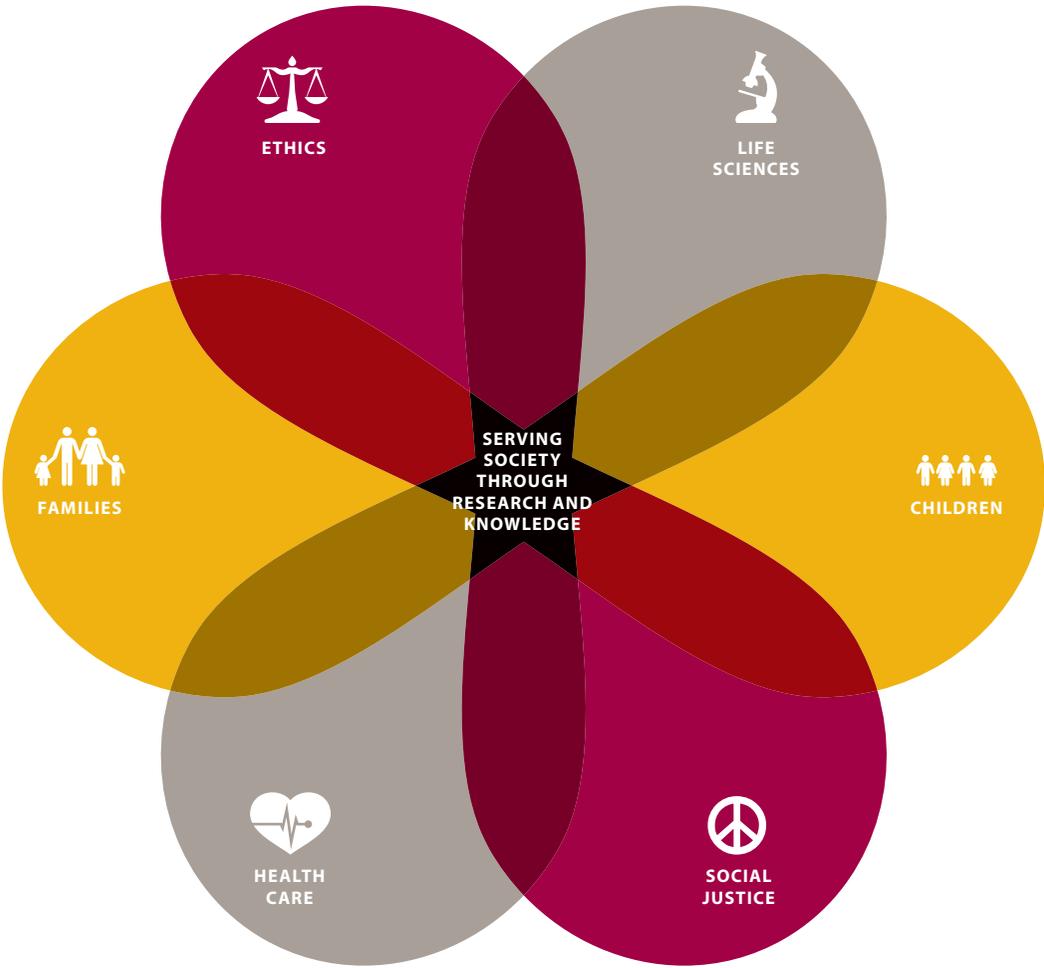


Endeavors

ISSUE 1

2009 - 2010





DEAR COLLEAGUES,

Welcome to the inaugural issue of *Endeavors*. Our goal is to keep the Loyola community, including alumni and friends, informed about the innovative research and creative scholarship at Loyola that contributes in meaningful ways to the public good. Readers are introduced to a wide range of projects that reflect our commitment to improving the quality of lives in Chicago's communities and enhancing societal benefits on a larger scale.

In this issue, we feature initiatives from our Centers of Excellence to raise public awareness about homelessness prevention, transformative education, and environmental sustainability. We also highlight our faculty's efforts to ensure fair practices in our justice systems, improve the lives of immigrant families, uncover civil rights movements, combat tropical diseases, aid children with spina bifida, and elevate academic and social standards in our public schools. Our undergraduate and graduate students have also been dedicating their time investigating some of today's critically important news topics, such as child welfare, foreclosure crises, and asthma treatment.

