

Working Together



Working for Life

HIV Center Milestones

- 1981** First pediatric and adult AIDS cases diagnosed in Brooklyn
- 1985** Expansion of Pediatric Immunology Clinic at SUNY Downstate — providing HIV counseling and testing as well as clinical trials for children • First year of the Perinatal HIV Transmission Study
- 1987** Clinical training to community-based physicians on HIV/AIDS issues begins • Infant and Child Learning Center is established to provide early intervention services for HIV-infected infants and children
- 1988** Development of the AIDS Prevention Center — providing counseling and testing to adults as well as education and outreach • First year of the Heterosexual AIDS Transmission Study
- 1989** Development of the Brooklyn Pediatric AIDS Network — providing comprehensive case management and primary care to HIV infected children in Brooklyn • Development of the Adolescent Education Program — providing peer-led community education to teens throughout Brooklyn
- 1990** Development of the Pediatric-Maternal Center — providing HIV primary care to children at Kings County Hospital Center • Development of the Brooklyn Group Support Project (now Supportive Counseling Services of SUNY) — providing support groups for HIV infected individuals and their families • Development of the HIV Clinical Scholars Program — two year fellowship providing specialty training to clinicians in HIV disease • First year of the Women and Infants Transmission Study
- 1991** SUNY's University Hospital of Brooklyn becomes a New York State AIDS Designated Center • Development of the STAR Clinic (now STAR Health Center) — first outpatient HIV clinic on SUNY Downstate campus • First year of the Women's AIDS Cohort Study — prospective study examining the manifestations of HIV disease in women • Development of SUNY AIDS Clinical Trials Unit — first adult clinical trials unit in Brooklyn (emphasizing trials for women and minorities)
- 1992** Development of Central/East European HIV Education Center • Health and Education Alternatives for Teens (HEAT) Program begins serving the needs of HIV-infected adolescents
- 1993** Development of the HIV Center for Women and Children, to help coordinate the activities of all HIV-related programs directed by SUNY Brooklyn faculty • Development of the HIV Clinical Education Initiative — providing on-site training to area health care providers in HIV disease
- 1994** Development of the Co-Located HIV/Gynecologic Care Program — providing both HIV and gynecologic care to HIV infected women at four sites at SUNY Downstate and Kings County Hospital Center
- 1995** The Maternal and Pediatric Services of Brooklyn (MAPS) program is funded through HRSA's Special Projects of National Significance program to develop a model system for the prevention of perinatal HIV transmission at three Brooklyn hospitals
- 1997** The Health and Education Alternatives for Teens (HEAT) Clinic is selected as a Clinical Science Group site as part of the NIH-funded Adolescent Medicine HIV/AIDS Research Network
- 1998** The Pediatric AIDS Clinical Trials Units at University Hospital of Brooklyn and Kings County Hospital Center are consolidated
- 1999** The Special Treatment and Research (STAR) Program is awarded targeted Ryan White funding from a Congressional Black Caucus (CBC) initiative for a new outreach project
- 2000** The CDC funds SUNY Downstate's first large-scale, randomized community-based HIV/STD behavioral intervention project
- 2001** The Health and Education Alternatives for Teens (HEAT) Program is awarded Health Resources and Services Administration (HRSA) funding to establish a comprehensive care network to identify, enroll, and retain HIV-infected youth in medical care, and establish a youth service provider network in Brooklyn

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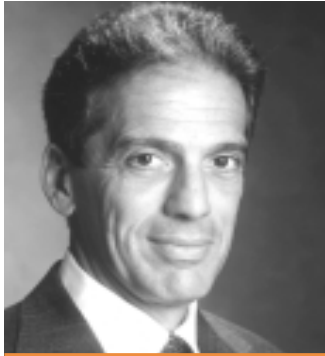
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Design: **Dorcas Gelabert**

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Printing: **William Charles Printing Co.**





John C. LaRosa, MD
President
SUNY Downstate Medical Center

A Message from the President

For more than 140 years, the people of Brooklyn have enjoyed access to a medical resource of uncommon excellence. SUNY Downstate Medical Center is one of America's leading urban medical centers. Since its beginnings in 1860, SUNY Downstate has followed a two-fold mission: advancing the quality of medicine through research, and bringing the benefits of that research to our clients by providing the highest caliber health care.

The HIV Center for Women and Children exemplifies this tradition. With 2.5 million people, Brooklyn is New York City's most populous borough. Its diverse population includes many struggling communities that have been hit hard by AIDS. Nearly 30,000 Brooklynites have been diagnosed with AIDS. Through research and treatment, The HIV Center for Women and Children is improving the quality of life for people with HIV/AIDS, while working to halt the epidemic's advance.

Our HIV Center owes its success to many superb researchers, physicians, and staff members. I invite you to read the following pages, which document their recent achievements—and their continuing efforts to promote a better life for the people of our borough.

A Message from the Director

The world marked a sobering anniversary in June, 2001. In the spring and summer of 1981, physicians in Los Angeles reported that a rare form of pneumonia had struck several young men. Similar reports followed: in New York and California, 41 young men were diagnosed with a rare form of cancer. Nothing like this had been seen before: a new disorder was attacking the immune systems of otherwise healthy young people. Though the first cases involved homosexual males, we soon learned that the illness could strike anyone.

In the years since, scientists and physicians, educators and health care providers have labored to help people with HIV and AIDS. The epidemic's toll has been enormous. Yet we have seen immense progress in our efforts to improve the lives of those infected – and to prevent infection among those at risk. Here in Brooklyn, the HIV Center for Women and Children has played a critical role in these efforts.

Established in 1993, the HIV Center for Women and Children has effectively coordinated the HIV-related programs and resources at SUNY Downstate Medical Center. Through their research, our scientists and physicians have contributed greatly to our collective understanding of HIV – and to ongoing advances in preventing its spread. Equally important, our physicians and health care professionals have brought these advances directly to the most vulnerable – women, children, and those touched by poverty and drug dependency.

HIV has become a particular threat to communities of color. In Brooklyn, these are the very communities that most depend upon the services of the HIV Center. We have responded by redoubling our efforts to bring treatment, education, and hope to those in need. As new advances in combination therapies continue to transform AIDS from a lethal to a chronic condition, the HIV Center helps people with the illness to enjoy more healthful – and productive – lives. And through pediatric and adolescent services, we are working effectively to stop the virus's spread.

Today, a growing number of institutions are dedicated to these efforts. Yet, our HIV Center enjoys uncommon success. I attribute our achievements to a unique confluence of factors: a dedicated group of investigators with wide-ranging experience in the research and treatment of HIV-related illnesses; their ability to work well together, despite disparate professional perspectives; and our location in Central Brooklyn, where the need for comprehensive service is great.

As the epidemic evolves, the HIV Center for Women and Children remains committed to its mission. At the same time, we have expanded our patient care, educational, counseling, and outreach services. The following pages will highlight many of the HIV Center's recent successes. I invite you to join us as we review the past few years – and plan for the future.



Jack A. DeHovitz, MD, MPH
Director
HIV Center for Women and Children



The Changing Face of an Epidemic

Two decades have passed since America – and the world – witnessed the first recorded signs of a perplexing new epidemic. At first, it seemed mainly to affect homosexual men, who showed up at hospitals with rare forms of pneumonia and cancer. Indeed, physicians originally referred to the illness as "Gay-Related Immune Disorder" (GRID).

The illness was soon recognized in other groups. Heterosexual men and women also were being infected with HIV, the human immunodeficiency virus. Children were born with similar manifestations. In those early days, HIV infection was almost always lethal, leading to the combination of illnesses physicians now called AIDS, for acquired immunodeficiency syndrome.

