



## Wilma L. West Library Resource Notes

### Pandemic

February 2003

One definition of pandemic is "describing a widespread epidemic of a disease, occurring throughout the population of a country, a people, or the world" ([Academic Press Dictionary of Science Technology](#))

As in many previous cases, the topic of this week's Resource Note is the result of my being reminded more than once in a very short time of a social issue. The first nudge was the suggestion by a subscriber that I add the following reference to a previous Resource Note on covenants.

Hansen, R.A. (1990). The ethics of caring for patients with HIV or AIDS. *The American Journal of Occupational Therapy*, 44, 239-242.

**ABSTRACT:** Health care professionals encounter many ethical issues in the care of persons who are HIV positive or who have been diagnosed as having AIDS. Such issues include the allocation of scarce resources for research and health care; the use of various methods of disease control, including mandatory testing, forced isolation, informing of sexual partners, and education, and the determination of the responsibility to treat infected patients. These issues are presented as a stimulus to readers to examine their own attitudes regarding HIV and AIDS. The usefulness and limitations of occupational therapy's professional code in resolving ethical dilemmas are discussed, followed by the description of a process that can be used to analyze and solve these dilemmas.

In an article reporting on a dinner in honor Kofi Annan, the Secretary General of the United Nations, several speakers reminded the guests of other crises the world faces, besides a possible war with Iraq. Colin Powell, U.S. Secretary of State, said, "Nowhere has Kofi's leadership and foresight been more important than in marshaling the international community against the biggest problem we have on the face of the earth today, and that's the HIV/AIDS pandemic." (Martinez, BE, For Kofi Annan, a night of peace and praise. (2001, November 13). *The Washington Post*, p. C8.) To learn more about Annan go to <http://www.un.org/News/ossg/sg/index.html> or locate the two references below.

Annan K, Piot P, Schwartlander B, Berman D, Davis P, Kaninda AV, Ouma C, Leghentsev K. (2001). Wealthy nations called on to boost support efforts. Five-year plan estimated to cost \$9.2 billion. *Aids Alert*, 16, 99-101.

**ABSTRACT:** Using the 20-year mark in the history of AIDS as a catalyst, the United Nations and other international organizations have called upon the world's wealthier nations to increase

attention, support, and funding to HIV/AIDS prevention and treatment efforts. This call to action included a series of meetings with business and political leaders and culminated in the first United Nations General Assembly Special Session on HIV/AIDS, held in June.

Brown, P. (2001). Kofi Annan describes new health fund for developing countries. *British Medical Journal*, 322(7297): 1265.

The global **statistics** on the AIDS/HIV pandemic are mind boggling.

#### HIV/AIDS WORLDWIDE

- As of the end of 2002, an estimated 42 million people worldwide - 38.6 million adults and 3.2 million children younger than 15 years - were living with HIV/AIDS. Approximately 70 percent of these people (29.4 million) live in Sub-Saharan Africa; another 17 percent (7.2 million) live in Asia.

- Worldwide, approximately twelve of every 1000 adults aged 15 to 49 are HIV-infected. In Sub-Saharan Africa, about 9 percent of all adults in this age group are HIV-infected. In 4 African countries, the prevalence of HIV infection among adults aged 15 to 49 exceeds 30 percent.

- Approximately 50 percent of adults living with HIV/AIDS worldwide are women.

- An estimated 5 million new HIV infections occurred worldwide during 2002; that is, about 14,000 infections each day. More than 95 percent of these new infections occurred in developing countries.

- In 2002, approximately 2,000 children under the age of 15 years, and 6,000 young people aged 15 to 24 years became infected with HIV every day.

- In 2002 alone, HIV/AIDS-associated illnesses caused the deaths of approximately 3.1 million people worldwide, including an estimated 610,000 children younger than 15 years

You may view and/or download a detailed report, the UN AIDS Epidemic Update - December 2002, by the Joint United Nations Programme ([www.unaids.org](http://www.unaids.org)) on HIV/AIDS on this page, <http://www.unaids.org/worldaidsday/2002/press/Epiupdate.html>.

