

Street Children and Drug Abuse: Social and Health Consequences

September 17-19, 2000
Marina Del Rey, California

Cosponsored by

International Program
Office of Science Policy and Communications
National Institute on Drug Abuse

Department of Child and Adolescent Health and Development
World Health Organization



Table of Contents

Preface	ii, iii
Acknowledgments	iv, v
Executive Summary	1
Presentations	5
Research and Programmatic Issues: NIDA and WHO Objectives	5
Contextual and Social Issues	5
Research on Inhalant Abuse: Focus on Children and Youth	6
Overview of Inhalants and Solvents: U.S. Perspective	7
Forging an Epidemiology/Ethnography Dialogue: A Cultural Anthropologist's View	8
Data Collection and Measurement Issues	9
Collaborative Research, Proposal Development, and Funding	10
Discussion with U.S. Street Youth	12
Participant Panel Presentations	14
Global Status of Street Children and Key Research Issues.....	14
North America	15
Asia	16
Europe and the Middle East	17
Latin America	18
Africa	19
Workgroup Reports	20
Research on Inhalants and Solvents.....	20
Interventions: Developing Effective Projects	20
Effective Data Collection: Surveillance, Methods, and Instruments.....	21
Pathways to and from the Streets.....	22
Recommendations	23
General.....	23
Research on Inhalants and Solvents.....	23
Interventions: Developing Effective Programs	24
Effective Data Collection: Surveillance, Methods, and Instruments.....	24
Pathways to and from the Streets.....	24
Appendix A: Agenda	26
Appendix B: Participant List	31
Appendix C: Index of Relevant NIDA and WHO Publications	37

PREFACE

There are 30 million severely marginalized children and adolescents living on the world's streets. Other vulnerable children and youth live in poverty, many of them homeless and abused. These facts represent an urgent public health issue for all nations. The National Institute on Drug Abuse (NIDA) welcomed the opportunity to cosponsor the multinational meeting, *Street Children and Drug Abuse: Social and Health Consequences*, because it provided a unique opportunity to address the issue with the World Health Organization (WHO) network of community-based organizations and researchers. The meeting was designed to stimulate interest in the topic, plan strategies to develop a cross-national research agenda focusing on vulnerable children and youth, and to support the development of science-based interventions to protect the health of especially vulnerable young people in many parts of the world.

We are very pleased to have the World Health Organization join us as a cosponsor. NIDA and WHO share a firm commitment to scientific research that addresses the health and social consequences of drug abuse, and have established collaboration in a number of areas. Through this meeting, as well as our joint and parallel efforts, we hope to promote research activities that will improve the health status of the world's most vulnerable citizens: children as young as 5 who abuse inhalants, solvents, and other harmful substances. We hope to encourage researchers and community organizations, especially cross-national teams, to work together in developing evidence-based findings to help plan effective programs serving vulnerable children and youth. It is our hope that the joint efforts of this group, together with participants' organizations, will contribute to our knowledge about preventing and treating substance abuse among vulnerable children and youth. The unique advantage of the participants' varied backgrounds and significant experience in developing effective, evidence-based prevention programs in diverse cultural settings are of great interest to NIDA and will generate new opportunities for multidisciplinary multinational research.

I congratulate the planners and participants for their contributions to a successful and productive endeavor.

Alan I. Leshner, Ph.D.
Director, National Institute on Drug Abuse

PREFACE

Recognizing the rapidly growing public health concern of substance abuse among vulnerable children and youth worldwide, the World Health Organization (WHO) Department of Child and Adolescent Health and Development (CAH) was pleased to join together with NIDA in cosponsoring the international research meeting on *Street Children and Drug Abuse: Social and Health Consequences*.

The issue of substance use, and associated health risks, among vulnerable children and youth is not new to WHO. In 1991 the WHO Street Children Project was launched in eight countries. It had the overall aim of improving the health, welfare and quality of life of children who live on the streets and other especially vulnerable young people around the world through the provision of technical assistance to Member States and organizations working with these vulnerable groups. The focus of the project was on developing the capacity of countries and local organizations to prevent, assess, and reduce psychoactive substance use problems among vulnerable children and youth. Often, substance use problems are associated with other health and social problems such as those related to discrimination, stigmatization, unprotected and unwanted sexual behavior, and violence. Addressing substance use problems provides a window into the lives of these young people and an opportunity to address health and development issues, including HIV/AIDS, other sexually transmitted infections, mental health, and injury prevention.

In 1993 the WHO project expanded activities to 23 sites around the world. A training manual for street educators and a monitoring and evaluation guide for programs were produced and piloted in those sites. Findings from the Phase II evaluation indicate that over 70 governmental and nongovernmental agencies participated in the project in more than 20 countries. The evaluation has informed the revision of the two manuals, the refinement of the project methodology, and the identification of priorities and further areas of action.

In planning for the next phase of the WHO project, participating sites and other interested organizations identified the urgent need to strengthen research capacity in developing and transitional countries and to develop an evidence base for effective policy and programming on drug abuse prevention among vulnerable children and youth. This meeting provided the opportunity to advance this objective. The establishment of an international network of researchers and field-level programs, the identification of priority research issues, and the focus on evidence-based interventions has helped to lay the foundations for further work in this important area of international public health.

We hope that this initiative will provide the opportunity for closer collaboration between WHO, NIDA, and other partners in promoting the healthy development of young people worldwide, including those vulnerable young people who live on the streets.

Hans Troedsson, M.D.

*Director, Department of Child and Adolescent Health and Development,
World Health Organization*

ACKNOWLEDGMENTS

A number of individuals and institutions contributed to the success of *Street Children and Drug Abuse: Social and Health Consequences*. As the organizing cosponsor, NIDA wishes to acknowledge the invaluable assistance of our cosponsoring institution, the WHO Department of Child and Adolescent Health and Development, particularly Dr. Andrew Ball, Medical Officer. We thank the members of the planning committee for their contributions to setting the agenda, identifying the participants, and ensuring a successful meeting. In addition to Dr. Ball and myself, members of the planning committee included Dr. Mary Jane Rotheram-Borus, University of California Los Angeles (UCLA); Dr. John Howard, Macquarie University, Sydney; and Ms. Moira O'Brien, Community Research Branch, NIDA Division of Epidemiology, Services and Prevention Research. The U.S. Department of State provided financial support and professional encouragement. Special thanks to the staff of the UCLA Center for HIV Identification, Prevention, and Treatment Services, particularly Mr. Ernesto Guzman and Ms. Colleen Cantwell, for their logistical support. Finally, we thank all of the attendees for their excellent preparation and participation. Many of you struggled with long and difficult travel schedules to join us, and we appreciate your efforts to ensure a productive and enjoyable meeting.

M. Patricia Needle, Ph.D.
Director, International Program
Office of Science Policy and Communications
National Institute on Drug Abuse

ACKNOWLEDGMENTS

This meeting would not have been possible without the commitment and efforts of NIDA in taking the lead role as the organizing cosponsor. Nor would it have been possible without the generous financial support of the U.S. Department of State. WHO greatly appreciates the support of these two agencies in promoting interest and action on such an important international public health issue. WHO would specifically like to acknowledge the contributions made by Dr. Patricia Needle, Director, International Program, NIDA, for her chairing of the planning committee; her staff for the logistical support provided; and Dr. Alan Leshner, Director, NIDA, for ensuring the institutional support necessary for the meeting to be such a success. The planning committee brought together a range of committed international experts who were able to organize a stimulating and relevant technical program and identify an excellent mixture of researchers, program managers, and policymakers to participate in the meeting. WHO would also like to acknowledge all the collaborators, past and present, who have contributed to the WHO Street Children Project, some of whom also made valuable contributions to this meeting.

Andrew L. Ball, M.B., B.S.

Medical Officer

Department of Child and Adolescent Health and Development

World Health Organization

EXECUTIVE SUMMARY

When NIDA and the World Health Organization (WHO) assembled 37 representatives from 16 nations to discuss vulnerable children and youth and substance abuse, participants described a sense of urgency in creating research-based interventions to reduce substance abuse and address the numerous challenges facing the world's vulnerable children and youth. *Street Children and Drug Abuse: Social and Health Consequences* was convened September 17 through 19 in Marina Del Rey, California. The researchers and community-based organizers met to enhance networks for communication and cooperation, examine science-based interventions from around the world, and set action priorities to shape a collaborative, cross-national, multidisciplinary research agenda that will promote the health and well-being of young people.

Through a series of formal presentations, panel discussions, and working groups, the participants discussed the state of basic research on solvents and inhalants (which are commonly abused by vulnerable children and youth because they are mostly legally available and inexpensive), epidemiological and ethnographic research, data collection and measurement issues, and developing effective programs to reduce substance abuse. A panel of young men who have moved from life as street youth to become peer counselors and outreach workers with the Los Angeles Youth Network joined meeting participants for a wide-ranging discussion of research, treatment, and service issues related to vulnerable children and youth.

NIDA and WHO cosponsored the meeting, with support from the U.S. Department of State. The organizing committee was cochaired by Dr. M. Patricia Needle, International Program Director, NIDA Office of Science Policy and Communications; and Dr. Andrew Ball, Medical Officer, WHO Department of Child and Adolescent Health and Development, and included Dr. Mary Jane Rotheram-Borus, University of California Los Angeles; Dr. John Howard, Macquarie University, Sydney, Australia; and Ms. Moira O'Brien, Community Research Branch, NIDA Division of Epidemiology, Services and Prevention Research. Dr. Needle welcomed the participants, calling their varied backgrounds and diverse cultural experiences a unique advantage in generating opportunities for multinational and multidisciplinary research. Dr. Ball provided background information on the WHO Street Children project and described current WHO research interests.