Today, as many as one million Americans have HIV. An additional 40,000 Americans become infected each year. In the United States, men having sex with men (MSM) is still the main mode of transmission (accounting for some 53% of new HIV infections in 2000), but almost one-third of new HIV-positive diagnoses were among women in 2000. In this latter group, an overlap of injecting drug use and heterosexual intercourse appears to be driving the epidemic. Indeed, injecting drug use has become a more prominent route of HIV infection in the United States, where an estimated 30% of new reported AIDS cases are related to this mode of transmission. Since AIDS was first diagnosed in the early eighties, it has killed close to 500,000 Americans. Worldwide, more than 36 million people are estimated to be living with HIV/AIDS.

Most striking, however, is the changing face of the disease. In the United States, HIV increasingly touches the most vulnerable among us – especially poor communities and people of color. Among African-Americans, the illness has reached crisis proportions. African-Americans now represent almost half of newly reported AIDS cases, and HIV remains the leading cause of death among African-Americans ages 25-44. And though African-Americans constitute only 13 percent of our population, collectively they account for more than half of all new infections.

Women bear a large burden of this disease. The number of American women with AIDS rose from an estimated 7 percent in the mid-eighties to 23 percent by the century's end. African-American women and Latinas represent the vast majority of these cases, which are most apparent in urban areas, such as our own.

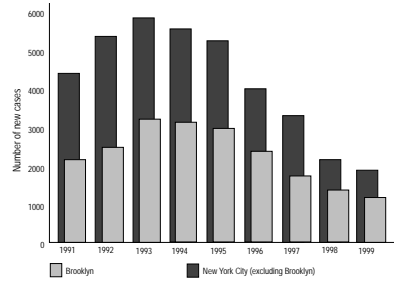
A Borough at Risk

The crisis is especially challenging in Brooklyn. With 2.5 million people, Brooklyn is New York City's largest borough – a densely populated district with reduced access to health care. In Central Brooklyn, most residents are African-American and Latino, including recent immigrants from the Caribbean and Central America.

While new reported cases of AIDS in Manhattan, Bronx, and Queens declined by 46.5%, 21% and 19%, respectively, from 1998 to 1999, Staten Island and Brooklyn showed only slight declines of 4% and 3.5%, respectively. AIDS is the borough's third leading cause of death, after heart disease and cancer.

Today, as many as one million Americans have AIDS . . . Evidence suggests that women are especially vulnerable to infection.

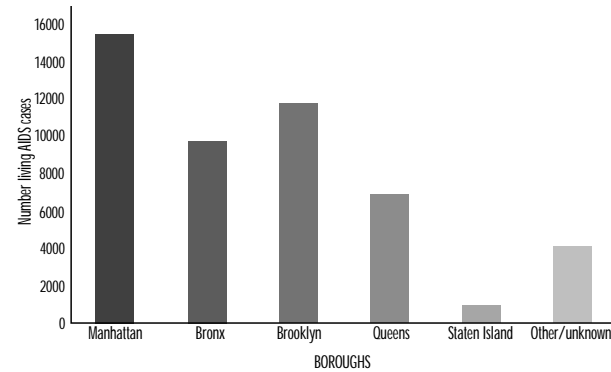
New adult AIDS cases: Brooklyn vs NYC



As a result of new therapies, new cases of AIDS are declining in Brooklyn and throughout the city. However, the decline in the borough is less dramatic than it is elsewhere in NYC. Since 1991, the decline in AIDS cases was 43% for Brooklyn – far less than the 56% decline in NYC (excluding Brooklyn). In that same year, NYC (excluding Brooklyn) had more than twice as many known AIDS cases as Brooklyn. In 1999, the city had only 50% more AIDS cases than Brooklyn.

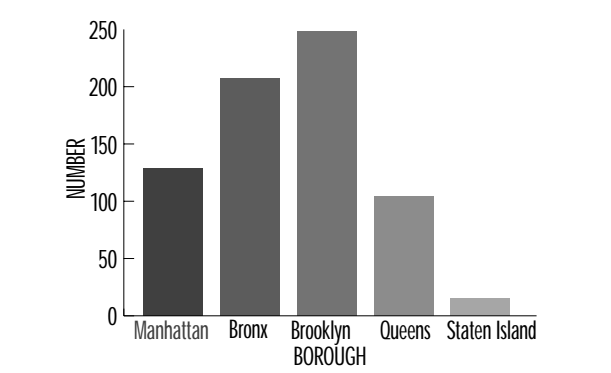
Source: Data Request for AIDS Cases Reported through 1999, Office of AIDS Surveillance, NYCDOH

AIDS Cases Living at the End of 2001 by Borough



Source: New York City Department of Health, HIV/AIDS Surveillance Program, 2002

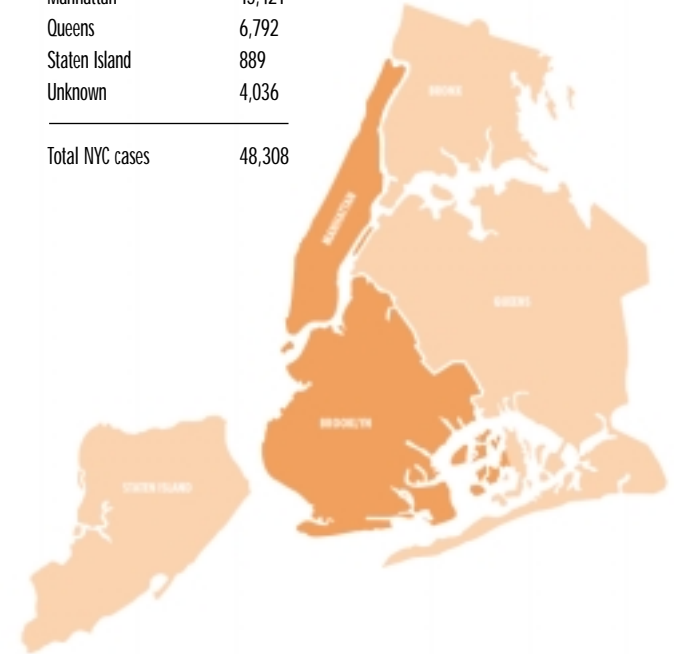
Living Pediatric AIDS Cases by Borough (2001)



Source: New York City Department of Health, HIV/AIDS Surveillance Program, 2002

Adults Living With AIDS in New York City, 2001

Brooklyn	11,567
Bronx	9,603
Manhattan	15,421
Queens	6,792
Staten Island	889
Unknown	4,036
<hr/>	
Total NYC cases	48,308



Brooklyn ranks second only to Manhattan in the cumulative number of adults living with AIDS. The borough's large number of known AIDS cases puts a burden on families, health care providers, and community-based organizations. The burden of the disease in Brooklyn is not evenly shared among its neighborhoods. The disease has a greater impact on poorer neighborhoods and those with large minority populations.

The disease places a large burden on women and children. Women in Brooklyn are more likely to have AIDS than anywhere else in the city. Between 1991 and 1999, new AIDS cases among the borough's women increased from 27.4 percent to 35.4 percent. For children, the numbers are equally sobering. More children with AIDS live in Brooklyn than in any other borough. In fact, Brooklyn is home to approximately one in nine American children with AIDS.

More than 95 percent of these children were infected through perinatal transmission. According to the Downstate Report Card on HIV/AIDS, nearly 60 percent of women in Brooklyn who transmitted HIV to their babies either used intravenous drugs or had sex with men who did. In fact, injection drug use is the leading reason for HIV transmission among men and women in Brooklyn.

An illness so broad in scope demands a wide range of responses—medical, educational, behavioral. The scholars and practitioners dedicated to eradicating HIV are employing many tools to achieve their common goal.