Though perhaps dated, the article below provides a closer look at the demographics for the United States.

Gayle H. (2000). An overview of the global HIV/AIDS epidemic, with a focus on the United States. *AIDS*, 14 Suppl 2, S8-17.

The HIV/AIDS epidemic is a global human tragedy, especially in sub-Saharan Africa. The pandemic affects people in the prime of their lives moving from at-risk populations to broader cross-sections of society. There have been more than 47 million adults and children infected since the beginning of the epidemic, and more than 18.8 million people have died. Over 95% of the global total of all AIDS cases are in the developing world, with prevalence among adults at less than 1% in India and Europe, to more than 10% in several African countries. The overwhelming majority of all infections globally are acquired through unprotected sexual intercourse, with at least 70% resulting from heterosexual intercourse. There have been more

than 733,374 AIDS cases reported to the Centers for Disease Control and Prevention (CDC) in the US since the beginning of the epidemic, and more than 430,000 deaths. The largest number and proportion of AIDS cases reported have occurred among gay and bisexual men. This trend continues today, although racial and ethnic minorities, women, and youth are becoming infected in increasing proportions. The south has the most people living with AIDS, followed by the north-east. The global situation is improving in some areas, but even if all HIV transmission could be completely stopped tomorrow, the long-term health, social and economic consequences will be devastating well into the 21st century. The magnitude of the epidemic and the continuing explosive risk of infection, coupled with the economic and infrastructural realities of the regions of the world, make prevention the only realistic approach.

For those of you interested in the epidemiology of disease, here are four articles for your consideration.

Detels, R. (2001). The role of epidemiology in challenging the HIV/AIDS pandemic. *Journal of Epidemiology*, 11, 95-102.

The HIV/AIDS pandemic has challenged the resourcefulness of epidemiology and epidemiologists. In response to the challenge, epidemiologists have used existing epidemiologic strategies, expanded existing strategies, and developed new strategies to answer key questions about the transmission of HIV, the natural history of HIV at the molecular, host, and community levels, for evaluation of treatment effectiveness and intervention strategies, and to inform public health policy. In responding to the challenge of the pandemic, epidemiologists have also increasingly collaborated with scientists from other disciplines, particularly immunology, virology, and the behavioral sciences. Examples of the application of these epidemiologic strategies are presented.

Gayle HD & Hill GL. (2001). Global impact of human immunodeficiency virus and AIDS. *Clinical Microbiology Review*, 14, 327-335.

This review provides information on the epidemiology, economic impact, and intervention strategies for the human immunodeficiency virus (HIV)/AIDS pandemic in developing countries. According to the World Health Organization and the Joint United Nations Programme on HIV/AIDS (UNAIDS) at the end of 1999; an estimated 34.3 million people were living with HIV/AIDS. Most of the people living with HIV, 95% of the global total, live in developing countries. Examples of the impact of HIV/AIDS in Africa, Asia, Latin America, the Caribbean, and the Newly Independent States provide insight into the demographics, modes of exposure, treatment and prevention options, and the economic effect of the epidemic on the global community. The epidemic in each region of the world is influenced by the specific risk factors that are associated with the spread of HIV/AIDS and the responses that have evolved to address it. These influences are important in developing HIV/AIDS policies and programs to effectively address the global pandemic.

Levin BR, Bull JJ & Stewart FM. (2001). Epidemiology, evolution, and future of the HIV/AIDS pandemic. *Emerging Infectious Diseases*, 7(3 Suppl), 505-11.