The Office of Research Services remains committed to the University's mission of expanding knowledge in the service of others, exemplified by the outstanding work of our faculty and students. We hope you enjoy learning about our featured projects, and we encourage you to share your thoughts or ideas for future issues. Thank you for reading.

Sincerely,

Samuel A. Attoh, PhD
Associate Provost for Research and Centers
and Dean of the Graduate School

Endeavors

SERVING SOCIETY THROUGH RESEARCH AND KNOWLEDGE



PAGE PROJECT

CENTERS OF EXCELLENCE RESEARCH

2	Taking on toxins in Chicagoland	ETHICS	SOCIAL JUSTICE	HEALTH CARE	LIFE SCIENCES	FAMILIES	CHILDREN
4	A shift in the homeless population		SOCIAL JUSTICE	HEALTH CARE			
5	Transforming education				LIFE SCIENCES	FAMILIES	CHILDREN

FACULTY RESEARCH

6	At the crossroads of justice	ETHICS	SOCIAL JUSTICE				
8	Uncovering Chicago's political legacy						
10	Fighting tropical disease				LIFE SCIENCES		
11	Finding la familia	ETHICS	SOCIAL JUSTICE			FAMILIES	CHILDREN
12	Working toward independence			HEALTH CARE	LIFE SCIENCES		CHILDREN
13	Setting the bar for success		SOCIAL JUSTICE				CHILDREN

GRADUATE RESEARCH

14	The statistics of societal problems		SOCIAL JUSTICE	HEALTH CARE		FAMILIES	
----	-------------------------------------	--	----------------	-------------	--	----------	--

UNDERGRADUATE RESEARCH

15	A breath of fresh air			HEALTH CARE	LIFE SCIENCES		CHILDREN
16	Neighborhood watch		SOCIAL JUSTICE			FAMILIES	CHILDREN



Taking on toxins in Chicagoland

What kinds and quantities of pollutants are in our environment?

Some environmental dangers are known, like lead or mercury, but an initiative at Loyola is hunting for new threats in Chicago's air, water, and soil. Sponsored by Loyola's Center for Urban Environmental Research and Policy (CUERP), the Chicago Clean Air, Clean Water program will monitor new environmental dangers to help keep our communities clean.

"There are new, emerging threats that are not being regulated; there aren't enough instruments out there taking measurements; and the information that we will collect on these emerging threats could be shared more effectively among agencies that monitor air and water quality," says Nancy Tuchman, PhD, director of CUERP. Some of these new emerging threats include substances like caffeine, anti-depressants, antibiotics, hormones, and even cocaine, as well as other pharmaceuticals. "We want to measure how much of this stuff is in our water, soil, and air, and test their effects on aquatic organisms."

CUERP is partnering with government organizations like the Environmental Protection Agency and the Illinois Department of Natural Resources to tackle these problems. These agencies gather information on toxins taken from observatories around Chicago, and Loyola will pitch in by building new observatories where they are needed. Plans are also in the works to build a new analytical lab at

Loyola to test samples submitted by these observatories and to supplement samples taken by the EPA and the DNR.

Once a continuous flow of information about Chicago's environmental health has been established, computer science professors at Loyola will maintain the results in a database, which will be accessible to the public and fully searchable. The database will contain information on the levels of many chemical compounds found in Chicago's environment.

The database is just the beginning. The information it contains will be a resource for medical researchers, psychologists, social workers, and other concerned agencies. For example, some areas of Chicago see instances of asthma and emphysema 10 or 50 times higher than their neighboring communities. Researchers at the Stritch School of Medicine are interested in obtaining environmental data that might help to describe the causes of these localized instances of lung disease using information that will be gathered by members of the



biology department, analyzed by the chemistry department, and maintained in a database by the Department of Computer Science.

But scientists and researchers won't be the only ones commissioned to gather information in the field. In an effort to engage the larger community, CUERP is also reaching out to Chicago's elementary schools. "We will show science teachers how to take samples so that they can teach their students," says Tuchman. "The students can send us samples that they've taken in their own



"We want to measure how much of [these pollutants are] in our water, soil, and air, and test their effects on aquatic organisms."

