Conference of ISMS, Department of Biostatistics, National Institute of Mental, Health and Neurosciences, Bangalore-560029.
Workshop on the Role of Nitric Oxide Gas in the Treatment of High Altitude Pulmonary Edema and Adult Respiratory Distress Syndrome	December 4, 1999; (at Pune)	Dr. W. Selvamurthy, Director, Defence Institute of Physiology and Allied Sciences, Delhi-110054.
Neurosciences 2000 and Beyond : XVII Annual Conference of Indian Academy of Neurosciences, Annual Meeting of Neuroscience Society of India, and National Symposium on Cellular and Molecular Basis of Brain Function	December 6-8, 1999; (at Gwalior)	Dr. I.K. Patro, Organising Secretary of the Conference, Neurobiology and Aging Unit, School of Studies in Zoology, Jiwaji University, Gwalior-4740001.

Symposium/Seminar/Workshop/ Course/Conference	Date & Place	Contact Address
Indo-European Seminar-cum-Workshop on Advances in Human Cytogenetics	December 6-9, 1999; (at Lucknow)	Dr. S.S. Agarwal, Head, Department of Medical Genetics, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow-226014.
XXXI Annual Conference of the Society of Nuclear Medicine	December 8-11, 1999; (at Madurai)	Dr. Y.N.I. Anand, Organising Secretary of the Conference, Department of Imaging Science, Meenakshi Mission Hospital and Research Centre, Madurai-625107.
National Seminar on Newer Vistas in Bio-active Agents	December 9-10, 1999; (at Gandhigram)	Dr. N.S. Nagarajan, Coordinator of the Seminar, Gandhigram Rural Institute, Gandhigram-624302.
International Symposium on Cancer Control in Developing Countries	December 10, 1999; (at Calcutta)	Dr. Urmi Sen, Organising Secretary of the Symposium, Chittaranjan National Cancer Institute, Calcutta-700026.
XV Asia Pacific Cancer Conference	December 12-15, 1999; (at Chennai)	Dr. T. Rajkumar, Secretary General, The XV APCC Secretariat, Cancer Institute (WIA), Chennai-600036.
II International Conference on Contaminants in the Soil Environment in Australasia - Pacific Region	December 12-17, 1999; (at New Delhi)	Dr. Rajendra Prasad, Organising Secretary of the Conference, Council of Scientific and Industrial Research, Rafi Marg, New Delhi-110001.
International Conference on Medical Diagnostic Techniques and Procedures	December 15-17, 1999; (at Chennai)	Dr. Megha Singh, Organising Secretary, ICMOTP, Department of Applied Mechanics, Indian Institute of Technology, Chennai-600036.
III International Symposium on Cognition, Education and Mental Health	December 16-19, 1999; (at Varanasi)	Dr. C.B. Dwivedi, Organising Secretary of the Symposium, Department of Psychology, Banaras Hindu University, Varanasi-221005.
LXVIII Annual Meeting of Society of Biological Chemists (India) and Symposium on Current Trends in Biology	December 27-29, 1999; (at Bangalore)	Dr. Sandhya S. Visweswariah, Organising Secretary, 68th SBC(I) Meeting, Indian Institute of Science, Bangalore-560012.
XVIII National Symposium on Reproductive Biology and Comparative Endocrinology	December 27-29, 1999; (at Chennai)	Dr. R. Moses Inbaraj, Organising Secretary, 18th SRBCE, Department of Zoology, Madras Christian College, Chennai-600059.
XLIII All India Congress of Obstetrics and Gynaecology	December 27-30, 1999; (at Lucknow)	Dr. Vinita Das, Organising Secretary of the Congress, Department of Obstetrics and Gynaecology, K.G. Medical College, Lucknow-226003.
LXXXVII Session of the Indian Science Congress	January 3-7, 2000; (at Pune)	Dr. Bhushan, Patwardhan, Local Organising Secretary, Indian Science Congress-2000, University of Pune, Pune-411007.
Workshop on Gene Amplification Techniques in Disease Diagnosis and National Conference of Laboratory Medicine	January 21-25, 2000; (at New Delhi)	Dr. Sarman Singh, Organising Secretary of the Conference, Department of Laboratory Medicine, All India Institute of Medical Sciences, New Delhi-110029.
V World Conference on Injury Prevention and Control	March 5-8, 2000; (at New Delhi)	Prof. Dinesh Mohan, Secretary General (FIWOCO), Transportation Research and Injury Prevention Programme, Indian Institute of Technology, New Delhi-110016.

COUNCIL'S TRAINING PROGRAMMES

Reproductive Biology

At the Institute for Research in Reproduction, Mumbai:

- Training Course on Cytological Detection of Reproductive Tract Infections (December 13-17, 1999).

Nutrition

At the National Institute of Nutrition, Hyderabad:

- Postgraduate Certificate Course in Nutrition (December 1, 1999-February 28, 2000).