A Special Challenge

The changing face of AIDS poses a special challenge to the HIV Center for Women and Children. Based at Downstate – one of Brooklyn's leading health care providers for more than a century – the HIV Center embraces the vision of several distinguished scientists and physicians. In the 1980's, these investigators already offered clinical, psychosocial, and educational services for those with HIV. They also launched early research studies to help us understand the ways HIV is transmitted from mother to child.

By the early 1990's, that informal group of investigators realized they could enhance their success by coordinating their efforts. In 1993, they founded the HIV Center for Women and Children, combining research, primary care, and community outreach.

Today, the HIV Center serves more than 2,000 men, women, and children through a wide variety of services at Downstate and its municipal hospital partner, the Kings County Hospital Center (KCHC). Each year, the HIV Center attracts more than \$15 million in extramural funding to support its varied research and service activities.

"The HIV Center is a response to a crisis – and a meeting of minds," says Dr. Michael Augenbraun, a member of the Center's Board of Directors and an associate professor of medicine at Downstate. "Medicine is not driven by the lone scientist anymore. It has to be a cooperative effort among specialties. The HIV Center is a joining of specialists who are committed to helping people overcome the many factors contributing to HIV."

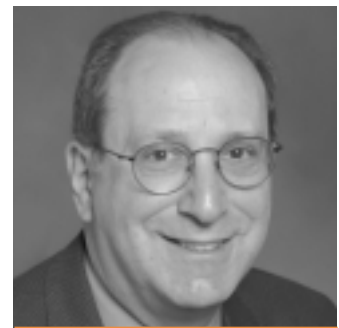
Through Research, Hope

Researchers at the Center were among the first to focus on HIV transmission from mother to child. In 1990, Drs. Sheldon Landesman, Howard Minkoff, Joan Hittelman, and Hermann Mendez launched the Maternal and Infant Transmission Study (MITS). The study – combining such disciplines as infectious disease, gynecology, and pediatrics – dramatically improved our understanding of how to prevent perinatal transmission.

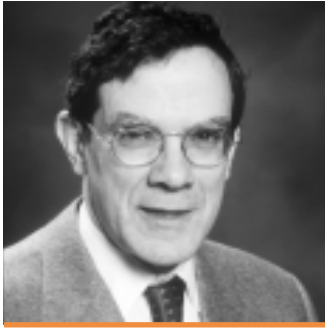
For example, Dr. Landesman and his colleagues found that a Cesarean section significantly reduces the likelihood of an infected mother's passing HIV to her newborn infant. "We gave doctors another quiver in their bow," says Dr. Landesman. "When



Michael H. Augenbraun, MD



Howard Minkoff, MD



Sheldon H. Landesman, MD

a woman has a C-section, the membrane surrounding the infant remains intact longer, as do the amniotic fluids protecting the infant. We were in the lead with this kind of research."

That effort grew into the Women and Infants Transmission Study (WITS) – part of a cooperative, nationwide study of HIV and pregnancy. Through it, the HIV Center continues to find ways of cutting HIV transmission during delivery. For example, Dr. Minkoff served as part of a team that found that taking AZT (Zidovudine) further reduces a mother's chances of passing HIV to her child. The Center continues to attract major funding for the initiative.

Discoveries made through MITS and WITS may help put an end to the perinatal transmission of HIV. "There has been a known percentage of HIV transmission from mother to child during pregnancy," explains Dr. Jack DeHovitz. "In the absence of voluntary precautions, the rate is 25%. But with a wide range of interventions – new medicines, C-sections – the risks are reduced to 1-3%. At this rate, we anticipate that perinatal transmission will be almost extinct."

Of course, WITS is only one of the HIV Center's distinguished research efforts. Another is the Women's Interagency HIV Study (WIHS). This long-term study also grew out of a previous effort – the Women's AIDS Cohort Study (WACS), a significantly smaller effort which started at Downstate. In 2000, WIHS received enhanced funding from the National Institutes of Health (NIH). The grant supports an expansion of this long-term study, which tracks and assesses the health of HIV-positive women.

"The study has been ongoing for nine years now," explains Dr. DeHovitz. "Originally, there were 300 participants, and some of them are no longer in the study. To get a more accurate assessment of what's going on today, we are adding an additional 100 participants. The renewed NIH funding attests to the continuing relevance of our efforts."

The long-term health of every person is the HIV Center's ultimate goal. For women of all ages, health is intimately related to attitude and behavior. Dr. Tracey Wilson enjoys strong government support for her efforts to help women change attitudes and reduce behaviors that place them at risk for HIV and other sexually transmitted diseases.

Funded by the CDC, "Strategies for Optimizing STD Partner Notification" is a four-year study involving randomized control trials at clinics in East Flatbush. The "STD/HIV Prevention Project" is a two-year effort to help young minority women learn how to avoid being at risk for sexually transmitted diseases; Bristol-Myers Squibb funds the study. Dr. Wilson also is attracting government support for her research into adherence – the reasons why patients either follow or abandon prescribed medical regimens.

The web of biological issues surrounding HIV is equally complex. For example, the other sexually transmitted diseases may facilitate the transmission and acquisition of HIV. Researchers at the HIV Center are using WITS and WIHS to gain insights into the relationship – if any – between HIV and other STD's. "My interest is in the interplay between them," says Dr. Augenbraun. "One area I'm focusing on is whether shedding in herpes can promote the transmission of HIV."

Like physicians, researchers must also address the broad issues affecting children and adolescents with HIV. One salient issue involves the chemical and behavioral impact of psychotropic medications that people with HIV often need. Toward this end, Dr. Diana Dow-Edwards has launched a promising international study to examine these drugs' effects on brain function.

Under her leadership, the study will be conducted at Downstate and several collaborating institutions: the Albert Einstein College of Medicine, in New York; Karolinska Hospital, in Sweden; Loyola University, in Chicago; and the University of Maine. The five-year study will examine the biochemical and behavioral effects of psychotropic drugs on rats aged 28 to 509 days – periods



Tracey E. Wilson, PhD



Diana Dow-Edwards, PhD working at her lab (left), with Susan Melnick, PhD (right).

that developmentally correspond to childhood and adolescence in human beings. Drugs will be administered and behavior monitored at Downstate, where the rats will be prepared for additional, in-depth studies involving brain imaging.

"We've had a great deal of success with past studies using rats to better understand the effects of certain medications on human functioning," Dr. Dow-Edwards explains. "Rats have biochemical and behavioral responses to drugs that are very similar to those experienced by people," says Dr. Dow-Edwards. "At the same time, you can track long-term changes in rats that people would require decades or longer with people."

Treatment and prevention are two sides of the same coin. The researchers of the HIV Center for Women and Children are advancing our knowledge of that relationship. Yet their studies transcend the academic – they are also improving the lives of those affected by HIV.

A Unique Synergy

Toward that end, the HIV Center for Women and Children brings new medications to those in need. In 2001, the HIV Center received funding to participate in several promising clinical trials. One drug, recently approved by the FDA, combines the benefits of several medications to reduce the number of pills needed for these medications from four to two a day.

The HIV Center also offers children access to promising pediatric clinical trials. Information about these opportunities – as well as counseling, educational services, and medical adherence – is provided through the Pediatric/Maternal Center, a division of the Brooklyn Pediatric AIDS Network (BPAN). BPAN offers comprehensive services to families of children with HIV/AIDS. Case management services are provided on site and supported at many other Brooklyn network partner sites. Mental health services are



Ninad Desai, MD



Edward Handelsman, MD



Dennis P. Andrulis, PhD

also provided on site and are an important component of the BPAN services. In an attempt to reduce the burden on families affected by HIV/AIDS, co-located services are provided at the Pediatric/Maternal Center where mothers and babies are seen at the same site to enhance patient retention and ease.