Dr. Howard proposed a number of connections between researchers, service providers, and young people to define the contextual, structural, and social conditions that researchers work within, and identified areas for future collaboration. He reported that effective projects reunite or recreate families and train vulnerable children and youth for meaningful employment. Finally, he urged researchers to connect their findings to broad policy and practice issues so that policymakers make addressing the long-term needs of vulnerable children and youth a global priority, and service providers can establish quality of care standards. Dr. Rotheram-Borus outlined the network of interconnected risk factors that are shaped by national variations in policies, values, and systems of care to create definite pathways into and out of the street for children around the world, including alcohol and drug use, sex work, unemployment, HIV, suicide, sexual and physical abuse, incarceration, illness, psychiatric issues, economic instability, war, and violence. She urged participants to form a coordinated research network to develop a participatory action agenda that identifies both universal and unique characteristics of policies,

care systems, and service agencies so that researchers can design, implement, and evaluate interventions.

Inhalant Abuse by Vulnerable Children and Youth

Vulnerable children and youth frequently abuse inhalants. Unlike other drugs of abuse, inhalants are defined by their route of administration and are mostly legal substances (such as art and office supplies, industrial chemicals, or aerosol propellants) which are easily available, inexpensive, and used primarily by disadvantaged groups. Dr. Silvia Cruz, Cinvestav, Mexico, discussed the characteristics of this wide variety of chemically different substances, which are all volatile, inhaled, and affect the central nervous system. She warned that researchers must take into account the conditions that affect vulnerable children and youth, such as age, gender, poverty, malnutrition, lack of services, and other health problems, and outlined a number of questions for future investigations. Discussing U.S. trends in inhalant use, Mr. Harvey Weiss, U.S. National Inhalant Prevention Coalition, reported that surveys of school- and college-age young people document that the prevalence of inhalant abuse is exceeded only by the prevalence of alcohol, tobacco, and marijuana abuse, and is most common among middle and upper class White youth, which is a very different use pattern than that observed in developing countries. National Inhalant Prevention Coalition researchers noted that inhalant use declined when young people and their parents perceived inhalants as dangerous and harmful. The coalition developed a prevention program that uses the Poison Control Center education approach to stress that inhalants are poisons and different from other drugs of abuse.

Participant Panel Presentations

In panel discussions organized by geographical regions, participants described research and services targeted to vulnerable children and youth around the world. Whether they were discussing the most economically powerful nations or countries with extremely limited resources, participants described uniquely similar situations, where the number of vulnerable children and youth is increasing; their age is decreasing; and substance abuse, sexual abuse, and violence are all part of a complex series of factors affecting their lives. Substance abuse by vulnerable children and youth begins with those substances that are most readily available and inexpensive. Inhalants are often the first abused substance because they are inexpensive and mostly legally available, but in some communities the first drug of abuse is alcohol, tobacco, marijuana, or a coca product. Injection drug use was reported most commonly in developed countries, probably because children who live on the streets there tend to be older than their counterparts in developing countries, and injection drug use appears to be related to age and physical and emotional development. There is evidence that injection drug use is increasing among vulnerable children and youth in some regions of both transitional and developing countries. The number of vulnerable children and youth increases with cultural shifts from rural to urban societies, economic and social instability, and decreased importance of nuclear families. Vulnerable children and youth in developing countries are more likely to have continuing contact with families, school, and work than are vulnerable children and youth in developed countries. But, for many children in developing countries, the street is home.

Research Methods and Data Collection Issues

Dr. Philippe Bourgois, University of California San Francisco, discussed ways to integrate the qualitative and quantitative approaches to data collection, particularly participant observation.

Although epidemiologists seek a large sample size to provide accuracy, Dr. Bourgois explained that ethnographers can achieve similar accuracy with smaller samples because they develop in-depth relationships with study participants that allow them to break down socially desirable answers, document what actually happens by observing taboo behaviors in natural settings, address the larger social and cultural context in which study subjects operate, and provide more accurate understanding of study participants' behaviors and motivations. The research team can then integrate the observations within the epidemiological hypothesis, tailor fieldwork around expected and unexpected associations, and adapt the interview process where necessary. Introducing a discussion of data collection and measurement issues, Dr. Ball asked participants to adopt common issues, research methods, and measurement tools to develop consistent and comparable strategies and approaches that could be applied nationally, regionally, and globally. Describing how Health Canada developed an enhanced surveillance tool to track trends in sexually transmitted diseases among Canadian youth living on the streets, Dr. Suzanne Shields stressed that enhanced surveillance requires a commitment from all those involved, is a valuable tool to conduct research among hard-to-reach groups, and complements routinely collected data rather than collecting repetitive data. Addressing ways to conduct user-friendly assessments that become part of the daily life for a service-providing agency, Dr. Rotheram-Borus described how data collection at intake, routine assessments, and followup could be used to reduce risk behaviors, evaluate programs, and empower vulnerable children and youth to become active participants in the research agenda. Dr. Michael Clatts, National Development Research Institute, New York City, illustrated how ethnography contributes voice and variability to public health discussions, describing his research that used participant observation to document a number of distinct behavioral patterns of needle-sharing. Drs. Needle, Ball, and Sutherland discussed relevant funding mechanisms, professional development programs, and technical assistance available to support international collaborative research on drug abuse.

Workgroups and Recommendations

Participants formed four workgroups to discuss cross-cutting issues; contrast developed and developing country experiences; identify ways to involve vulnerable children and youth in the research process; and review training, funding, and networking resources. Each group focused on one of four assigned topics: research on inhalants and solvents, developing effective interventions, effective data collection, and pathways to and from the streets. The discussions centered on the status of current research efforts, the application of research findings to policy and practice, and action priorities. Members of the workgroup on inhalants and solvents research sought ways to generate data that will promote understanding of the changing patterns of substance abuse among vulnerable children and youth, especially new drugs and routes of administration, and determine the sociocultural factors that influence those changing patterns of substance abuse. The participants reviewed methods to design effective prevention messages, strategies to deter individuals from starting substance use, the role of the family in prevention, and the role of the Poison Control Center in inhalant abuse treatment. Members of the workgroup on developing effective interventions defined effective programs for reducing

substance abuse as evidence-based, multidisciplinary projects with multiple components and a well-defined mission to serve a specialized target group. Effective programs start small and grow in small steps, and promote local ownership of the program. The group concluded that effective interventions require structured expectations; coordination with networks of service providers; involvement by family members, peers, the community, police, and Government officials; sustainable staff and financing; and ongoing evaluation and advocacy. Members of the workgroup on effective data collection agreed that monitoring at the local and international levels provides a valuable cross-national perspective for countries as they assess the nature and extent of problems relating to substance abuse and vulnerable children and youth in neighboring countries, predict the local impact of these problems, and direct resources to address the issues. The workgroup focused on basic surveillance and ways to enhance existing systems, capacity building, and research collaborations. Discussants recommended that research be linked to services and interventions as well as use a broad range of methods to identify new and emerging health issues and drug use trends. Participants in the workgroup on pathways to and from the streets stressed that no single factor is responsible for children living on the streets, and suggested that researchers focus their investigations on the complex interaction of factors that influence pathways to the streets. The workgroup members explored ways that researchers and service providers could use flexibility and creativity in seeking information from different resources and through everyday interactions in different settings, and suggested that researchers identify which approaches are effective in influencing governmental policies on vulnerable children and youth and substance abuse.

Meeting participants adopted recommendations presented by each workgroup during the closing plenary session, as well as five general recommendations:

- NIDA and WHO should establish a workgroup on substance abuse by vulnerable children and youth that will adopt a modest agenda of activity and coordinate a followup meeting within 18 months.
- NIDA should assist researchers with communications, and participants should commit to continued communications within and among the workgroups established at this meeting, as well as on a regional, national, and global basis.
- NIDA and WHO should facilitate international teams of researchers to help nations share and translate research methodologies as they develop a national research agenda, including design, implementation, and evaluation of best practices.
- NIDA and WHO should coordinate a special issue of a research journal to disseminate best practices and model interventions.
- Attendees should participate in the activities of other international working groups, such as Mapping the AIDS Pandemic, which produces a report immediately before major AIDS meetings, and the Global Research Network on HIV Prevention in Drug-Using Populations, which will next meet in Melbourne, Australia, in conjunction with the 2001 International Congress on AIDS in Asia and the Pacific.

PRESENTATIONS

Research and Programmatic Issues: NIDA and WHO Objectives

M. Patricia Needle

NIDA

Dr. Needle explained how NIDA supports a broad agenda of scientific research designed to explain the biomedical, behavioral, and social components of drug abuse and addiction and disseminates those findings rapidly and effectively to impact drug abuse research, policy, and practice. NIDA offers potential research support to those who are interested in examining substance abuse among vulnerable children and youth. Though the use of substances is relatively widespread - if not universal - among these children, little is actually known about the effects of inhalants and other drugs, such as amphetamine, cocaine, and heroin, on children before they enter puberty, how to prevent drug use in this population, and how to treat children who abuse drugs. Dr. Needle called the participants' varied backgrounds and diverse cultural experiences a unique advantage in generating opportunities for multinational and multidisciplinary research and asked attendees to help NIDA and WHO set priorities, create communications networks, and shape a cooperative research agenda.