We used mathematical models to address several questions concerning the epidemiologic and evolutionary future of HIV/AIDS in human populations. Our analysis suggests that 1) when HIV first enters a human population, and for many subsequent years, the epidemic is driven by early transmissions, possibly occurring before donors have seroconverted to HIV-positive status; 2)

new HIV infections in a subpopulation (risk group) may decline or level off due to the saturation of the susceptible hosts rather than to evolution of the virus or to the efficacy of intervention, education, and public health measures; 3) evolution in humans for resistance to HIV infection or for the infection to engender a lower death rate will require thousands of years and will be achieved only after vast numbers of persons die of AIDS; 4) evolution is unlikely to increase the virulence of HIV; and 5) if HIV chemotherapy reduces the transmissibility of the virus, treating individual patients can reduce the frequency of HIV infections and AIDS deaths in the general population.

Stover, J, Walker N, Garnett, GP, Salomon JA, Stanecki, K.A., Ghys, P.D., Grassly, N.C., Anderson RM, & Schwartzlander B. (2002). Can we reverse the HIV/AIDS pandemic with an expanded response? *Lancet*, 360, 73-7.

HIV/AIDS has reached pandemic proportions, and is one of the leading causes of death worldwide. In 2001, the Declaration of Commitment on HIV/AIDS set out several aims with respect to reducing the effect and spread of HIV/AIDS, and an expanded response in low-income and middle-income countries was initiated. Here we examine the potential effect of the expanded global response based on analyses of epidemiological data, of mathematical models of HIV-1 transmission, and a review of the impact of prevention interventions on risk behaviors. Analyses suggest that if the successes achieved in some countries in prevention of transmission can be expanded to a global scale by 2005, about 29 million new infections could be prevented by 2010.

Another Washington Post article gave me new insights into the social and economic impact of the third bullet above; that is, "approximately 50 percent of adults living with HIV/AIDS worldwide are women." In his article, "Women Make Up Half of HIV Cases: Milestone Explains Effects of Epidemic," David Brown writes:

"The rising number of infected women is having myriad social and economic effects. . . In particular, women in Africa do most of the work on subsistence farms and are primarily responsible for food preparation. In addition, they are generally more invested in the education of their children than men, and when a family member becomes ill, they are the caregivers. You can imagine what happens when that central role in society is disproportionately impacted by HIV/AIDS," said Bernhard Schwartzlander, director of AIDS programs for the World Health Organization. "If that is eroded, then it is a question of loss of 'human capital' that future generations will have to deal with." (Washington Post, November 27, 2002; Page A1, Section: A.)

Later in the article, Brown writes: "Experts have warned of other secondary effects of AIDS in Africa, notably the risk of poor socialization of many of the 11 million children who have lost one or both parents to the disease. But [Peter] Piot, [executive director of UNAIDS], said the worsening of the current African food shortage "is the first sign of the larger societywide destabilizing impact of AIDS, as was predicted several years ago, but which I frankly didn't think would happen so quickly."

Here is a selection of additional articles from MEDLINE/PubMed ([www.nlm.nih.gov](http://www.nlm.nih.gov)) that addresses the affect of the HIV/AIDS pandemic on children and families in Africa and elsewhere.

Demarco, R, Lynch, M.M. & Board R. (2002). Mothers who silence themselves: a concept with clinical implications for women living with HIV/AIDS and their children. *Journal of Pediatric Nursing*, 17, 89-95.

The number of women newly infected with the human immunodeficiency virus (HIV) continues to rise. Women living with HIV or the acquired immunodeficiency syndrome (AIDS) are often mothers who deal with the unenviable task of balancing the stigma and physical needs of illness with the needs of their families and, in particular, their children (DeMarco, Johnsen, Fukuda, & Deffenbaugh, 2001). This article addresses both the communication style and subsequent concept identified in women living with HIV/AIDS called "silencing the self," and the clinical implications for pediatric nurses who support and offer family-centered care to their patients. Mothers living with HIV/AIDS, often view the needs of the children primary as they deal with the trajectory of their own illness. In doing this, they effectively "silence" their own needs and may actually put their own psychosocial and physical needs in abeyance. It is critical that nurses in pediatric practice consider how to tangibly assess, refer, and educate mothers who silence their own needs in the process of providing care for their children. Copyright 2002, Elsevier Science (USA). All rights reserved.