NANCY TUCHMAN

neighborhoods. Once we analyze the samples, we'll enter the information into the interactive, online database so that the children can see not only the results of their work, but also keep tabs on the environmental health of their communities."

The hope is that beefing up the knowledge we have about potential threats in our environment will better equip us to lessen those threats or, hopefully, eliminate them. The findings will be shared with government agencies and environmental advocates such as the Environmental Law and Policy Center, a Chicago-based group of environmental lawyers, who can help develop policies to regulate these new types of toxins in our neighborhoods.



A shift in the homeless population

Why are more people over 50 becoming homeless?

A woman struggles to get through the day, her right hand paralyzed. Later, she realizes her neck is broken. An emergency surgery is performed, and she is told soon thereafter to get back to work.

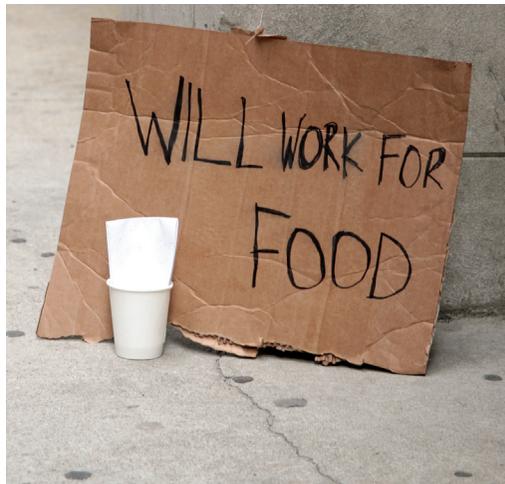
A city fleet manager slips on a patch of ice, then loses his job under budget cuts. Later, he finds out that he does not qualify for Social Security disability.

These stories represent a growing demographic of people over 50 who have become homeless in Chicago. Christine George, PhD, assistant research professor at Loyola's Center for Urban Research and Learning (CURL), wanted to know why. So she and her team joined forces with the Chicago Alliance to End Homelessness and embarked on a nine-month study of the increasing number of people between the ages of 50 and 64 struggling to get by in Chicago.

"We wanted to understand who they were, how the system was successfully and unsuccessfully serving them, and what more needed to be done," George says.

The study confirmed that agencies for the homeless are now serving more people over 50. The surprising thing was that most—75 percent—became homeless for the first time after they turned 40.

As the nation shifts from a more industrialized to knowledge-based economy, a growing number of people are left in destabilized job situations in middle age, George explains. Many lack adequate financial safety nets to bounce back from illness or injury. Further adding to the problem are issues of ageism, a mismatch



between skills and marketplace demands, and assorted individual challenges, ranging from criminal records to chronic health problems.

The CURL study has yielded a list of potential policy solutions, such as creating a state-wide sick-leave program, providing greater outlets for job training, integrating aging and senior homeless services, and working with employers to fight ageism. For those unable to work, the study recommends better early representation for disability claims and expanding current housing programs.

"This is a great example of collaborative research that helps us understand the consequences of shifts in the economy in an aging society," George says. Since its foundation in 1996, CURL has worked with dozens of community and government organizations to research urban conditions and help improve the quality of life in Chicagoland.



Transforming Education

How can we raise the bar for math and science education in Chicago Public Schools?

Over the last six years, Loyola's Center for Science and Math Education (CSME) has contributed to the professional development of more than 800 Chicago Public School teachers. The center, a collaborative effort between the College of Arts and Sciences and the School of Education, was created in 2002 to offer CPS teachers the skills they need to best prepare the next generation for success in math and science.

"I believe that America's economic viability is threatened by our ability to compete in an increasingly complex technological world," says David Slavsky, PhD, director of the center. "Knowledgeable and enthusiastic instructors who teach rigorous and interesting science and math curricula can help counter this trend."