Andrew Ball

WHO

Dr. Ball provided background information on the WHO Street Children project, which since 1991 has assembled researchers from around the world to develop a research agenda; test the modified social stress, rapid assessment, and focus group models; develop training materials and monitoring and evaluation guides; and provide technical assistance in community organization, regional capacity building, and strategic planning. Dr. Ball also described current WHO research interests, which include further developing rapid assessment and response methodology for use among especially vulnerable children and youth by community-based organizations; developing principles and a field-level operational model for youth-friendly health services; measuring the determinants of health behaviors and health risks among young people; epidemiological research to assess the health issues impacting children and adolescents around the world; analyzing youth alcohol, tobacco, and injection drug use among young people, and the related health consequences such as hepatitis and HIV; and expanding science-based life skills education programs.

Contextual and Social Issues

John Howard

Macquarie University, Sydney

Dr. Howard proposed a number of connections to define the contextual, structural, and social conditions that researchers work within, and identified areas for future collaboration. He advocated connections among scientists to reduce professional competition and increase

compromises on research tools that could be used in both developed and developing countries to allow global, regional, and national comparison of core data. Dr. Howard stressed that research findings must connect with service agencies and the young people they serve to improve information exchange and determine what mix of product activities and institutions would most effectively bring about desired outcomes. He added that projects must connect vulnerable children and youth with opportunities to reunite or recreate families and train for meaningful employment. Finally, he urged researchers to connect their findings to broad policy and practice issues so that policymakers make addressing the long-term needs of vulnerable children and youth a global priority and service providers can establish quality of care standards.

Mary Jane Rotheram-Borus
University of California, Los Angeles

Dr. Rotheram-Borus outlined the network of interconnected risk factors that are shaped by national variations in policies, values, and systems of care to create definite pathways into and out of the street for children around the world, including alcohol and drug use, sex work, HIV, suicide, unemployment, sexual and physical abuse, incarceration, illness, psychiatric issues, economic instability, war, and violence. Comparing policy and value differences among nations, she illustrated how these variations dramatically affect the types and density of services and research on vulnerable children and youth. Despite these variations, Dr. Rotheram-Borus identified common characteristics of effective service programs: coordinated, comprehensive, continuous programs that are distributed broadly and provide enough density to meet the needs of vulnerable children and youth. She urged participants to form a coordinated research network to develop a participatory action agenda that identifies both universal and unique characteristics of policies, care systems, and service agencies so that researchers can design, implement, and evaluate interventions.

Research on Inhalant Abuse: Focus on Children and Youth

Silvia Cruz
Cinvestav, Mexico City

Vulnerable children and youth frequently abuse inhalants. Unlike other drugs of abuse, inhalants are defined by their route of administration and are mostly legal substances (such as art and office supplies, industrial chemicals, or aerosol propellants) which are easily available, inexpensive, and used primarily by disadvantaged groups. Dr. Silvia Cruz, Cinvestav, discussed the unique characteristics of this wide variety of chemically different substances, which are all volatile, inhaled, and affect the central nervous system. Inhalants can be classified as solvents, gases, and nitrates. Most research on neurological damage by solvents has been conducted in industrialized nations where the focus is on the effects on adults of long-term exposure to low concentrations of the substances. Dr. Cruz called for more research on the effects of short-term exposure to high concentrations of inhalants, acute and chronic effects, mechanisms of action, potential treatments, and drug interactions on young children. Research has found that inhalants produce an initial euphoria followed by prolonged depression, dizziness, nausea, impaired judgment, changes in perception, and speech problems. Hallucinations and sudden death have

been reported with high doses. Users report experiencing a high and say they use inhalants to prevent sadness or boredom or to avoid a problem. Chronic use results in memory loss, paranoia, depression, headaches, sleep disruption, and neurological damage. Dr. Cruz warned that researchers must take into account the comorbid conditions that affect vulnerable children and youth, such as age, gender, poverty, malnutrition, lack of services, and other health problems. Researchers have determined that inhalants, ethanol, and other central nervous system depressants have similar mechanisms of action but that inhalants are much more potent. Prenatal exposure appears to result in hyperactivity, retardation, and respiratory problems, although the comorbid factors may also play a role in prenatal exposure.

Finally, Dr. Cruz outlined a number of questions for future research including:

- All solvents seem to exert similar effects, but are the physiological processes the same?
- Are acute and chronic effects the same?
- Do solvents activate the same reward pathways as other drugs of abuse?
- Is there a withdrawal syndrome when inhalant use is discontinued?
- Do inhalant abusers exhibit a cross-tolerance with other drugs of abuse?
- What is the influence of comorbid factors on inhalant abuse?
- What are the effects of commercial mixtures?
- What are the relevant concentrations of inhalants?
- Is there a fetal volatile solvent syndrome?
- Are inhalant abusers able to control their level of intoxication?
- What are the relationships between solvent abuse and violent death, suicide, and mortality?

Overview of Inhalants and Solvents: U.S. Perspective

Harvey Weiss

U.S. National Inhalant Prevention Coalition

Discussing U.S. trends in solvent abuse, Mr. Weiss reported that surveys of school- and college-age young people document that the prevalence of inhalant abuse is exceeded only by the prevalence of alcohol, tobacco, and marijuana abuse. Average age at first use of inhalants is 12, and inhalant use is associated with the use of other drugs. Inhalant use declines over time and with age, with significant increases in use reported for school dropouts and incarcerated youth. Recent data indicate that inhalant use is increasing among youths aged 18 to 25 who attend college or rave parties. First-time users account for 30 percent of inhalant-related deaths. Inhalant abuse is most common among middle and upper class White youth, which is a very different use pattern than that observed in developing countries. National Inhalant Prevention Coalition researchers noted that inhalant use declined when young people and their parents perceived inhalants as dangerous and harmful. The coalition developed a prevention program that uses the Poison Control Center education approach with teachers, parents, and youngsters to stress that inhalants are poisons and different from other drugs of abuse. The Coalition's message is presented in schools, churches, health care settings, and retail outlets as well as through television and radio public service announcements. Funding for the prevention program has varied, and Mr. Weiss presented anecdotal evidence that inhalant use decreases when

prevention program funding is sufficient and consistent; conversely, inhalant use increases when funding decreases.

Forging an Epidemiology/Ethnography Dialogue: A Cultural Anthropologist's View

Philippe Bourgois

University of California at San Francisco

Dr. Bourgois discussed ways to integrate the qualitative and quantitative approaches to data collection, particularly participant observation. Participant observation data is collected as field notes and disseminated to the research team through oral briefings and by coding into data management programs. Although epidemiologists seek a large sample size to provide accuracy, Dr. Bourgois explained that ethnographers can achieve similar accuracy with smaller samples because they develop in-depth relationships with study participants that allow them to break down socially desirable answers, document what actually happens by observing taboo behaviors in natural settings, address the larger social and cultural context in which study subjects operate, and provide more accurate and in-depth understanding of study participants' behaviors and motivations. The research team can then integrate the observations within the epidemiological hypothesis, tailor fieldwork around expected and unexpected associations, and adapt the interview process where necessary.

To maintain intimate access to a study population, the participant observer needs to develop a balance between ethical reserve and intervention. Ethnographers can assess the accuracy and objectivity of their observations by comparing them to the larger epidemiological context, explaining various processes, and employing rigorous mathematics and philosophies that are internally coherent, parsimonious in their explanations, and account for discrepancies. Dr. Bourgois suggested that researchers working with vulnerable children and youth could use participant observation to discuss taboo subjects, document changing patterns, develop hypotheses, and understand processing and meaning.

Participant observation employs cultural relativism to document and explain the internal logic of social processes. Cultural relativism assumes that no culture is good or bad but that all possess an internal logic and that power is centered in cultural interactions. For example, Dr. Bourgois contrasted the differences in perceptions of risk in sharing needles and injection equipment in the public health and street cultures. The public health culture views sharing as an irrational, ignorant, self-destructive act that exposes drug users to HIV, hepatitis, and abscesses. In street culture, however, sharing establishes drug users as generous, responsible members of the community, providing those who share with the promise that others will share with them and offering insurance against becoming "dope sick." In discussing the cultural gaps between ethnographers and epidemiologists, Dr. Bourgois described differences where, for example, coauthoring scientific papers is regarded favorably by epidemiologists and unfavorably by ethnographers.

Data Collection and Measurement Issues

Suzanne Shields

Health Canada

Describing how Health Canada developed an enhanced surveillance tool to track trends in sexually transmitted diseases (STDs) among Canadian youth living on the streets, Dr. Shields stressed that enhanced surveillance requires a commitment from all those involved, is a valuable tool to conduct research among hard-to-reach groups, and complements routinely collected data rather than collecting repetitive data. She described how the need for a national measurement tool was identified, designed, implemented, evaluated, and revised to meet Health Canada's clearly defined objectives, which included improving existing surveillance data to obtain nationally comparative data, accessing hard-to-reach populations, collecting and analyzing data on a timely basis, and creating a system to analyze trends over time through repeated data collection. Incentives were designed to encourage participation by youth living on the streets, local service providers, and provincial and Federal investigators. The inclusion criteria balanced practical limitations with the project objectives. The protocol was developed with input from both Federal and provincial investigators, and ethical responsibilities were assigned to provincial investigators to accommodate differing local requirements. Dr. Shields called starting with a valid, field-tested questionnaire essential to ensure that the wording matched the research goals. Results from the limited first phase were combined with input from those administering the questionnaire to address specimen collection issues and to evaluate the questionnaire for length, internal agreement, sampling bias, recall bias, poorly worded questions, and focus on issues. For phase two, the inclusion criteria were redefined to better focus on the most high-risk populations, the recall period was shortened to minimize recall bias, more data collection sites were added, additional sampling techniques were added, testing was increased to include more STDs, core national questions were identified, individual sites were allowed to add questions tailored to their specific needs, and a short questionnaire was added for youth returning to obtain laboratory test results. Dr. Shields added that enhanced surveillance tools need to be reevaluated after every phase to determine where they can be strengthened.