Hackl, K.L., Somlai, A.M., Kelly, J.A. & Kalichman, S.C. (1997). Women living with HIV/AIDS: the dual challenge of being a patient and caregiver. *Health & Social Work*, 22, 53-62.

More than 60,000 women in the United States have been diagnosed with AIDS, and millions of women worldwide are infected with HIV. Most of these women will die at an early age, leaving their children motherless. During their HIV illness, women confront the challenge of being both patient and family caregiver. Little research has explored this dual challenge. The authors conducted semistructured one-hour interviews with HIV-positive women that focused on the impact of the HIV diagnosis on the women's lives. Significant factors emerging from the interviews included the impact of stigma associated with HIV/AIDS, disbelief of the diagnosis, the lack of a guardian for their children, the paucity of women's support groups, and barriers associated with seeking services. All women exhibited evidence of clinical depression. A model for multidisciplinary intervention is proposed that focuses on women's needs within their family systems.

Joslin, D. & Harrison R. (1998). The "hidden patient": older relatives raising children orphaned by AIDS. *Journal of the American Medical Women's Association*, 53, 65-71, 76.

In the United States today, thousands of grandmothers and other third- and fourth-generation relatives are raising children and adolescents whose primary parent, usually the mothers, has died from acquired immune deficiency syndrome (AIDS) or is too ill to serve as the primary parent. More than 100,000 children below the age of 18 are expected to lose their mothers to AIDS by the year 2000, most in poor communities. Isolated by the demands of caregiving, child care, and the stigma of AIDS on even uninfected family members, this group of older surrogate parents is at risk not only for chronic conditions and stress-related somatic complaints, but for neglected health. Using the gerontological concept of the "hidden patient," this article presents four cases drawn from an exploratory study of the physical and emotional health risks and health behaviors of older adults raising children orphaned by AIDS. External and internal barriers to self-care are described, including lack of child and respite care and health insurance, caregiver depression, and denial of health problems.

Lachman, P., Poblete, X., Ebigbo, P.O., Nyandiya-Bundy S, Bundy RP, Killian. B. & Doek J. (2002). Challenges facing child protection. *Child Abuse & Neglect*, 26, 587-617.

The challenges facing children in the 21st century are immense and will need to be faced if we are to achieve the goal of child protection for all. Three specific constraints on child protection are examined in this article, namely poverty, HIV/AIDS infection, and war. The authors use their experience in Africa to raise issues of resilience and adaptation, dangers to child protection programs, and possible solutions. Poverty can be both financial and psychological, and this affects the effect of prevention programs. In many African and Asian countries, the AIDS pandemic has changed the social structure of society with AIDS orphans and children infected and affected by HIV/AIDS becoming more common. The impact has devastating effects on the way we view child protection and in particular child sexual abuse. The consequences of post-traumatic stress resulting from war needs to be addressed, and the development of programs that place children in the center of relief programs to foster a culture of child protection is essential. Finally, the article notes that the picture is not overly pessimistic and the examines the achievements in the field of children's rights which

Rotheram-Borus, M.J., Lee, M.B., Gwadz, M. & Draimin, B. (2001). An intervention for parents with AIDS and their adolescent children. *American Journal of Public Health*, 91, 1294-1302.

**OBJECTIVES:** This study evaluated an intervention designed to improve behavioral and mental health outcomes among adolescents and their parents with AIDS.

**METHODS:** Parents with AIDS (n = 307) and their adolescent children (n = 412) were randomly assigned to an intensive intervention or a standard care control condition. Ninety-five percent of subjects were reassessed at least once annually over 2 years. **RESULTS:** Adolescents in the intensive intervention condition reported significantly lower levels of emotional distress, of multiple problem behaviors, of conduct problems, and of family-related stressors and higher levels of self-esteem than adolescents in the standard care condition. Parents with AIDS in the intervention condition also reported significantly lower levels of emotional distress and multiple problem behaviors. Coping style, levels of disclosure regarding serostatus, and formation of legal custody plans were similar across intervention conditions.