Under the guidance of Dr. Ninad Desai, the medical director and an assistant professor of pediatrics, the Pediatric/Maternal Center provides leadership and support for these services at six affiliated hospitals: Brookdale, Brooklyn, Kings County Hospital Center, Long Island College, University Hospital of Brooklyn, and Woodhull Hospital, and one foster care agency, St. Vincent's Children's Services.

Research in pediatric HIV/AIDS is a critical part of the services provided by BPAN at this center. Under the stewardship of Dr. Edward Handelsman, the Principal Investigator of Pediatric AIDS Clinical Trial Group (PACTG) based at SUNY Downstate, enrollment in clinical research trials can be offered to children with HIV/AIDS. This provides an opportunity for cutting edge drugs and research to be made available to the community served by SUNY Downstate.

The Pediatric AIDS Clinical Trials Unit at SUNY Downstate was one of the first groups to make antiretroviral medications and subsequently highly-active antiretroviral therapy (HAART) available to children with HIV. The team, led by Drs. Edward Handelsman and Jack Moallem, have offered both government and industry-based trials of new medications for children. They were active participants in most of the pivotal pediatric studies, including the landmark ACTG 076 which proved the effectiveness of AZT in preventing transmission of HIV from mother to child.

This is in addition to the WITS program, of which children are a vital component. A number of research studies are conducted on site by Drs. Desai and Handelsman to find newer ways to ease the burden of HIV infection in children. The pediatric provider team is actively involved in outreach, education and training of providers and the community regarding issues related to HIV/AIDS. A large number of lectures, training workshops and teaching symposia are conducted by BPAN providers to empower the community in the fight against HIV/AIDS.

The Brooklyn Pediatric AIDS Network (BPAN) has been instrumental in assisting *Hopes Alive*, a non-profit organization, which provides antiretroviral medication to indigent children in Trinidad. Dr. Desai has facilitated financial support for laboratory tests for these children, while Dr. Handelsman has visited Trinidad three times in order to assist the nurses there with medication regimens. Both Dr. Handelsman and Joan Manning, BPAN's Director of Operations, are on the board of directors of *Hopes Alive*. Drs. Desai and Handelsman were recently honored with community service awards by the Trinidad and Tobago Association of New York. This program has recently been highlighted by *The New York Times*.

Issues surrounding AIDS often transcend medicine and physiology. Dr. Dennis Andrulis, a research professor in SUNY Downstate's Department of Preventive Medicine and Community Health, examines the ways that public policies address AIDS – especially among vulnerable urban populations. "We're creating a synergy between clinical research and policy issues in urban settings," Dr. Andrulis says.

Research within the larger context of service is a dual force driving the HIV Center's mission, says Dr. DeHovitz. "The unique aspect of this center," he explains, "is the way it combines a variety of knowledge- and treatment-based activities into a high quality service for people who might otherwise be ignored. Ultimately, the HIV Center engineers the rapid translation of research and innovation directly to a needy population."

“The HIV Center is a response to a crisis – and a meeting of minds.”





Caring for Those Most Vulnerable

Aside from a cough or a case of the sniffles, 26-year-old Barbara Greer* had never been sick a day in her life. Then, one morning in the fall of 1997, she awoke to the rasp of her own labored breathing. She thought the condition would improve by itself. Instead, she grew weaker by the hour.

"I couldn't breathe, couldn't walk – I didn't know what was happening," recalls the East Flatbush resident. "I went to the doctor, and he had me taken to the hospital. Suddenly, I had a very bad case of pneumonia." When the doctor asked Ms. Greer to take a routine HIV test, she scoffed. "I had never thought I was in the at-risk group," she says. "I wasn't promiscuous, never took drugs. I said no."

A few days later, Ms. Greer agreed to the test. "I learned the truth," she says. "It was devastating. I was ashamed to tell my family or anyone else. I didn't know what to do."

Ms. Greer's doctor advised her to visit the Special Treatment and Research (STAR) Health Center at SUNY Downstate. A division of the HIV Center for Women and Children, STAR Health Center was well known and well respected among the doctors and nurses who cared for her in the hospital. "They all thought very highly of the services, the staff. They were all absolutely right."

At the STAR Health Center, Ms. Greer found health professionals who treated her with genuine concern. Dr. David R. Warren, STAR Health Center's medical director, placed Ms. Greer on a regimen of medication that allowed her to get on with her life. Along with medical services, the STAR Health Center also offered Ms. Greer the counseling and emotional support to deal with a chronic illness that often carries an unfair stigma.

Today, at 30 years old, Ms. Greer is flourishing. The medical care she receives at the STAR Health Center has helped her regain her health, while the counseling services have given her renewed confidence. "I owe so much to the STAR Health Center," says Ms. Greer. "They gave me the treatment I absolutely needed to stay alive, and they helped me get through the emotional ups and downs that come with this illness. Now I'm determined to live life to the fullest."

Ms. Greer's story illustrates the uncommon success of the STAR Health Center. Formerly known as the STAR Clinic, the center opened its doors at SUNY Downstate in 1991. Its mission is to provide primary care and comprehensive, multi-disciplinary services for Brooklyn's often underserved HIV population.

The STAR Health Center's services range from ongoing clinical treatment for people with AIDS to counseling to help patients adhere to an exacting regimen of medications. Many of these services are geared toward the needs of women with HIV – more than 60% of center's patients are women. The STAR Health Center serves over 800 active patients a year.

Kings County Hospital Center (KCHC) is located directly across the street from Downstate Medical Center and is Downstate's largest affiliated teaching hospital. As part of Downstate's HIV Center, the STAR Health Center works closely with the Center for Hope, KCHC's adult HIV/AIDS clinic. In addition, women receive specialized HIV and gynecologic care through STAR's

They gave me the treatment I absolutely needed to stay alive ... Now I'm determined to live life to the fullest.

(left) Patricia DiFusco, RN, ACRN, takes a blood pressure reading.

* Ms. Greer's name has been changed to protect her privacy.

HIV/Gynecologic Services Program, which oversees three health care sites at Kings County and University Hospital of Brooklyn. These programs form the largest source of HIV/AIDS care in Brooklyn.

The STAR Health Center also provides care for the diverse medical and social issues affecting people with HIV. The STAR Health Center recently received Ryan White Title I funding to support screening and treatment for hepatitis C, which often appears as a co-infection in people with HIV. Over the past year, in fact, the STAR Health Center received additional support from such sources as HRSA/Ryan White CARE Act Titles I, II, and III funding, and Cablevision. The support enables the STAR Health Center to expand its medical, educational, and psychological services to those with or at risk for HIV/AIDS.

"We've grown over the past two years – in the services we offer and the funding we receive," said Dr. David Warren. "We continue to receive Ryan White funding, as we have since 1991. They've added additional funding to help us screen for hepatitis C, which is a growing problem among people with AIDS. And other sources also allow us to expand services generally."

Driving this expansion is a growing sense that HIV and AIDS in Brooklyn may be more pervasive than statistics suggest. "According to some estimates," says Dr. Warren, "the HIV-infected population may be, on average, at least one-third larger than documented. We've also seen a new, younger population engaging in unprotected sex. By expanding the services we offer, we can bring knowledge, treatment, and hope – to those who need it most."

A Full Range of Services

Hope often demands emotional as well as physical treatment. Recognizing this, the STAR Health Center has expanded its psychological counseling services. "That's part of the continuum of services we've added since last year alone," says Alexa Kazim, manager of the STAR Health Center. "Addressing a client's emotional needs is an important part of their treatment." More funds enabled the STAR Health Center to hire a full-time, psychiatric social worker and several full-time substance abuse counselors. "It's extremely positive," says Ms. Kazim. "Patients who are able to talk about their feelings, their fears, are often better able to adhere with their medical regimens." Those regimens, Ms. Kazim adds, can be daunting in themselves. Counseling also helps clients to master the core emotional issues that often lead to HIV infection. "In the population we serve," Dr. Warren notes, "we see a high correlation between AIDS and emotional abuse, physical abuse, and substance abuse. That's why counseling services are such an important part of what we do."