Mary Jane Rotheram-Borus

University of California, Los Angeles

Addressing ways to conduct user-friendly assessments that become part of the daily life for a service-providing agency, Dr. Rotheram-Borus described how data collection at intake, routine assessments, and followup could be used to reduce risk behaviors, evaluate programs, and empower vulnerable children and youth to become active participants in the research agenda. She called on investigators to develop short questionnaires that are culturally appropriate; tailored to the needs of researchers, service providers, and vulnerable children and youth; and provide comparability and credibility across a wide variety of settings. She recommended that researchers first determine which assessments and interventions are relevant to both program staff and vulnerable children and youth, employ a continuous quality improvement program to adapt to changing environments, create partnerships with service providers and vulnerable children and youth, and de-emphasize research that requires them to prove a concept in order to

design interventions with an eye to real world applications. For example, Dr. Rotheram-Borus said future research must give equal weight to resiliency as well as risk factors. She also discussed technological innovations, such as Palm Pilots and U.S. Army field computers that can help researchers conduct user-friendly assessments.

Michael Clatts

National Development Research Institute, Inc., New York City

Dr. Clatts illustrated how ethnography contributes voice and variability to public health discussions, describing his research that used participant observation to document a number of distinct behavioral patterns of needle sharing. By documenting the differences in drug preparation and injection practices among injection drug users in New York and Denver, then reproducing the drug preparation practices in laboratory models, the research team demonstrated that the differences in drug preparation and injection practices were not random or geographic variations but conscious adaptations by injection drug users to the different forms of heroin available in the two cities. He also cited ethnography's usefulness as a tool to monitor and identify emerging behavioral trends or at-risk subpopulations, develop reliable sampling strategies, enhance the validity of research by improving the understanding of research objectives, and describe the logic and processes by which behaviors are connected.

Collaborative Research, Proposal Development, and Funding

M. Patricia Needle

NIDA

Dr. Needle addressed funding mechanisms available to support the development of international collaborative research on drug abuse. Several sources of funding are available to international researchers through the U.S. National Institutes of Health grants process, including:

- *Administrative supplements* to existing grants can be proposed by NIDA grantees for a maximum of \$100,000 per year or 25% of the direct costs of the grant (whichever is less). The added component must be related to the purpose and integrity of the original grant. The proposal is not scored competitively through NIH, but approval and budgetary signoff within NIDA are required.
- *Domestic grants with a foreign component* enable U.S.-based principal investigators to conduct cooperative international studies. The foreign component is part of the original grant; the entire application is scored competitively.
- *Foreign grants* allow researchers from outside the United States to compete for funding within the NIH system. The actual research is conducted outside the United States. For a grant to be awarded to a foreign institution, the principal investigator must demonstrate a special opportunity to further drug abuse research through the use of expertise, resources, populations, or environmental conditions not readily available in the United States.

Other NIH programs are administered through the Fogarty International Center and support professional development opportunities or international research collaborations:

- *Fogarty International Research Collaboration Awards (FIRCA)* provide up to \$32,000 per year, for up to 3 years, for international research partnerships between NIH-supported scientists and collaborators in eligible countries. The FIRCA goal is to extend and enhance the research of the U.S. investigators while benefiting the scientific interests of international scholars.
- *AIDS-FIRCA* grants support cooperative studies by NIH grant recipients and foreign institutions on HIV/AIDS and on new and reemerging infectious diseases. AIDS-FIRCA grants are available for collaborative research in all countries. Support is similar to that available through the FIRCA grants.
- *Specific country grants.* Research funds occasionally become available through sources targeted to a specific country or region. One example is the Japan Society for the Promotion of Science.
- *AIDS International Training and Research Program (AITRP)* enables scientists from eligible countries to increase their proficiency to conduct biomedical and behavioral research related to AIDS and to develop and use those acquired skills in clinical trials, prevention, and related research. AITRP trains international health professionals in research on HIV infection among drug-using populations.
- *International Training and Research Program in Emerging Infectious Diseases (ERID)* enables U.S. universities and nonprofit research institutions to support international training and research programs for foreign scientists and public health workers from eligible nations in research, control, and prevention strategies related to emerging and reemerging infectious diseases. The ERID award is an institutional training grant.

Dr. Needle also described professional development opportunities sponsored by NIDA for international researchers:

- *INVEST Research Fellowships* are competitive, 1-year fellowships for scientists from outside the United States to conduct postdoctoral research with a NIDA-funded researcher. Fellows receive an orientation program at NIDA and travel support to attend scientific meetings. Fellows and their mentors jointly develop a collaborative research proposal for implementation in the Fellows' home countries.
- *NIDA Hubert H. Humphrey Drug Abuse Research Fellowships* are competitive, 10-month fellowships for mid-career professionals from eligible countries that combine academic course work at The Johns Hopkins University with professional development activities, including travel support for attendance at scientific meetings and a professional research affiliation with a NIDA grantee.

- *NIDA Distinguished International Scientist Collaboration Program Awards* are competitive 1- to 3-month professional visits to the United States for experienced drug abuse researchers from any other country to stimulate development of innovative collaborative research. This program gives senior international researchers the opportunity to propose projects that can potentially advance the scientific agenda in both countries, as well as offer the ability to apply enhanced research skills and mechanisms in the non-U.S. scientist's home country.

Andrew Ball

WHO

WHO is a specialized agency of the United Nations, charged with promoting technical cooperation for health by conducting programs to control and eradicate disease and improve the quality of human life. As directed by its 191 member states, WHO has adopted 4 main functions: 1) to provide worldwide guidance in the field of health; 2) to set global standards for health; 3) to cooperate with governments who request assistance in strengthening national health programs; and 4) to develop and transfer appropriate health technology, information, and standards. Dr. Ball stressed that WHO is not a funding institution but a technical organization that can help researchers identify funding sources and develop, implement, monitor, and evaluate research programs. WHO plays a key role in developing standardized research methods and instruments, allowing for collection of comparable data across countries and regions. It has an important role in promoting evidence-based public health and providing governments with the necessary evidence and guidance to develop effective policies and programs. Another important area of WHO work focuses on capacity building through the development of training resources and support of country- and regional-level training. He added that WHO endorsement of a research proposal, or use of a WHO research instrument or protocol, can help organizations obtain funding approval from another agency, and urged researchers to establish relationships with country officers from international organizations such as WHO, UNAIDS, UNDCP, and UNICEF.

Donald Sutherland

Health Canada

Dr. Sutherland reported that Health Canada devotes from 5 to 10 percent of staff time to international projects, including mutually cooperative research and technical assistance for countries developing a research agenda. Both the Canadian Institutes for Health Research and the Canadian International Development Agency also support international research efforts. He reminded participants that any routine data collection effort could yield scientifically rigorous research if carefully planned and implemented.

Discussion with U.S. Street Youth

Los Angeles Youth Network Representatives

A panel of young men who have moved from life as street youth to become peer counselors and outreach workers with the Los Angeles Youth Network joined meeting participants for a wide-ranging discussion of vulnerable children and youth as well as research, treatment, and

service issues. The discussants reminded participants that they must overcome the street culture perception that researchers are driven by self-interest rather than a desire to truly befriend and help vulnerable children and youth. They suggested that researchers involve vulnerable children and youth as partners in research projects by treating them with respect; offering incentives as compensation for the subjects' expertise; employing vulnerable children and youth for such tasks as outreach, surveying, or data analysis; reporting findings to subjects at followup, and involving the community in setting action priorities based on research findings. Because normal age differences among vulnerable children and youth are negated by their common life experiences, the panelists reported that peer programs could be highly effective and employ a broad definition of peers. They added that street safety is a factor in both seeking drugs and seeking help. Stressing safety may be irrelevant for some vulnerable children and youth, but feeling unsafe can prompt others to seek help.

PARTICIPANT PANEL PRESENTATIONS

Global Status of Street Children and Key Research Issues

Through a series of panel discussions organized by geographical regions, participants described research and services targeted to vulnerable children and youth around the world. Whether they were discussing the most economically powerful nations or countries with extremely limited resources, participants described uniquely similar situations, where the number of vulnerable children and youth is increasing; their age is decreasing; and their abuse of substances begins with those substances that are most readily available and inexpensive. Inhalants are often the first abused substance because they are inexpensive and mostly legally available, but in some communities the first drug of abuse is alcohol, tobacco, marijuana, or a coca product. Injection drug use was reported most commonly in developed countries, probably because vulnerable children and youth there tend to be older than their counterparts in developing countries, and injection drug use appears to be related to age and physical and emotional development. There is evidence that injection drug use is increasing among vulnerable children and youth in some regions of both transitional and developing countries. The number of vulnerable children and youth increases with cultural shifts from rural to urban societies, economic and social instability, and decreased importance of nuclear families. Vulnerable children and youth in developing countries are more likely to have continuing contact with families, school, and work than are vulnerable children and youth in developed countries. But for many children in developing countries, the street is home. For all vulnerable children and youth, substance abuse, sexual abuse, and violence are all part of a complex series of factors affecting their lives.