**CONCLUSIONS:** Interventions can reduce the long-term impact of parents' HIV status on themselves and their children.

Sewpaul, V. (2001). Models of intervention for children in difficult circumstances in South Africa. *Child Welfare*, 80, 571-86.

Advances in policy have helped to create interventions for children in difficult circumstances in South Africa. This article examines models addressing children suffering abuse and neglect and children affected by HIV/AIDS. The focus is on innovative local attempts to deal with these problems, rather than theoretical reflection. Larger programs are usually conducted by government agencies because they have more resources but valuable solutions have also been created by NGOs.

Stein, J.A., Riedel, M. & Rotheram-Borus MJ. (1999). Parentification and its impact on adolescent children of parents with AIDS. *Family Process*, 38, 193-208.

Parentification refers to children or adolescents assuming adult roles before they are emotionally or developmentally ready to manage those roles successfully. We assess predictors and outcomes of parentification among adolescent children of Parents with AIDS (PWAs) in two

phases. In Phase 1, relationships among parental AIDS-related illness, parent drug use, parent and adolescent demographics, and parentification indicators (parental, spousal, or adult role-taking) were assessed among 183 adolescent-parent pairs (adolescents: 11 to 18 years,  $M = 14.8$  years, 54% female; parents: 80% female). Adult role-taking was associated with maternal PWAs, female adolescents, and greater parent drug use. Greater parental AIDS-related illness predicted more spousal and parental role-taking. Parent drug use predicted more parental role-taking. In Phase 2, we examined the impact of parentification on later adolescent psychological adjustment ( $N = 152$  adolescents). Adult role-taking predicted more internalized emotional distress; parental role-taking predicted externalized problem behaviors: sexual behavior, alcohol and marijuana use, and conduct problems. Given these dysfunctional outcomes, we discuss interventions to mitigate parentification among children of PWAs.

I opened my February 2003 issue of Harvard Business Review to find this:

Sydney Rosen, S., Simon, J., Vincent, J.R., MacLeod, W. Fox, M. & Thea, D.M. (2002). AIDS is your business. Harvard Business Review, 81, 80-87.

"If you've got global operations, you've got an HIV-infected workforce. Doing something about it will save lives - as well as money." (p. 80.)

The authors write that the HIV/AIDS epidemic is "destroying the twin rationales of globalization strategy: cheap labor and fast growing markets." Increased absenteeism, low productivity, higher health care costs from claims and premiums, and employee turnover affecting training costs are the causes of a more expensive labor force. The fact that money, which might have gone towards purchasing goods, is now needed to pay for health care or is disappearing when the employee can no longer work is slowing down market growth. The article describes current surveying practices to attempt to gauge the epidemic's spread and also prevention and treatment programs in the workplace that are beneficial to the population and to the company's bottom line.

For further exploration of the socioeconomic and political aspects of the HIV/AIDS pandemic, you might read one of more of these five articles.

Benatar, S.R. (2002). The HIV/AIDS pandemic: a sign of instability in a complex global system. The Journal of Medicine and Philosophy, 27, 163-77.

Intense scientific work on HIV/AIDS has led to the development of effective combination drug therapies and there is hope that effective vaccines will soon be produced. However, the majority of people with HIV/AIDS in the world are not benefiting from such advances because of extreme poverty. This article focuses on the pandemic as a reflection of a complex trajectory of social and economic forces that create widening global disparities in wealth and health and concomitant ecological niches for the emergence of new infectious diseases. While the biomedical approach to HIV/AIDS is necessary, has prolonged the lives of many individuals and could offer much at the level of population health, it cannot, in isolation, improve the health of populations. To achieve the latter will require understanding and addressing the deeper social causes of pandemics. Broadening the discourse on ethics to include public health ethics and the ethics of international relations could contribute to reducing the impact of the pandemic and to preventing the emergence of new infectious diseases in the future.

Forsythe, S, & Rau, B. (1998). Evolution of socioeconomic impact assessments of HIV/AIDS. *AIDS*, 12 Suppl 2, S47-55.