For example, the High School Transformation Program is the center's largest program, both in size and scope. The program combines content instruction with an inquiry-based teaching approach, where teachers help students learn by completing activities, rather than simply listening to lectures. "Our program focuses on revisiting key science concepts and is part of the overall CPS High School Transformation project, which is one of the largest and most ambitious urban transformation programs of its type in the nation," says Slavsky. In addition, the center is working with the School of Education to introduce three new master's programs for those who teach middle school math or high school chemistry or earth/space science.

"As a teacher, you can only influence the class in front of you," says Deanna Wruskyj



"As a teacher, you can only influence the class in front of you."

DEANNA WRUSKYJ

(BS '03), who gained a math endorsement and a master's degree through the Science Teaching Scholars Program. Wruskyj was so impressed with the center's work that she joined the team as an instructional science coach, supporting 30 CPS teachers by modeling lessons, co-teaching, and obtaining additional resources. "As an instructional coach, I'm able to affect a greater number of students by helping their teachers instruct at a higher level."

"Our work is closely aligned with Loyola's Jesuit mission of community service," adds Slavsky. "Initial data suggests that in classes where teachers have completed CSME programs; students' standardized test scores show an increase in student achievement, and the effect is greater the longer the teacher has been involved in the program."

Through all of its programs, the Center for Science and Math Education is addressing the critical need to improve math and science education. "We're working to make a difference where it matters most," explains Slavsky. "Loyolans should be proud that the University puts effort and resources into a program that is making such an impact in Chicago, the state and, hopefully, the nation."



At the crossroads of justice

How can we make our criminal justice system more fair and more effective?

Art Lurigio, PhD, associate dean for faculty in the College of Arts and Sciences, works at the confluence of many different academic fields: psychology, statistics, criminal justice, political science, law, and sociology. Embodying the collaborative, Ignatian struggle for social justice that motivates many of Loyola's scholars, Lurigio is driven to improve the lives of the mentally ill, the incarcerated, and those with substance abuse problems. "My preference has always been to work with disenfranchised populations," Lurigio says. A psychologist and expert in criminal justice, he has initiated several projects to improve the criminal justice system by confronting a web of intertwined problems: poverty, prejudice, mental illness, and the unintentional consequences of even well-intentioned laws.

One of Lurigio's main projects focuses on the disproportionate imprisonment of minorities for drug violations. "The Human Rights Watch published a study showing that, in Illinois, an African American man is 57 times more likely than a white man to be imprisoned for the same drug charges," he says. "Illinois once led the country in this disparity."

According to Lurigio, there are many factors contributing to this inequality. "Unintentionally, drug laws and the ways they have been enforced have had pernicious effects on individuals, families, and communities," he says. "Federal laws made punishments for possession of crack cocaine many times more severe than

for the possession of the same amount of powder cocaine. That is simply egregious. Or, for example, if you sell drugs within 100 feet of a church, you get a mandatory prison sentence. In Chicago's African American communities, there is a higher average density of churches than anywhere else in the city."

It is Lurigio's goal to modify the laws that create such marked racial disparities. "Research shows that African Americans do not use illicit drugs more than their white counterparts. But because of the way drug laws are written and the manner in which drug laws are enforced, African Americans are disproportionately affected. A conviction for a felony drug law violation



makes it exceedingly difficult to be employed or to obtain licensure, student loans, or public housing," Lurigio says he hopes to obtain funding to continue his work on this topic and aims to convince legislators to pass race-neutral drug laws.

Another of Lurigio's current projects studies the prevalence of mentally ill people at each step in the criminal justice system, as well as the system's response to this population. Lurigio became involved with this demographic more than 20 years ago, when he began tracking people leaving state hospitals and investigating their contact and experiences with the police. Through surveys, focus groups, archival analyses of data from correctional institutions and hospitals, and by talking to patients, prisoners, and staff, Lurigio has become an expert on the paths the mentally ill take through the criminal justice system. "Mental illness can manifest itself in ways that are publicly threatening and require police action," Lurigio says.



"I regard my research with the mentally ill as a tool for advancing the Ignatian spirit of caring for others."

ART LURIGIO

"The police are the first line of assistance in those cases, and many have become de facto streetcorner psychiatrists." Lurigio has had a hand in studying police intervention teams—specially trained police officers who work with people who appear to be mentally ill. "Police in Chicago are now much less inclined to arrest someone with mental illness," he says. "In lower-level offenses, police are more likely to take an arrestee with mental illness to a hospital instead of to the jail."