Increased funding improved the center's facilities as well. With support from Cablevision, the STAR Health Center enhanced patient management by purchasing a new electronic medical records system, including software and staff training. And STAR completely renovated its waiting room. "First impressions count," observes Ms. Kazim. "Now our waiting room is bigger, brighter, and more child-friendly." Clients now have access to two state-of-the-art computers donated by The Wiz. "We encourage clients to use the computers to develop their skills, conduct Internet research, even work on their résumés," she says. In fact, the STAR Health Center is planning to offer computer workshops for clients.

These services reflect the hope that brightens the lives of many people with AIDS. "There was a time," Dr. Warren observes, "when our patients would have to go on disability, and remain on it. Now they're interested in updating their résumés, sharpening their skills, and going back to work. Their quality of life has improved dramatically."



Barbara O'Sullivan, MS, NP (left) explains a procedure.

Taking It to the Street: Outreach, Education, Follow-Up

At times they set up tables in front of neighborhood pharmacies. Other times, they stand on street corners, venture into public parks, or visit storefront health clinics. There are only three of them, but their dedication to community health compels them to cover a lot of ground.

"We're out there at least three days a week," says Carolyn Ferdinand, project coordinator of Educating People at Risk (EPAR). "Weather permitting, we're out there at least four, five hours each day. We go where the people are, to educate them about the importance of being tested for HIV – and if they test positive, we try to get them into treatment at STAR."

“We’re out there... where the people are, to educate them about the importance of being tested for HIV.”

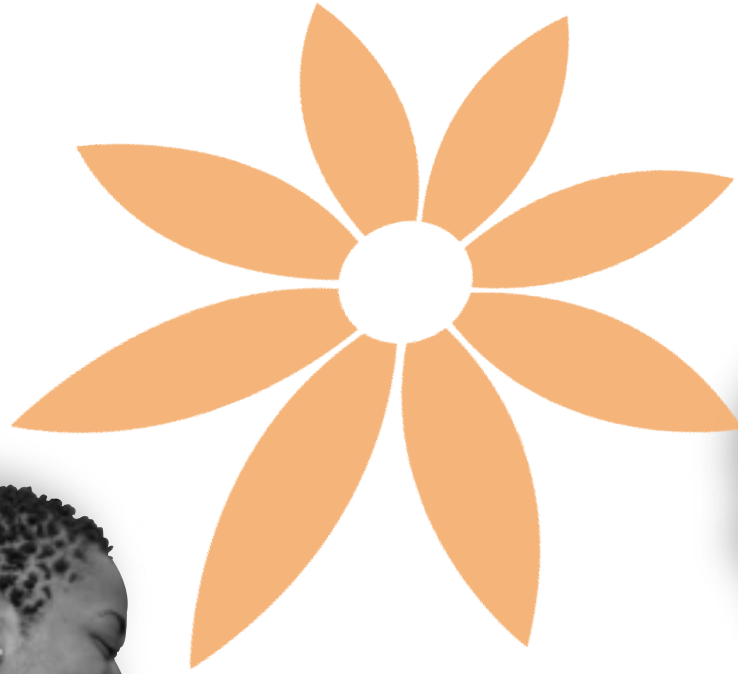
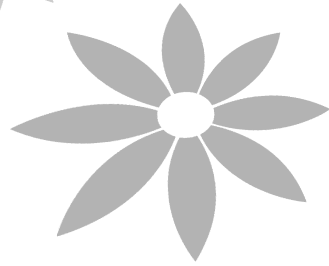


EPAR is the outreach component of the STAR Health Center. Recognizing the growing AIDS crisis in minority communities, the Congressional Black Caucus secured special funding to establish EPAR. The program complements STAR's mission by bringing the opportunity for HIV care directly to those most in need. It is a time- and energy-consuming mission. Along with the community liaisons who work with her, Ms. Ferdinand strives to become a "familiar presence" in the community. During the course of a week, they visit pharmacies, outpatient clinics, drug treatment centers, busy intersections and street fairs, homeless shelters and churches that are receptive to their work.

Along with education, EPAR's counselors also provide HIV counseling and testing. Through *OraSure*, a testing method that offers 99% accuracy, the counselors rub a specially treated cotton swab against the lining inside a person's mouth. The sample then goes to a lab for evaluation. If people test positive, EPAR's counselors urge them to take the next step by going for a blood test at the STAR Health Center. Anyone who tests seropositive is accepted as a patient. Aggressively bringing care to underserved communities is the aim of additional funding secured through the Congressional Black Caucus.

In June 2000, the HIV Center for Women and Children became one of only 47 agencies to receive a special grant from the Substance Abuse and Mental Health Services Administration (SAMHSA). The grant allows the Brooklyn Pediatric AIDS Network (BPAN) to provide counseling, treatment, and other interventions for 440 minority women and children at risk for substance abuse and HIV.

Supportive Counseling Services of SUNY (SCSS) provides support groups for individuals infected and affected by HIV, both at University Hospital and Kings County Hospital Center. It offers twelve weekly support groups in English and Haitian Creole, as well as individual and family counseling. SCSS also addresses the needs of children and adolescents affected by HIV through the use of art and recreation therapy.



Across the Generations

Epidemics spare no one – including the youngest and most vulnerable among us. Of the approximately 40,000 Americans infected with HIV each year, nearly half are under the age of 25. And 25% of those living with AIDS were infected as teenagers.

Since the early years of the AIDS crisis, the epidemic has taken an especially heavy toll on infants and children. For a long time, however, services for these most vulnerable patients were scarce. The health specialists of the HIV Center for Women and Children were among the first to recognize the problem – and provide relief. In the late 1980's, Dr. Joan Hittelman identified an array of developmental problems that were seen in many of the children with HIV infection she treated. Dr. Hittelman, clinical associate professor of psychiatry at SUNY Downstate and a founder of the HIV Center, was one of the original participants in the Women and Infants Transmission Study (WITS). "It was a disturbing pattern," Dr. Hittelman recalls. "Back then, children with HIV often suffered from severe neurological problems – cognitive and motor disorders, attention deficit disorder. But there were very few services for children who had HIV."

Under Dr. Hittelman's leadership, the Infant and Child Learning Center (ICLC) filled the vacuum. The Center was established in 1987 to give developmentally delayed children a chance to learn and grow. Originally, ICLC had dedicated classrooms solely to meet the needs of children with HIV infection.

"What we wanted," says Dr. Hittelman, "was to offer children with HIV infection the needed range of early intervention services. At the same time, we wanted to address the needs of many other medically involved children with developmental disabilities, including those from the Neonatal Intensive Care Unit. We looked at the problems and expanded our programs to meet these children's needs."

Today, ICLC offers a full range of educational, medical, and psychosocial services to 500 children from birth to five years old. The Center also provides training for health-care providers who focus on pediatric issues. About one-fifth of ICLC's children receive care at the Center's on-site facilities—including a pre-school and day-care center—at the Kings County Hospital Center. Depending on their needs—and those of their families—most of the children attend five days a week for special education classes; they may also receive other services, including occupational and physical therapy, speech therapy, nursing, psychological, social work, and case management services. The rest of the students receive services at home or in a neighborhood setting. "These children are entitled to live at their maximum potential," says Dr. Hittelman. "Our goal is to give them every opportunity to learn and grow."

Over the past fifteen years, Dr. Hittelman has seen prospects brighten considerably for children with HIV. "When we began this work," she says, "we didn't have the medications we do today. Many of the children we served in those early days died young, with severe neurodevelopmental disabilities. But today, children with HIV can expect longer, healthier lives." ICLC is funded by Early Intervention/New York State Department of Health; the New York State Department of Education; and the AIDS Institute of the New York State Department of Health.