**OBJECTIVE:** The objective of this paper is to describe how and why socioeconomic impact assessments, as applied to HIV/AIDS in developing countries, have evolved over time and to discuss the direction that this field should be taking in the future.

**DESIGN:** This paper involves a review of existing literature and incorporates the experience of AIDSCAP/Family Health International, the AIDS and Economics Network (AEN) and other organizations working in this field.

**RESULTS:** Socioeconomic impact methodologies have become more rigorous over the last 10 years. Concurrently, they have been applied to achieve a new understanding of the impact of AIDS on the economy. The results have been successfully utilized because they are often compelling; to inform, sensitize and mobilize policymakers. At the same time, however, demand is growing for socioeconomic impact assessments to continue to evolve to meet the needs of policymakers in developing countries. **CONCLUSION:** The tools that have been used in the past for performing socioeconomic impact assessments will have to change significantly to reflect the needs of policymakers for more specific, policy-oriented analyses. Existing economic impact assessments in the field of HIV/AIDS will need to be replaced by more targeted economic research intended to encourage the development of appropriate workplace policies, mitigate the impact of HIV/ AIDS on families, and address critical treatment issues.

Parker R. (2002). The global HIV/AIDS pandemic, structural inequalities and the politics of international health. *American Journal of Public Health*, 92, 343-6.

In spite of recent advances in treatment and care available in most developed countries, the HIV/AIDS pandemic continues to spread throughout the developing world. Structural inequalities continue to fuel the epidemic in all societies, and HIV infection has increasingly been concentrated in the poorest, most marginalized sectors of society in all countries. The relationship between HIV/AIDS and social and economic development has therefore become a central point in policy discussions about the most effective responses to the epidemic. Important progress has been made in recent United Nations initiatives. Maintaining long-term commitment to initiatives such as the Global Fund to Fight AIDS, Tuberculosis and Malaria is especially important in the wake of September 11 and ensuing events, which threaten to redirect necessary resources to seemingly more urgent security concerns.

Tangwa, G.B. (2002). The HIV/AIDS pandemic, African traditional values and the search for a vaccine in Africa. *The Journal of Medicine and Philosophy*, 27, 217-30

The response to the HIV/AIDS pandemic in Africa has so far ignored important traditional African values and attitudes toward disease and commerce. These values and attitudes are significantly different from the libertarian, market-driven, profit-oriented values and practices of important sectors of the Western world. To deal with this epidemic, the world should consider respect for, and possibly even adoption of those African values, which provide for people in genuine need, irrespective of their ability to pay. HIV/AIDS vaccine research indigenous to Africa is also not always taken seriously, and struggles to find adequate funding for such research within or outside of the continent have been extremely difficult. A better appreciation of knowledge systems and values indigenous to the African experience is important in the fight against the HIV/AIDS pandemic.

Whiteside, A. (2001). Demography and economics of HIV/AIDS. *British Medical Bulletin*, 6, 73-88.

The rapid spread of HIV in the 1980s and 1990s in the non-industrialized world is now leading to an AIDS epidemic. This in turn is having a demographic and economic impact on these societies. This article assesses the most recent evidence for these impacts. It concludes that, while there is already a real and measurable impact, there is far worse to come. The demographic consequences will be particularly serious. Economic impact is rather more uncertain, and the article looks at the macro-economic impact as well as that on firms. In addition, it is postulated that economics may not be the most appropriate discipline to assess the true effects of the disease.

Of course, there are a plethora of articles about research into and treatment regimens for HIV infection and AIDS, and you can go to any of your favorite databases to find them. There will not be a Resource Note on that aspect. The next Resource Note will concern the role of occupational therapy in HIV/AIDS. Occupational therapy practitioners have been caring for and writing about this patient/client group for over twenty years.

Resource Note written by Mary Binderman, MLS, Director of Information Resources, American Occupational Therapy Foundation, Bethesda, MD. February 7, 2003.