Participants described a broad range of research being conducted on topics related to vulnerable children and youth, including participant action research, epidemiological surveys, program evaluation, and rapid assessment and response. Discussants commonly identified two areas where substantial research is needed: pathways to the street and protective factors. Prevention programs included community readiness models; street outreach programs; drop-in and residential treatment centers; and individual, group, and family counseling in a variety of settings. Speakers called for development of programs that use the public health model to deliver targeted, comprehensive, coordinated, integrated, age-appropriate, low-cost, and effective services modeled on best practices.

North America

Michael Clatts and Cameron Cuch

United States

Elise Roy and Donald Sutherland

Canada

Jacques Normand

United States, Moderator

Dr. Roy presented information about an ongoing prospective cohort study tracking HIV incidence and the evolution of sexual and drug using behaviors among Canadian youth living on the streets. Injection drug use is common (46 percent); its incidence is increasing; the age of first injecting is decreasing; and it is strongly associated with suicide, depression, HIV, and hepatitis. Dr. Roy reported that the risk of dying is 13 times higher for youth who live on the streets when compared to other youth of the same age. Suicide and drug overdose are the two main causes of death among Canadian youth living on the streets. Dr. Sutherland reported that the median age of HIV infection is decreasing in Canada and that half of all new HIV cases are reported in young people. Of new HIV cases, 50 percent are associated with injection drug use. The primary risk group for all sexually transmitted diseases is young people aged 15 to 24; vulnerable children and youth are especially at risk because they lack access to health care. Dr. Sutherland also discussed one Canadian research priority: efforts to identify and understand factors that contributed to an HIV outbreak that occurred in Vancouver during the mid-1990s despite the existence of outreach and needle exchange programs. Dr. Clatts presented data from an epidemiological study that documented the demographics as well as sexual and drug risk behaviors among youth living on the streets in New York City. He cited concerns that U.S. services targeted to young people aged 21 to 24 do not address the behavioral, cognitive, and developmental factors that place them at extreme risk for sexually transmitted diseases and injection drug use. Mr. Cuch stressed that 60 percent of the U.S. indigenous population does not live on tribal reservations, and that Native Americans are affected by larger cultural factors associated with substance abuse. He cited high school dropout rates, poverty, homelessness, and violence as factors in substance abuse among Native Americans. Because Native Americans hold a unique legal status as domestic sovereign nations, research conducted on tribal reservations must comply with tribal laws in addition to National Institutes of Health regulations governing protection of human subjects.

Asia

Gabriel Britto

India

Joselito Pascual and Emma Porio

The Philippines

Shuiyuan Xiao

China

Elise Roy

Canada, Moderator

Mr. Britto described the benefits and limitations of various service delivery models. He suggested that vulnerable children and youth are best served by targeted interventions designed to meet the needs of a specific population through comprehensive, coordinated, and integrated services. He urged participants to follow the public health approach in developing best practices.

Dr. Pascual described the rapid increase in the number of children and youth living on the streets that occurred in The Philippines from 1991, when 220,859 were reported, to 1999, when 1.5 million were reported. They are more likely to be male, aged 6 to 17, and work 6 to 14 hours a day for an average daily wage between 50 cents and 1 dollar. Two-thirds reported using solvents to get high and forget their problems. Center-, community-, and street-based programs are available. Dr. Pascual reported that research priorities include developing special programs for children, creating linkages between services, evaluating program activities, and establishing facilities to treat psychoses. Dr. Porio described the Philippine shift in emphasis to delivering street-based services and conducting research activities that center on participant action research.

She warned that establishing trust among street outreach workers and the target population takes more time than actually collecting data. Recent surveys show that the substance abused is age-related: vulnerable children and youth under the age of 11 report using inhalants or solvents; those over 11 report using cocaine, which is more expensive and is perceived to be more adult and more risky than inhalants. Gender differences are also age-related: males outnumber females 9 to 1 among vulnerable children and youth younger than 20; males and females are almost equally distributed among those between ages 20 and 25. The incidence of injection drug use is very low. Dr. Xiao reported that vulnerable children and youth have been relatively rare in China because family-oriented values, traditions, social support systems, and laws combine with limited personal mobility to encourage intact families. He predicted that the number of vulnerable children and youth would increase as these factors change. Although reliable data is limited, 50 percent of China's estimated 6 million drug users report injecting opiates, and stimulant use is increasing among young people. Sexual transmission of HIV is increasingly important in China, but injection drug use remains the primary vector of transmission: 70 percent of the estimated 500,000 HIV cases are attributed to injection drug use.

Europe and the Middle East

Sevil Atauz

Turkey

Martin Hajny

Czech Republic

Alena Peroshkina

Russia

Robin Montgomery

Russia, Moderator

Dr. Atauz reported on Turkish socioeconomic factors, such as rural to urban migration, population increases among children under 18, limited educational opportunities, high rates of child labor, and limited policies governing child labor, that have contributed to increases in neglect, abuse, homelessness, and sexual exploitation of young people. Abuse of solvents, alcohol, and tobacco is increasing among vulnerable children and youth, but other drugs are rarely abused, reflecting low rates of drug abuse in the general population. Research priorities include participant action research, developing best practices, and efforts to change policies, paradigms, and strategies to focus on drug abuse, sexually transmitted diseases, and HIV among vulnerable populations. Dr. Hajny discussed the 10-bed residential treatment program he directs in Prague that provides individual, group, and family counseling; education; and detoxification for heroin and methamphetamine abusers. Focus group discussions, a rapid assessment, and increased collaboration with street outreach workers prompted treatment providers to flexibly modify protocols and institute harm reduction programs to serve a hidden population of young drug abusers who live on the streets. He added that researchers are educating first-time runaways about the costs and consequences of substance use. Current research focuses on behavior and attitudes relating to substance abuse, identifying pathways to the street, cultural aspects of relationships among street users, risk and protective factors for substance abuse, factors contributing to increased rates of suicide, and the impact of drug abuse among vulnerable children and youth on the rest of the Czech population. Ms. Peroshkina discussed the changing political and economic factors that have contributed to the epidemic of vulnerable children and youth, drug abuse, and HIV in Russia, and cited official estimates that injection drug users between the ages of 16 and 25 account for 90 percent of new HIV cases. Many of these individuals are homeless and lack official documents, which limits their access to medical and public health services. She described a limited approach to drug treatment, where many healthcare professionals dismiss ethical considerations, research, and outreach or prevention activities as beyond their role in treatment and diagnosis. To reach the hidden population of drug-using vulnerable children and youth, AIDS Infoshare conducts HIV and sexually transmitted disease education and prevention programs, trains medical professionals to work with vulnerable populations, operates legal clinics and telephone help lines, and collaborates with UNICEF to establish Youth Information Centres for Health and Development. Research activities focus on factors contributing to drug use among vulnerable children and youth, commercial sex workers, and migrant populations, and on youth health and welfare issues.

Latin America

Rubens Adorno and Fr. Harold Rahm

Brazil

Gloria de Salvador

Colombia

Donald Kaminsky

Honduras

Moises Salazar

Mexico

Norweeta Milburn

United States, Moderator

Dr. Adorno reported that children and young people in the depressed city centers of Brazil are in transit to the streets. Ethnographic studies are researching the attraction of the streets and the factors contributing to increasing abuse of cocaine, the combination of crack and solvents, and rising levels of violence. He described risk reduction programs instituted to address these trends. Father Rahm described the therapeutic community approach he coordinates to serve violent and addicted vulnerable children and youth. The program works to reunite families by conducting street- and family-outreach efforts, operating a medical clinic, and providing counseling. Dr. de Salvador described multidisciplinary drug treatment programs for Colombian vulnerable children and youth between the ages of 7 and 18 that offer individual-, family-, and community-based interventions and rely on godparents, foster parents, or residential programs to provide family support when the young people cannot be reunited with their parents. Research is underway to evaluate the program's effectiveness and identify risk and protective factors. She described the strong correlation between drug abuse and such factors as delinquency, prostitution, physical abuse, and low socioeconomic status. Dr. Kaminsky stressed the importance of addressing both global and local legal, policy, environmental, economic, and social factors that influence a complex cluster of problems (such as violence, abuse, poverty, migration, and consumerism) that contribute to substance abuse among vulnerable children and youth. He urged participants to develop low-cost, community-based, comprehensive programs to serve the needs of two diverse groups: children who live with their families but work on the street, and children without any ties to family who live and work on the street. Dr. Kaminsky reported that crack is beginning to replace solvents as the primary drug of abuse among Honduran vulnerable children and youth, and that street educators have been effective in identifying emerging trends and providing referrals to services for at-risk young people. His research demonstrated that substance abuse is strongly associated with later violence and delinquency, and that time on the streets, deviance, and family situations influence a child's tendency to abuse inhalants. Mr. Salazar described the Casa Alliance therapeutic community that serves Mexican drug abusers through street education, community prevention activities, crisis centers, and group homes. The program offers medical services, individual and group counseling, and legal aid as they help drug abusers restore family contacts.

Africa

Rogers Kasirye

Uganda

Anne-Gloria Moleko

South Africa

Frank Canizales

United States, Moderator

Dr. Kasirye described prevention and treatment programs he conducts for vulnerable children and youth in Uganda. The target population is identified through media campaigns and street outreach, and receives counseling, drug treatment, skills training, job placement, and referrals to legal and medical services. The average age of the target population is 14; the majority are male. He presented research findings on HIV, sexual, and drug risk behaviors; service delivery models; and life skills for vulnerable children and youth. Dr. Kasirye also discussed the challenges of operating in a limited-resource environment where the high incidence of HIV/AIDS contributes to social and economic instability that influence the rising incidence of drug abuse among vulnerable children and youth. Ms. Moleko described the effects of the political transition in South Africa, including increases in psychosocial problems and displaced families, and decreases in public health and socioeconomic status. She reported on research studies that examined the role of sexual and drug use behaviors in HIV infection and prostitution. Discussing how the meeting had affected her perspective on global and South African issues, Ms. Moleko urged participants to collaborate on multidisciplinary research that assesses current situations; identifies and prioritizes needs; and develops, implements, monitors, and evaluates interventions.