These children are entitled to live at their maximum potential ... Our goal is to give them every opportunity to learn and grow.



Joan Hittelman, PhD

A Wider Commitment

Making a difference in children's lives ultimately depends on the adults who care for them. Mother or father, grandparent or aunt—these caregivers also need support to face the unique emotional, medical, and financial pressures that may arise from their child's illness.

At ICLC, adult caregivers find the support they need. For example, dependent mothers and other caregivers can visit ICLC for counseling. When children grow old enough to enroll at local schools, ICLC advises family members on the best ways to educate school personnel about their child's needs; they also may continue receiving counseling and family therapy at ICLC.

The strain of living with HIV can severely test the parent-child relationship. To strengthen this vital bond, ICLC has revitalized its Parent/Child Program. Families from all over Brooklyn travel to ICLC for the program—the only one of its kind remaining in the borough. The program features group support, special instruction, and parent-child therapy to enhance the intimate—and complex—relationship between a child and her caregiver.

ICLC also empowers caregivers to help themselves—and each other. Empowerment is the aim of ACTUAL (AIDS Children Teaching Us About Love), composed entirely of parents, relatives, and others who are responsible for the welfare of a child with AIDS. "It's become a large community of families affected by AIDS," explains Dr. Hittelman. "They are a great source of support for each other."

Every Friday afternoon, the group's thirty members—and their families—meet at Downstate. The informal agenda depends solely on the issues each family needs to confront. "It's a forum for everyone to talk about what's happening in their lives—and the lives of their children," says Jen Longley, ICLC's liaison to the group. "The families discuss their children and share information that's useful to everyone."

ACTUAL also reaches out to the wider community. Members train outreach volunteers to staff a telephone network that provides peer support, information, even referrals to anyone responsible for the well-being of a child with HIV infection. "The families and caregivers come together to educate and support themselves," says Ms. Longley.

In addition to weekly meetings, the group organizes monthly family outings for its members, who also attend national conferences. In 2001, Ms. Longley accompanied several ACTUAL members to Washington, D.C., for a conference sponsored by the Petra Foundation. ACTUAL became the first organization to achieve fellowship status with the foundation, which honors civic activism.

Moving forward together is a clear goal of ACTUAL's members. Yet they also support each other through the trying times when progress seems far away. "Things can get difficult," says Ms. Longley. "There are discussions related to death, dying, issues concerning the end of care. No matter what, all our members are there for each other."

A Balm for Growing Pains

Children and adults occupy the two poles of the service spectrum. Between them is the growing number of teenagers infected with, or at risk for, HIV. One of Brooklyn's most important resources for these young people is nestled in a quiet corridor at Kings County Hospital Center (KCHC).

Located on the fourth floor of the "E" Building, the Health and Education Alternatives for Teens (HEAT) Clinic offers a welcoming atmosphere for teens at risk for HIV. "It's a discreet location, and very teen-friendly," says Dr. Jeffrey Birnbaum, assistant professor of pediatrics and medical director of HEAT. "We're far from the hustle and bustle of the main hospital, so teens aren't intimidated. They can walk right in without an appointment."

Founded in 1991, HEAT is a full-service, multi-disciplinary clinic for HIV-infected and at-risk young people between 13 and 24 years old. Dr. Birnbaum leads a staff of twelve health professionals – a nurse, a nurse practitioner, two case managers, an outreach coordinator, and an administrator. The clinic provides primary care and prevention services as well as educational programs to bring accurate information to young people.

"Young people are referred to us by a variety of sources," says Dr. Birnbaum. "Adolescent clinics, the juvenile justice system, youth services agencies – if they suspect a teen is at-risk, they send them here for testing. A good many of those patients are teenage girls who are pregnant. Then we also have teens who are referred to us by pediatric clinics that deal with prenatally infected patients, who survive longer and longer these days. It runs the whole gamut."

Identification and treatment are dual goals at HEAT. The clinic routinely tests young people for HIV. If they test positive, their condition is carefully monitored as the clinic's staff prepares them for treatment. "We don't rush them into treatment," says Dr. Birnbaum. "We take the opportunity to educate them beforehand. That way, they are more likely to adhere."

Under Dr. Birnbaum's direction, HEAT also provides a wide variety of mental health services. "When you're dealing with adolescents," he explains, "there are usually a whole host of issues related to HIV infection. Emotional abuse, physical abuse, substance abuse – you have to deal with the developmental issues they are facing."

HEAT relies completely on external funding. Grants have come from such varied sources as the New York State Department of Health AIDS Institute, the National Institutes of Health, and Ryan White Title IV funding. A recent award from HRSA will enable HEAT to establish a "HEAT Youth Comprehensive Care Network," which will identify, enroll and retain HIV-infected youth in medical care, and establish a youth service provider network in Brooklyn. In addition, the HEAT Network will establish a Youth Advisory Board, which will meet quarterly to conduct outreach to marginalized youth, obtain feedback on HEAT services, plan youth-oriented activities, and discuss future directions of the program.

Dr. Birnbaum says that programs like this are urgently needed to combat the growing risk of HIV infection among young people in central Brooklyn. "We have better interventions than ever before," he says. "But those interventions can only be effective if we identify those at risk and get the interventions to them."

Empowering Young People to Help Each Other

Teenagers are often best qualified to reach their at-risk peers. Ask Sadie Johnson. In September, the hard-working young woman from East Flatbush began her second year as a medical student at SUNY Downstate. In a sense, her medical career began nearly a decade ago. In August 1992, Ms. Johnson, then a high school student, completed eight weeks of HIV-prevention training at the THEO (Teens Helping Each Other) Program. A division of SUNY Downstate's Adolescent Education Program, THEO allows



Jeffrey M. Birnbaum, MD, MPH

teenagers to serve as mentors to and peer educators for young people at risk for HIV infection. The young counselors bring the message of prevention to high schools, junior high schools, churches, health fairs, and clinics. For Ms. Johnson, joining THEO allowed her to contribute to those in need. It also strengthened her desire to serve others through medicine. To fulfill her dream, she earned her Bachelor of Science degree – with honors – from the City College of New York. Today, she looks forward to earning her degree at Downstate, one of the nation's most respected urban medical schools. "Sadie is on her way to becoming part of the next generation of leaders," notes Christine Rucker, director of THEO and co-chair of the Brooklyn Adolescent Service Network for AIDS Prevention (BASNAP). "Through her training for THEO, Sadie is one of the very dedicated young people who are responsible not only for themselves, but for their communities."

Leadership and service through education – this is the aim of THEO. The program is based on the realization that young people often will listen to their peers before heeding the advise of adults. The realization is a critical component of the HIV Center's efforts to help at-risk teens to change habits that may lead to HIV infection. In return for their hard work, THEO's peer educator enjoy services of their own. THEO's professional staff meet regularly with the young helpers, providing encouragement, guidance, and academic counsel. Peer educators also participate in life-skills seminars, college workshops, and other programs to ensure their academic success. THEO also awards annual scholarships.

THEO has earned wide recognition for its work. Last fall, Curtis Anderson, one of the program's peer educators, received the Governor's Youth Recognition Award – including a laptop computer. In March, the state's AIDS Institute awarded the program four scholarships so peer educators could attend a conference on using theater techniques in AIDS education. This past June, THEO won grants from Con Edison and the Brooklyn Borough President's Office.



“Leadership and service through education – that is the aim of THEO.”





Brooklyn and Beyond

No one is an island, as the poet John Donne declared centuries ago. In the interdependent world of the 21st century, the same is true of nations. The ferocity of the AIDS epidemic in Africa, Southeast Asia, Eastern Europe, and other far-flung regions pose a threat to every corner of the globe – including our own.