ICMR PUBLICATIONS

	Price(Rs.)
Nutritive Value of Indian Foods (1985) by C. Gopalan, B.V. Rama Sastri and S.C. Balasubramanian, Revised and Updated (1989) by B.S. Narasinga Rao, Y.G. Deosthale and K.C. Pant (Reprinted 1999)	30.00
Growth and Physical Development of Indian Infants and Children (1972, Reprinted 1989)	10.00
Studies on Weaning and Supplementary Foods (1974, Reprinted 1996)	15.00
A Manual of Nutrition (Second Edition 1974, Reprinted 1995)	6.00
Low Cost Nutritious Supplements (Second Edition 1975, Reprinted 1996)	5.00
Menus for Low-Cost Balanced Diets and School-Lunch Programmes Suitable for North India (Second Edition 1977, Reprinted 1998)	6.00
Menus for Low-Cost Balanced Diets and School-Lunch Programmes Suitable for South India (Fourth Edition 1996)	6.00
Some Common Indian Recipes and their Nutritive Value (Fourth Edition 1977, Reprinted 1998) by Swaran Pasricha and L.M. Rebello	16.00
Nutrition for Mother and Child (Fourth Edition 1994, Reprinted 1996) by P.S. Venkatachalam and L.M. Rebello	11.00
Japanese Encephalitis in India (Revised Edition 1980)	5.00
Some Therapeutic Diets (Fifth Edition 1996) by Swaran Pasricha	7.00
Nutrient Requirements and Recommended Dietary Allowances for Indians (1990, Reprinted 1998)	16.00
Fruits (Second Edition 1996) by Indira Gopalan and M. Mohan Ram	20.00
Count What You Eat (1989, Reprinted 1997) by Swaran Pasricha	15.00
*The Anophelines of India (Revised Edition 1984) by T.Ramachandra Rao	150.00
Depressive Disease (1986) by A. Venkoba Rao	58.00
*Medicinal Plants of India Vol.2 (1987)	136.00

* 25 per cent discount allowed to individuals

Diet and Diabetes (Second Edition 1993, Reprinted 1998) by T.C. Raghuram, Swaran Pasricha and R.D. Sharma	20.00
Dietary Tips for the Elderly (1992, Reprinted 1997) by Swaran Pasricha and B.V.S. Thimmayamma	5.00
Diet and Heart Disease (1994, Reprinted 1998) by Ghafoorunissa and Kamala Krishnaswamy	30.00
Dietary Guidelines for Indians – A Manual (1998)	23.00
Dietary Guidelines for Indians (1998)	10.00
पोषण नियमावली (द्वितीय संस्करण 1974, पुनर्मुद्रण 1990)	6.00
फल (1998)	22.00
अपने आहार को जानें (1997)	9.00
भारतीयों के लिए आहार संबंधी मार्गदर्शिका (1998, पुनर्मुद्रण 1999)	10.00

These publications are available on prepayment of cost by cheque, bank draft or postal order (bank and postal charges will be extra) in favour of the Director-General, Indian Council of Medical Research, New Delhi. Money orders are not acceptable. All correspondence in this regard should be addressed to the Chief, Division of Publication and Information, Indian Council of Medical Research, Post Box No.4911, Ansari Nagar, New Delhi-110029 (India).

ICMR ON INTERNET

<http://www.icmr.nic.in>

A web site of ICMR has been developed inhouse and is hosted from a server located at the National Informatics Centre (NIC), New Delhi. The site contains detailed information about the activities of ICMR.

The welcome section gives general information like address and phone numbers of Chiefs of Divisions in the ICMR Hqs., Profile of the Director General, Highlights of activities, Achievements, History of the ICMR, Details of ICMR Awards and Prizes, Guidance for international collaboration, *etc.*

Information is available about Council's training programmes, meetings, ICMR aided Seminars/Symposia/Workshops and other announcements under 'News'.

General information on various funding schemes for Research & Development implemented by the ICMR is found under 'Grants'. Application forms for various schemes can be downloaded from the site. Information on extramural projects ever funded by ICMR can be searched from the dynamic web pages using search keys.

Issues of ICMR Bulletin, current and one year old are accessible under 'Publications'. The list of ICMR publications is also available.

An informative write-up on each of the ICMR Institutes/Centres is available under 'Institutes'. A searchable list of ICMR scientists is also available. It is planned to publish research results and results of epidemiological surveys, *etc.* of ICMR Institutes on the web.

Any comments/suggestions regarding the web site from readers of ICMR Bulletin are welcome. These may be sent to the ICMR (provision has been made on the homepage).

ICMR BULLETIN INDEX

Volume 29, 1999

Main Feature	Page No.	Month
Prospects of Using <i>Bacillus sphaericus</i> in the control of <i>Culex</i> Mosquitoes in Relation to Resistance Development.	1	January
India's Needs and Priorities in Fertility Regulation Research	17	February
Protein Turnover Studies Using Stable Isotopes	33	March
Alliums as Food for Healthy Life	43	April-May
Increased Male Responsibility and Participation : A Key to Improving the Reproductive Health	59	June
Malariogenic Stratification of India Using <i>Anopheles culicifacies</i> Sibling Species Prevalence	75	July
Risk of Aluminium Toxicity in the Indian Context	85	August
Silicosis – An Uncommonly Diagnosed Common Occupational Disease	95	September
Multi Drug Resistant Tuberculosis	105	October-November
Children and Young People in Context of HIV/AIDS: Listen, Learn, Live! World AIDS Campaign with Children and Young People	125	December

EDITORIAL BOARD

Chairman

Dr. N.K. Ganguly
Director-General

Members

Dr. Padam Singh
Dr. Lalit Kant
Dr. Bela Shah
Sh. N.C. Saxena
Dr. V. Muthuswamy

Editor

Dr. N. Medappa

Printed and Published by Shri J.N. Mathur for the Indian Council of Medical Research, New Delhi
at the ICMR Offset Press, New Delhi-110 029

R.N. 21813/71