WORKGROUP REPORTS

Participants formed four workgroups to discuss cross-cutting issues; contrast developed and developing country experiences; identify ways to involve vulnerable children and youth in the research process; and review training, funding, and networking resources. In addition, each group focused on one of four assigned topics: research on inhalants and solvents, developing effective interventions, effective data collection, and pathways to and from the streets. The discussions centered on the status of current research efforts, the application of research findings to policy and practice, and action priorities.

Research on Inhalants and Solvents

Irma Makalinao, *Rapporteur*
University of The Philippines

Workgroup members agreed that research should be conducted on inhalants, solvents, and other drugs of abuse as they related to children, beginning with research to understand the nature of the problem. Changing the terminology from “street children” to “vulnerable children and youth” would expand the target population for future research. To assess the global impact of inhalant abuse, scientists must create working definitions and terms of reference that will permit data harmonization. In discussions focused on prevention research, the discussants sought ways to generate data that will promote understanding of the changing patterns of substance abuse among vulnerable children and youth, especially new drugs and routes of administration, and determine the sociocultural factors that influence those patterns of substance abuse. Examining prevention needs in developing countries, the participants reviewed methods to design effective prevention messages, strategies to deter individuals from starting substance use, and the role of the family in prevention. Workgroup members also examined the role of the Poison Control Center (PCC) in inhalant abuse treatment. In the developing world, PCC is not linked to service providers or researchers, so there is no agreement on what toxicological or medical issues should bring an inhalant abuser to the attention of PCC personnel. Treatment providers would also benefit from identification of useful biological markers for specific abused substances, and a range of interventions and treatment options to promote long-term abstinence. The workgroup members also discussed Fetal Volatile Solvent Syndrome, the integration of basic science research with prevention and treatment efforts, morbidity and mortality monitoring systems, and electronic communication among researchers.

Interventions: Developing Effective Projects

Nancy Haley, *Rapporteur*
Montreal Public Health Department

The workgroup participants defined an effective program for reducing substance abuse as one with multiple components, including structured expectations; a well-defined mission to serve a specialized target group; multidisciplinary staff; coordination with networks of service providers;

involvement by family members, peers, the community, police, and government officials; sustainable staff and financing; ongoing evaluation that provides staff with feedback; and ongoing advocacy at all levels to ensure multilevel involvement and sustainability. Programs serving a specialized target group will be developmentally tailored for children or adolescents, start during the critical pre-adolescent period, meet standards of care, and be theory guided. Multidisciplinary teams allow researchers to comprehensively evaluate individual, family, and social problems leading to substance abuse, facilitating treatment for the whole child as an entity as well as his family and environment. To ensure that staff is sustainable, programs should develop recruiting sources, such as schools of social work or medicine; provide adequate and ongoing training; offer adequate salaries to reduce turnover; and develop ongoing support systems for staff members, such as team meetings, case discussions, and professional consultations. The discussants recommended that program developers start by clearly identifying the target population group and its needs. Effective programs start small and grow in small steps, encourage advocates who have professional credibility at all levels to ensure multilevel involvement, and promote local ownership of the program.

The group also identified the characteristics of effective programs:

- Multiple markers of risk reduction and social integration, such as improved well-being and health, stable living situation, increased family and social ties, safer drug and sexual behaviors, and integration with education or employment.
- User satisfaction, where the family as well as the child agree on the amount, quality, and type of intervention and on the frequency of dialogue between the staff, child, and family.
- Staff that meets productivity goals and program objectives, such as creating and utilizing field notes, conducting regular needs assessments of the target population, and providing regular staff evaluation and feedback.
- Staff satisfaction, measured by turnover, the amount and continuity of training, and sources and amount of support.
- Perceptions of stakeholders and gatekeepers.
- Coordinated networks that ensure followup and feedback for referrals, joint projects and funding, shared resources and staff, and multilevel meetings to discuss ongoing problems.
- Administrative accountability demonstrated by fiscal reports and diverse sources of funding.

Effective Data Collection: Surveillance, Methods, and Instruments

Ms. Moira O'Brien, *Rapporteur*
NIDA

The workgroup members agreed that monitoring at the local and international levels provides a valuable cross-national perspective for countries as they assess the nature and extent of problems relating to substance abuse and vulnerable children and youth in neighboring countries, predict the local impact of those problems, and direct resources to address the issues. The group concluded that a standard definition of street children and substance abuse could be useful if it also meets local needs and is sensitive to cultural issues. They focused on basic surveillance and ways to enhance existing systems, capacity building, and research collaboration. Discussants stressed that experience and expertise should be shared bilaterally because everyone has

something to learn from sharing information about collecting data and shaping a research agenda. The group recommended that researchers start by identifying and utilizing existing information, which is especially important for research just beginning to track trends. They added that researchers should carefully consider the level of data collection required, suggesting that surveillance systems begin broadly with information on cross-national general issues, adding more details, such as clinical data, at the national level and even more details, such as serological data, at the local level. Data must be comparable across nations but flexible and adaptable for use in the local context. Using multiple indicators that can be interpreted within the local context can help identify trends even if individual instruments are not cross-nationally comparable. To be most effective, research should be linked to services and interventions and use a range of methods, such as qualitative and quantitative data to identify new and emerging health issues and drug trends.

Pathways to and from the Streets

Alena Peroshkina, *Rapporteur*
AIDS Infoshare Russia

Discussants identified a number of factors that contribute to children living on the streets, including poverty, race, discrimination, drug abuse, sexual and physical abuse, rural-to-urban migration, gender, familial dysfunction, economic instability, and social unrest. The group stressed that no single factor is responsible for children living on the streets, and suggested that researchers focus their investigations on the complex interaction of factors. Participants described effective programs to reach vulnerable children and youth as those that employ peer educators and stress connections to families. The workgroup members also discussed factors that help some children and youth survive on the streets. Those factors that motivate children and youth to leave the streets are not clearly understood, the group reported, because outreach workers lose contact with individuals who successfully leave the streets. The participants explored ways that researchers and service providers could use flexibility and creativity in seeking information from different resources and through regular interactions in different settings. Finally, the group discussed governmental responses to vulnerable children and youth, which range from denial to effective prevention and intervention programs, and suggested that researchers identify approaches that effectively influence policy.

RECOMMENDATIONS

In addition to the recommendations presented by each workgroup, meeting participants adopted five general recommendations during the closing plenary session.

General

- NIDA and WHO should establish a workgroup on substance abuse by vulnerable children and youth that will adopt a modest agenda of activity and coordinate a followup meeting within 18 months.
- NIDA should assist researchers with communications, and participants should commit to continued communications within and among the workgroups established at this meeting, as well as on a national, regional, and global basis.
- NIDA and WHO should facilitate international teams of researchers to help nations share and translate research methodologies as they develop a national research agenda, including design, implementation, and evaluation of best practices.
- NIDA and WHO should coordinate a special issue of a research journal to disseminate best practices and model interventions.
- Participants should participate in the activities of other international workgroups, such as Mapping the AIDS Pandemic, which produces a report immediately before major AIDS meetings, and the Global Research Network on HIV Prevention in Drug-Using Populations, which will next meet in Melbourne, Australia, in conjunction with the 2001 International Congress on AIDS in Asia and the Pacific.

Research on Inhalants and Solvents

- To include more young people in research, change the terminology to “vulnerable children and youth,” and include all substances used and abused by this population by any route of administration.
- Establish universal guidelines for data collection and interpretation so that researchers better understand each other.
- Researchers and treatment providers should tap the experience of Poison Control Center personnel in designing research and service networks.
- Conduct research on the following topics:
 - Sociocultural or other conditions that influence patterns of substance abuse, including differences in use patterns between vulnerable children and youth and other population groups.
 - Useful biological markers for specific abused substances.
 - Fetal Volatile Solvent Syndrome.
 - Basic science of inhalants and solvents.
- Establish an electronic message board to list funded projects.
- Develop a surveillance system to monitor solvent and solvent-related deaths.

Interventions: Developing Effective Programs

- Establish programs to reduce substance abuse that are science-based, comprehensive, and multidisciplinary efforts developmentally tailored to a specialized target group.
- Coordinate service networks on multiple levels (for the individual, family, peers, community, municipality, educational system, and employment services).
- Start small, grow in small steps, structure expectations, and continually evaluate program objectives.
- Generate local ownership of the program by involving community stakeholders and gatekeepers.
- Conduct ongoing evaluations that employ multiple markers of risk reduction and social integration, such as stable living conditions and reinsertion into educational or employment systems.
- Ensure that substance abuse reduction programs are fiscally and administratively sound, with adequate, diverse, and ongoing sources of funding, staff, and advocacy; professional credibility; and accountability.

Effective Data Collection: Surveillance, Methods, and Instruments

- Establish a workgroup to:
 - ◆ Review existing instruments.
 - ◆ Recommend core domains for data collection as well as specific items and examples.
 - ◆ Develop a tool kit that provides guidelines on key issues, methods, and interpreting findings, and could become the basis for training programs.
 - ◆ Assess feasibility of instruments.
 - ◆ Include more systematic qualitative components in surveillance.
 - ◆ Characterize services and linkages.
 - ◆ Increase surveillance of drug use profiles, including type of drug, mode of administration, dependence (tools), and consequences of use, such as HIV, overdose, TB, and hepatitis.
 - ◆ Develop simple tools.
- Develop a plan for sharing experience and expertise in data collection, surveillance and assessment across countries.
- Explore mechanisms to support capacity building.
- Develop a conference to complement a series of papers and case studies across regions discussing how scientifically sound data has been used to influence policy and practice with respect to the welfare of children.