As one of New York City's premiere centers for HIV treatment and research, the HIV Center for Women and Children plays a leading role in educating health care providers around the world. "Very few centers have the depth of knowledge and talent that is available at the HIV Center," says Dr. Jack DeHovitz. "We have an opportunity to share that expertise by offering programs that help others who are fighting the spread of AIDS."

One ambitious program is the Central/East European HIV Education Center. Dr. DeHovitz heads the Center, which is jointly administered with SUNY Downstate, the SUNY Albany School of Public Health and the New York State Department of Health. Established in 1993, the program provides HIV prevention training for physicians and scientists from Armenia, the Baltic States, the Czech Republic, Georgia, Hungary, Poland, and Russia. Funded by the Fogarty International Center of the National Institutes of Health, the program sponsors conferences and workshops on both sides of the Atlantic. A number of trainees spend a year or more either at SUNY Downstate or in Albany studying epidemiology and biomedical sciences. Almost 50 scientists have completed their training here and Center faculty have provided workshops to almost 1,000 physicians abroad.

Dr. DeHovitz leads many of these workshops himself. In 2001, he headed workshops in Warsaw and Prague. Recent additional funding has allowed the program to expand its training focus to tuberculosis and other emerging diseases. In February 2000, the Fogarty Center renewed funding with a five-year grant for the program.

An emerging concern is Estonia, a nation that borders Russia on the Baltic Sea. Estonia has seen a recent increase in injection drug transmitted HIV infections in cities close to the Russian metropolis of St. Petersburg. Dr. Tracey Wilson is working to address the problem. With a two-year grant from the World AIDS Foundation, Dr. Wilson will develop and implement a program to help injection-drug users reduce behaviors that place them at risk for HIV.

"I've taken part in the HIV Center's other efforts in Estonia," Dr. Wilson explains. "We encountered quite a few misconceptions about sexually transmitted diseases. There are also risk factors from borders opening up, travel across borders. We're going to work with clinicians to develop behavioral intervention programs."

Investigators at the HIV Center also are helping to address the AIDS crisis in Africa. Dr. Jeffrey Birnbaum, director of the Health and Education Alternatives for Teens (HEAT) Program at SUNY Downstate, traveled to Nigeria February 2001 and in January 2002. Working with "Perpetual Help for Africa," a non-governmental organization founded to promote HIV prevention, Dr. Birnbaum met with government officials and conducted HIV prevention seminars with young people in Benin, one of Nigeria's largest cities.

Very few centers have the depth of knowledge and talent that is available at the HIV Center.



Dr. Jack DeHovitz leading an HIV symposium in Prague.

HIV Clinical Education

Facing the challenge of HIV demands continued training in this country as well. Catherine Grimes is one of the dedicated health care professionals sharpening their knowledge and skills at the HIV Center for Women and Children.

Ms. Grimes has had a lifelong interest in education, public policy, and health care. After earning her bachelor's degree in theology at Iona College, she became a volunteer at a public high school in Jersey City. Four years later, she took a position as an HIV counselor at a hospital in Patterson. "I discovered that AIDS is a complex – and compelling – illness," she says.

Ms. Grimes went on to earn a master's degree in public health at Hunter College, followed by a degree as a nurse practitioner at Columbia University. At Columbia, Ms. Grimes heard about a unique educational program at the HIV Center. "Some of

the guest lecturers at Columbia spoke very highly of the HIV Clinical Scholars Program," Ms. Grimes recalls. "It was exactly what I was looking for, so I applied."

Today, Ms. Grimes is enhancing her medical understanding of AIDS while gaining additional clinical experience. "It's a very meaningful, multi-faceted program," she says. "It allows you to interact with patients while gaining a broader perspective on the issues affecting them all."

That is the aim of the HIV Clinical Scholars Program. Funded by the New York State Department of Health AIDS Institute, the program offers two-year fellowships emphasizing the development of management, policy, and leadership skills in clinical care environments. It has graduated 12 trainees, most of whom are engaged in HIV care and prevention activities in New York State.

For Rose Tirelli, a nurse practitioner who has worked with HIV patients for nearly twenty years, the HIV Clinical Scholars Program provides a broad understanding of HIV-associated infections. "Along with my work at SUNY Downstate," she explains, "I'm doing eight weekly rotations at the STD Clinic at Kings County Hospital Center. That's valuable, because people with HIV often have other sexually transmitted infections that also require treatment."

Another two-year training program, the Postdoctoral Fellowship in HIV/STD Prevention, is funded by the Centers for Disease Control and Prevention (CDC) and the Association of Teachers of Preventive Medicine. Fellows explore all aspects of HIV/STD prevention and care under the guidance of Downstate's faculty in conjunction with staff at the New York City Department of Health and the CDC. The interdisciplinary course of study focuses on a wide range of issues, including psychosocial aspects of HIV infection, public policies affecting access to information and care, and behavioral interventions.

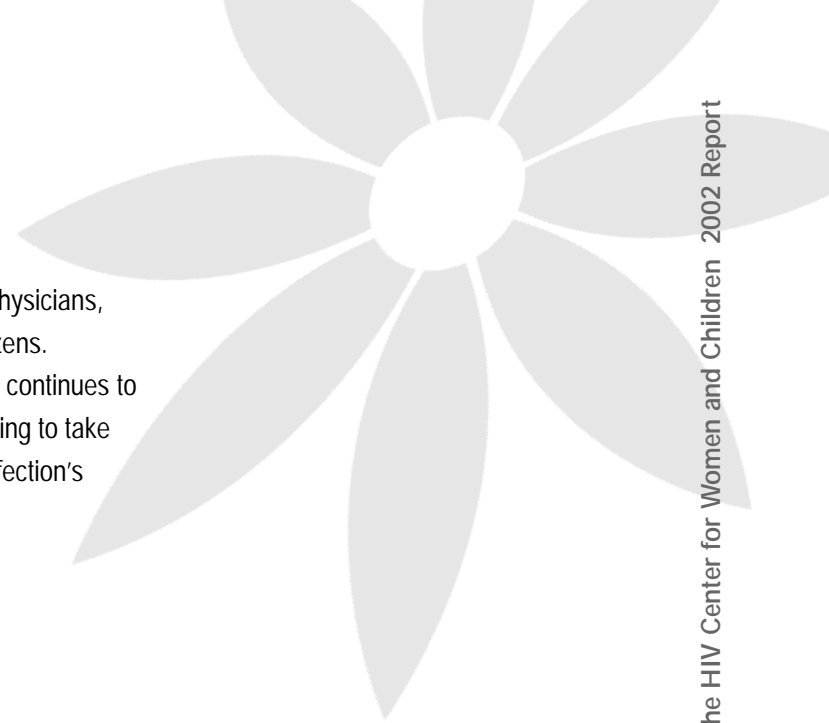
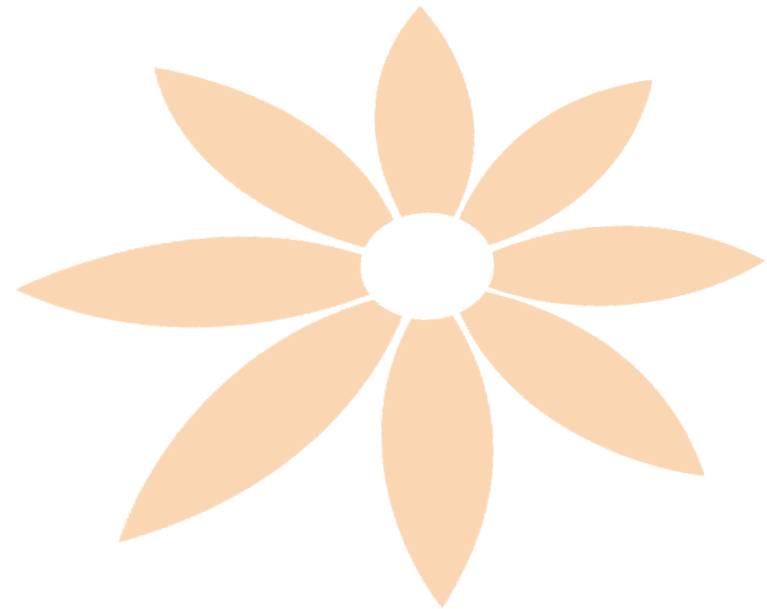
Community clinics form the front lines for the battle against HIV. To assist the health care providers who directly serve the city's residents, the HIV Center offers its HIV Clinical Education Initiative. The program sponsors two to three sessions a week on clinical education – geared toward the community-based medical providers engaged in HIV care.