Pathways to and from the Streets

- Critically reexamine prevailing conceptual frameworks that individualize and pathologize risk and consider social problems contributing to risk.
- Direct research away from a focus on individual risk factors to examine the interaction

between individual and systemic factors that influence entry into (or provide protection against) street life.

- Because it is especially difficult to track vulnerable children and youth who successfully leave the street, more research is needed on individual, social, and structural factors facilitating exit or pathways from the street.
- Examine complex relationships between drug use, sex work, and violence.
- Adapt and develop research methods capable of assessing and responding to the complex dynamics associated with entry to and exit from street life by flexibly and creatively using ethnographic observations from different settings and resources.
- Identify data collection and reporting mechanisms that affect the recognition of and responses to vulnerable children and youth in different national settings.
- Different factors influence formation of government policy; what types of research can help shape policy, strategies, and interventions?

APPENDIX A: AGENDA

STREET CHILDREN AND DRUG ABUSE: SOCIAL AND HEALTH CONSEQUENCES

Marina Beach Marriott
Marina Del Rey, California, USA
September 17–19, 2000

SUNDAY, SEPTEMBER 17

4:00 P.M. **Welcome and Introductions** PROMENADE ROOM

Conference Objectives: Setting the Agenda

Research and Programmatic Issues: NIDA and WHO Objectives

Presenters:

Andrew Ball
M. Patricia Needle

Discussion Moderator:
Rubens Adorno

Contextual and Social Issues

Presenters:

John Howard
Mary Jane Rotheram-Borus

Discussion Moderator:
Sevil Atauz

6:30 P.M. **Reception Meeting** THE COURTYARD

MONDAY, SEPTEMBER 18

8:30 A.M. **Research on Inhalant Abuse:
Focus on Children and Youth** PROMENADE ROOM

Presenter:
Silvia Cruz

Discussion Moderators:
Joselito Pascual
Fr. Harold Rahm

Asia

Gabriel Britto
Joselito Pascual
Emma Porio
Shuiyuan Xiao

Discussion Moderator:
Elise Roy

Europe-Mideast

Sevil Atauz
Martin Hajny
Alena Peroshkina

Discussion Moderator:
Robin Montgomery

Break

Latin America

Rubens Adorno
Gloria de Salvador
Donald Kaminsky
Harold Rahm
Moises Salazar

Discussion Moderator:
Norweeta Milburn

Africa

Rogers Kasirye
Anne-Gloria Moleko

Discussion Moderator:
Frank Canizales

TUESDAY, SEPTEMBER 19

8:30 A.M.

Data Collection and Measurement Issues

PROMENADE ROOM

Presenters:

Suzanne Shields
Mary Jane Rotheram-Borus

Discussion Moderator:
Anne-Gloria Moleko

Moderator:
Andrew Ball

10:00 A.M. **Break**

10:30 A.M. **Workgroups** PROMENADE ROOM

Research on Inhalants/Solvents

Moderator/Rapporteur:
Irma Makalinao
Harvey Weiss

Interventions: Developing Effective Projects PENINSULA ROOM

Moderator/Rapporteur:
Nancy Haley
Harold Rahm

*Effective Data Collection: Surveillance, Methods,
and Instruments* SANTA MONICA ROOM

Moderator/Rapporteur:
Cameron Cuch
Moirá O'Brien

Pathways to and from the Streets MALIBU ROOM

Moderator/Rapporteur:
Michael Clatts
Alena Peroshkina

*Additional cross-cutting issues for workgroup discussion: contrasting
developed/developing country experiences; involving street children in this process;
training; funding sources; networking*

12 NOON **Lunch** CATALINA ROOM

**Collaborative Research, Proposal Development,
and Funding**

Presenters:
M. Patricia Needle
Andrew Ball

Discussion Moderator:
Shuiyuan Xiao

1:30 P.M. **Workgroups (continued)**

3:30 P.M. **Break**

4:00 P.M. **Closing Plenary Session**

PROMENADE ROOM

Moderators:
Andrew Ball
M. Patricia Needle

Workgroup Reports
Recommendations and Next Steps (Discussion)
Summary and Closing Comments

Presenter:
John Howard

5:30 P.M. **Adjourn**

APPENDIX B: PARTICIPANT LIST

STREET CHILDREN AND DRUG ABUSE: SOCIAL AND HEALTH CONSEQUENCES

Marina Beach Marriott
Marina Del Rey, California, USA
September 17-19, 2000

Rubens Adorno, Ph.D.

Professor
Child and Maternal Health Department
School of Hygiene and Public Health
University of São Paulo
BRAZIL
Phone: +55-11-306-67702/03
+55-11-306-67773
Fax: +55-11-853-0240
E-mail: radorno@usp.br

Sevil Atauz, Ph.D.

Professor
Faculty of Social Services
Hacettepe University, Keçiören
Ankara
TURKEY
Phone: +90-312-495-0007
+90-312-495-6570
Fax: +90-312-355-5771
E-mail: sevilatauz@hotmail.com

Andrew Ball, M.B., B.S.

Medical Officer
Department of Child and Adolescent Health
and Development
World Health Organization
20, Avenue Appia
CH-1211 Geneva 27
SWITZERLAND
Phone: +41-22-791-4792
Fax: +41-22-791-4853
E-mail: balla@who.int

Philippe Bourgois, Ph.D.

Professor and Chair
Department of Anthropology, History, and
Social Medicine
University of California at San Francisco
Box 0850, Suite 485K
3333 California Street
San Francisco, California 94143-0850
FedX/UPS ZIP 94118
USA
Phone: +1-415-502-8400
Fax: +1-415-920-9592
E-mail: bourgoi@itsa.ucsf.edu

Gabriel Britto

Director
National Addiction Research Center
Floor V, Bhardwadi Hospital
Bhardwadi Road, Andheri West
Mumbai 400 058
INDIA
Phone: +91-22-624-5290
+91-22-624-9388
Fax: +91-22-850-0313
+91-22-620-1700
E-mail: premag@bom5.vsnl.net.in
mollycharles@hotmail.com
manadiar@vsnl.com

Frank Canizales, M.S.W.

Management Analyst
Alcoholism and Substance Abuse Program
Indian Health Service
Headquarters, Room 6A-20
5600 Fishers Lane
Rockville, Maryland 20852
USA
Phone: +1-301-443-2051
Fax: +1-301-443-7623
E-mail: fcanizal@hqe.ihs.gov

Michael Clatts, Ph.D.

Director
Institute for Research Youth-at-Risk
National Development and Research
Institutes, Inc.
Two World Trade Center, 16th Floor
New York, New York 10013-2429
USA
Phone: +1-212-845-4459
Fax: +1-212-845-4698
E-mail: michael.clatts@ndri.org

Silvia Cruz, Ph.D.

Principal Investigator
CINVESTAV, IPN
Calzado de los Tenorios No. 235
Col. Granjas Coapa
14330-México, D.F.
MÉXICO
Phone: +1-525-483-2853
Fax: +1-525-483-2863
E-mail: jcmolcruz@compuserve.com.mx

Cameron Cuch

Tri-Ethnic Center for Prevention Research
Colorado State University
Sage Hall 100
Ft. Collins, Colorado 80523
USA
Phone: +1-800-835-8091 - General Center
Number
+1-970-491-3954 – Cameron's
Number
Fax: +1-970-491-0527 - Fax to Cameron
E-mail: ccuch@lamar.colostate.edu
camcuch@hotmail.com

Gloria Inez de Salvador

Community San Glesrio
Transversal 26 No. 140A-04
Interior 12
Santa Fé de Bogotá
COLOMBIA
Phone: +57-1-342-6078
Fax: +57-1-258-4008
E-mail: gdesalvador@hotmail.com

Martin Hajny, Ph.D.

Head of Department
Youth Centre-MOST
Crisis Intervention Centre MOST
Cakovicka 51
190 00 Prague
CZECH REPUBLIC
Phone: +42-2-689-7929
E-mail: m.hajny@worldonline.cz
pro.most@worldonline.cz

Nancy Haley, M.D.

Medical Consultant STD/AIDS
Montreal Public Health Department
1301 Sherbrooke Street East
Montreal, Quebec H2L 1M3
CANADA
Phone: +1-514-528-2400 poste: 3630
Fax: +1-514-528-2452
E-mail: nhaley@santepub-mtl.qc.ca

John Howard, Ph.D.

Director
Social Health Program
Department of Psychology
School of Behavioural Sciences
Macquarie University
Sydney NSW 2109
AUSTRALIA
Phone: +61-2-9850-8093
Fax: +61-2-9850-8062
E-mail: john.howard@mq.edu.au
johnphoward@hotmail.com

Justeen Hyde

Program Director
Research and Evaluation
Division of Adolescent Medicine
Children's Hospital Los Angeles
5000 Sunset Boulevard, Suite 540
P.O. Box 54700, MS #2
Los Angeles, California 90054-0700
USA
Phone: +1-323-660-2450, Ext. 3116
Fax: +1-323-664-8365
E-mail: jhyde@chla.usc.edu

Donald C. Kaminsky, M.D., M.P.H., T.M.