The Mission Continues

Treatment and counseling, research and education – for the past seventeen years, SUNY Downstate has led efforts to serve the victims of an insidious disease. Thanks in large part to the work of its physicians, scientists, and staff, the HIV Center has succeeded in improving the lives of our city's most vulnerable citizens.

Though people with HIV and AIDS are living longer and more productively than ever, the infection continues to spread among people of all ages and backgrounds. Yet it is in the minority communities that HIV is beginning to take its heaviest toll. The HIV Center for Women and Children will need continued support to help prevent the infection's spread among new generations.



Contributors

The HIV Center for Women and Children receives funding to support its programs from a variety of governmental and private sources. The largest single source of funding for research is the federal government through both the National Institutes of Health (NIH) and the Centers for Disease Control and Prevention (CDC). The federal government, through the Health Resources and Services Administration's Ryan White CARE Act, supports many of the clinical care activities as does the New York State Department of Health AIDS Institute. A partial list of the current HIV Center funders are listed below:

Private Funders

Aaron Diamond Foundation
 The Alliance for Scientific Affairs and Publications, Inc.
 Bristol-Myers Squibb Foundation, Inc.
 Brookings Institution
 Cable Positive
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 The California Wellness Foundation
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 Central NY Council
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Tiger Foundation
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 World AIDS Foundation

Pharmaceutical Companies

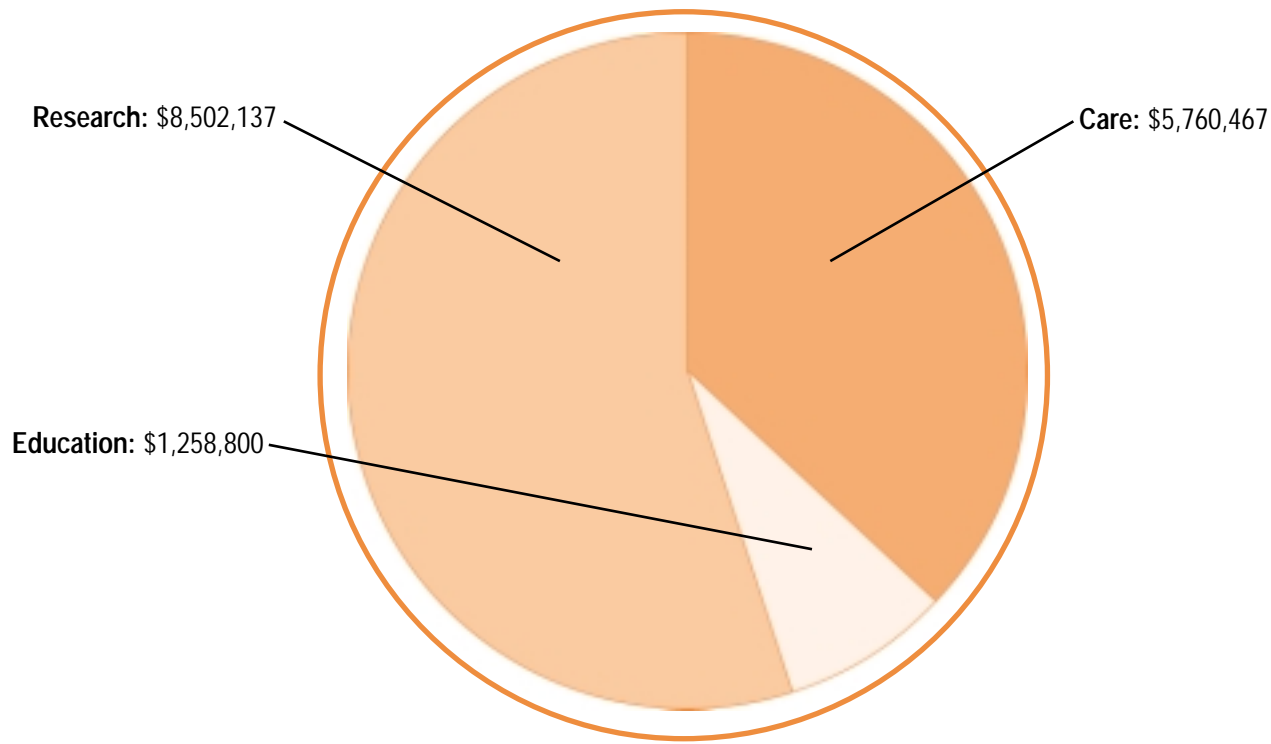
Abbott Laboratories
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 Agouron Pharmaceuticals, Inc.
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 Hoffmann-La Roche
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 Ortho Biotech
 Pfizer, Inc./Roerig Division
 Pharmacia, Inc.
 Schering Plough
 Upjohn
 U. S. Bioscience

Government Funders

Brooklyn Borough President's Office
Centers for Disease Control and Prevention (CDC)
John E. Fogarty International Center (FIC)
Health Resources and Services Administration (HRSA)
LA County Hospitals
National Institutes of Health (NIH)
National Institute of Allergy and Infectious Diseases (NIAID)

National Institute of Child Health and Human Development (NICHD)
New York City Board of Education
New York City Department of Health
New York State Department of Education
New York State Department of Health AIDS Institute
Substance Abuse and Mental Health Services Administration (SAMHSA)

Annual Funding for HIV Center Care, Education, and Research Activities (2001)



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HIV Phone Link

All of the programs listed below are part of SUNY Downstate's HIV Center for Women and Children. For more information about the services each program provides, please call the numbers listed below or The HIV Center for Women and Children at (718) 270-2301 or 4736.

PATIENT CARE AND SERVICES

for Adults:

Out-Patient Care
STAR Health Center at University Hospital:
(718) 270-3745

Peer Support for Parents of HIV+ Children:
ACTUAL Phone Line :
(718) 270-2598

Support Groups for HIV+ Adults, their Partners and Caregivers
(in English, Spanish, and French Creole), Supportive Counseling
Services of SUNY:
(718) 270-2758 or 4045

for Adolescents:

Health and Education Alternatives for Teens (HEAT) Program:
(718) 467-4446

for Children:

Brooklyn Pediatric AIDS Network
(at one of six participating Brooklyn hospitals):
(718) 270-3825

Neurodevelopmental Assessments, Early Intervention, and Day Care,
Infant and Child Learning Center:
(718) 270-2598

Pediatric/Maternal Center (at Kings County):
(718) 245-4485

COMMUNITY AND MEDICAL EDUCATION

Adolescent Education Program (AEP),
Teens Helping Each Other (THEO):
(718) 270-3203

HIV Clinical Education Initiative:
(718) 270-4752

RESEARCH

Pediatric Clinical Trials:
University Hospital:
(718) 270-3185

Adolescent Clinical Trials:
(718) 467-4446

Women and Infants Transmission Study (WITS):
(718) 270-1690

Adult Clinical Trials:
(718) 270-4487

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