Executive Director
FUNDAR
Technical Advisor, Proyecto
Alternativas & Oportunidades
P.O. Box 1587
Tegucigalpa
HONDURAS
Phone: +504-238-2449
Fax: +504-238-2449
E-mail: fundar@sdnhon.org.hn

Rogers Kasirye

Head and Director of Programmes
Uganda Youth Development Link
Victoria House
Plot 25 Namirembe Road
Bakuli Junction
P.O. Box 12659
Kampala
UGANDA
Phone: +55-256-41-348251
+55-256-77-470190 (mobile)
Fax: +55-256-41-258535
+55-256-41-530412
E-mail: soba-uyd@infocom.co.ug

Irma Makalinao, M.D.

Associate Professor
National Poison Control Center
Philippine General Hospital
University of the Philippines Manila
Taft Avenue, Ermita, Manila
PHILIPPINES
Phone: +63-2-524-1078
Fax: +63-2-526-0062
E-mail: docirma@mydestiny.net
irmarmakalinao@aol.com

Sheryl Massaro

Special Projects Manager
Public Information and Liaison Branch
Office of Science Policy and
Communications
National Institute on Drug Abuse
National Institutes of Health
Room 5213, MSC 9561
6001 Executive Boulevard
Bethesda, Maryland 20892-9561
USA
Phone: +1-301-594-6146
Fax: +1-301-443-7397
E-mail: sm105n@nih.gov

Norweeta Milburn, Ph.D.

Director
Assessment Core
Center for HIV Identification, Prevention,
and Treatment Services
UCLA -NPI Center for Community Health
10920 Wilshire Boulevard, Suite 350
Los Angeles, California 90024
USA
Phone: +1-310-794-3773
Fax: +1-310-794-8297
E-mail: nmilburn@mednet.ucla.net

Anne-Gloria Moleko

Senior Lecturer and Principal
Clinical Psychologist
Department of Psychology
University of Pretoria
P.O. Box 41119
Moreleta Park 0044
Pretoria
SOUTH AFRICA
Phone: +12-420-2930
Fax: +12-420-2404
E-mail: amoleko@postino.up.ac.za

Robin Montgomery

Information and CSW Project Coordinator
Aids Infoshare
P.O. Box 51
Moscow 105037
RUSSIA
Phone: +7-095-119-3316
+7-095-119-3233
Fax: +7-095-119-3316
E-mail: infoshare@glasnet.ru

M. Patricia Needle, Ph.D.

Director
International Program
Office of Science Policy and
Communications
National Institute on Drug Abuse
Building 31, Room 1B59
9000 Rockville Pike
Bethesda, Maryland 20892
USA
Phone: +1-301-594-1928
Fax: +1-301-402-5687
E-mail: pn28h@nih.gov

Jacques Normand, Ph.D.

Acting Branch Chief
Division of Epidemiology, Services, and
Prevention Research
National Institute on Drug Abuse
Neuroscience Center
Room 5153, MSC 9589
6001 Executive Boulevard
Bethesda, Maryland 20892
USA
Phone: +1-301-402-1919
Fax: +1-301-480-4544
E-mail: jnormand@nida.nih.gov

Moira O'Brien, M. Phil.

Health Scientist Administrator
Community Research Branch
Division of Epidemiology, Services, and
Prevention Research
National Institute on Drug Abuse
Neuroscience Center
Room 5153, MSC 9589
6001 Executive Boulevard
Bethesda, Maryland 20892
USA
Phone: +1-301-402-1881
Fax: +1-301-443-2636
E-mail: mobrien@nida.nih.gov

Joselito Pascual, M.D.

National Poison Control Center
Philippine General Hospital
University of the Philippines Manila
Taft Avenue, Manila
PHILIPPINES
Phone: +63-2-524-1078
Fax: +63-2-526-0062
E-mail: psyber@pacific.net.ph.
doc_jojo@lycos.com

Alena Peroshkina

Programme Director
Aids Infoshare
P.O. Box 51
Moscow 105037
RUSSIA
Phone: +7-095-119-3316
+7-095-119-3606
Fax: +7-095-119-3316
E-mail: infoshare@glasnet.ru
alena2infoshare.ru

Emma Porio, Ph.D.

Professor and Chair
Department of Sociology and Anthropology
Coordinator, Global Urban Research
Initiative for Southeast Asia
Ateneo de Manila University
P.O. Box 154, Manila
PHILIPPINES
Phone: +63-2-426-5270 local
+63-2-426-5271 local
+63-2-426-6001
+63-2-426-5990
Fax: +63-2-426-6088
+63-2-426-6076
E-mail: eporio@admu.edu.ph
eporio@hotmail.com

Father Harold Rahm

APOT
P.O. Box 5700
13094-970
Rua President Wenceslau 199
Jd. Flamboyant 13093-010
Campinas, São Paulo
BRAZIL
Phone: +55-19-294-2065 or
+55-19-9771-1490 cell
Fax: +55-19-253-1250
E-mail: apot@correionet.com.br

Heidi Rauch

Demand Reduction Specialist
Inter-American Drug Abuse Control
Commission (CICAD)
Organization of American States
1889 F Street, N.W.
Washington, DC 20006
USA
Phone: +1-202-458-3629
Fax: +1-202-458-3658
E-mail: hrauch@oas.org

Mary Jane Rotheram-Borus, Ph.D.

Professor of Clinical Psychology
Director, Center for HIV Identification,
Prevention, and Treatment Services
Division of Social and Community
Psychiatry
UCLA Department of Psychiatry
10920 Wilshire Boulevard, Suite 350
Los Angeles, California 90024
USA
Phone: +1-310-794-8278
Fax: +1-310-794-8297
E-mail: rotheram@ucla.edu

Elise Roy, M.D., M.Sc.

1301 East Sherbrooke Street
Montreal, Quebec H2L 1M3
CANADA
Phone: +1-514-528-2400, x3604
Fax: +1-514-528-2452
E-mail: eroy@santepub-mtl.qc.ca

Moises Miguel Salazar Sanchez

Coordinator
Casa Alianza México
Apartado 61-132, 06600
Mexico D.F.
MEXICO
Phone: +525-510-9425
+525-510-9438
Fax: +525-521-4207
E-mail: mexico@casa-alianza.org

Susanne Shields

Senior Biostatistician
Division of STD Prevention and Control
Bureau of HIV/AIDS, STDs and TB
Center for Infectious Disease Prevention and
Control
Health Canada
Tunney's Pasture, A/L: 0900B1
Ottawa, Ontario K1A 0L2
CANADA
Phone: +1-613-946-8637
Fax: +1-613-957-0381
E-mail: susanne_shields@hc-sc.gc.ca

Donald Sutherland, Ph.D.

Director, Bureau of HIV/AIDS, STDs and
TB
Center for Infectious Disease Prevention
and Control
Health Canada
Tunney's Pasture, A/L: 0900B1
Ottawa, Ontario K1A 0L2
CANADA
Phone: +1-613-957-1777
Fax: +1-613-946-0244
E-mail: donald_sutherland@hc-sc.gc.ca

Jokichi Takamine

726 Santa Monica Boulevard, Suite 216
Santa Monica, California 90401
USA

Harvey Weiss

Executive Director
National Inhalant Prevention Coalition
2904 Kerby Lane
Austin, Texas 78703
USA
Phone: +1-800-269-4237 (USA and
Canada)
+512-480-8953 (Outside USA and
Canada)
Fax: +1-512-477-3932
E-mail: nipc@io.com

Shuiyuan Xiao, M.D., Ph.D.

Professor and Director
Department of Social Medicine
Hunan Medical University
Changsha, Hunan 410078
CHINA

Phone: +86-13907494509

Fax: +86-731-436-1454

E-mail: xiaosy@cs.hn.cn

APPENDIX C: INDEX OF RELEVANT NIDA AND WHO PUBLICATIONS

The following publications were distributed to meeting participants:

NIDA Publications

NIDA Research Monograph No. 129: Inhalant Abuse
Preventing Drug Use Among Children and Adolescents: A Research-Based Guide
Principles of Drug Addiction Treatment: A Research-Based Guide
Research Report Series: Cocaine Abuse and Addiction
Research Report Series: Inhalant Abuse
Research Report Series: Methamphetamine Abuse and Addiction
Research Report Series: Heroin Abuse and Addiction
Community Drug Alert Bulletin: Hepatitis C
Community Drug Alert Bulletin: Anabolic Steroids
Community Drug Alert Bulletin: Club Drugs
Community Drug Alert Bulletin: Methamphetamine
Mind Over Matter: The Brain's Response to Inhalants
Mind Over Matter: The Brain's Response to Stimulants
Mind Over Matter: The Brain's Response to Opiates
Mind Over Matter: The Brain's Response to Hallucinogens
Mind Over Matter: The Brain's Response to Steroids
Mind Over Matter: The Brain's Response to Marijuana
Mind Over Matter: The Brain's Response to Nicotine

WHO Publications

*Programming for Adolescent Health and Development:
What Should We Measure and How?*
March 1998-September 2000

*Programming for Adolescent Health and Development:
What Should We Measure and How?
What Have We Accomplished?*
June 2000

*WHO Planning Meeting for the Implementation of Phase II of
WHO Street Children Project*
Geneva, Switzerland, January 27-31, 1997

*Measurement of Adolescent Development:
Environmental, Contextual and Protective Factors*
Washington, DC, USA, February 4-6, 1999

Risk and Protective Factors Affecting Adolescent Health and Development
Geneva, Switzerland, March 6-8, 1999

Report of First Meeting
Morges, Switzerland, May 19-22, 1998

Report of Second Meeting
Chiang Mai, Thailand, April 26-30, 1999