In April 2009, Lurigio was the cosponsor and facilitator of a conference with hospital administrators to determine how hospitals can treat the mentally ill and better cooperate with the police. Dovetailing with his interest in the treatment of the mentally ill at every level, Lurigio also investigates the psychiatric facilities at jails, studies individuals on probation, works to educate parole agents, and is conducting an evaluation of mental health courts: "I look at how people leave the system and how these cases fare. Do they end up in formal arrest? In hospitalizations? Are they in effective treatment? Stable housing? What is their quality of life? What happens to the mentally ill after we broker services for them? These services are the key to success."

Lurigio's research and the solutions that result from it satisfy much more than his intellectual curiosity. "For me, my scholarship is a vehicle to further social justice," he says. "I regard my research with the mentally ill as a tool for advancing the Ignatian spirit of caring for others." His work is about both de-stigmatizing mental illness and, in tangible ways, improving the lives of patients and families. Whether it's developing better services for those with mental illness and substance use disorders or in pushing legislators to reconsider faulty drug laws, Lurigio's scholarship has made, and is making, a real difference both in his field and in the world. It is in projects like his that the inextricable ties between research and community service are evident, and it is through the dedication of researchers like Lurigio that justice for the overlooked in our society will come about.



Uncovering Chicago's political legacy

How did a Chicago congressman change politics in America?

If it's true that history repeats itself, then Christopher Manning, PhD, associate professor of history at Loyola University Chicago, has found an echo of current political events in the biography of a legendary Chicago politician.

In his new book, *William L. Dawson and the Limits of Black Electoral Leadership*, Manning explores the life of William Dawson, perhaps the most powerful black politician in the mid 20th century. Manning's motivation in researching Dawson was to explore how politics has been, and can be, used to improve the lives of the underprivileged. In Dawson, he found a story that illustrates the limits of black political power before the Civil Rights Era. In Chicago, he found a political legacy that stretches from the streets of the Second Ward to Pennsylvania Avenue.

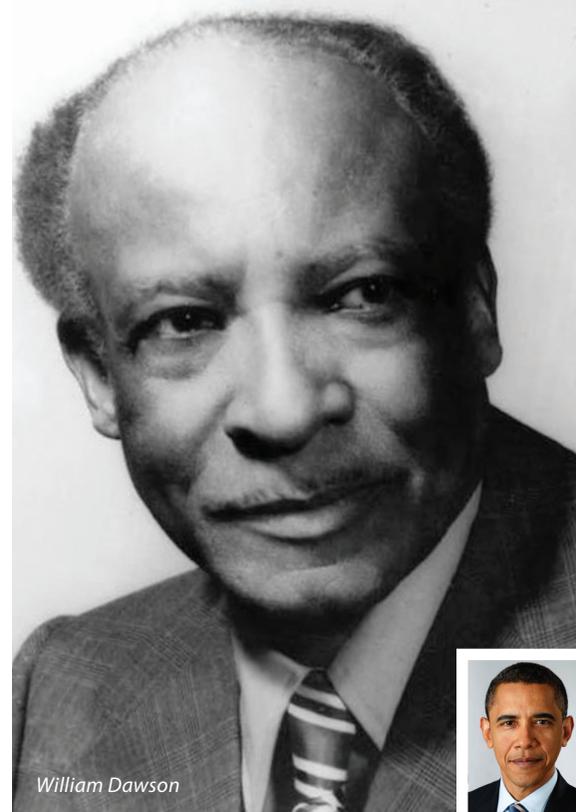
William Dawson was born in Georgia in 1886 and moved to Chicago in 1912. From 1917 to 1919, he served in World War I as a first lieutenant in the United States Army. While serving, Dawson witnessed the rampant abuse of black soldiers in the Army. Years later, he cited this experience as a motivation for pursuing a career in politics and bettering circumstances for African Americans.

After returning home, Dawson passed the bar and entered Chicago politics as a

Republican. A few strong, but ultimately unsuccessful, bids for office proved that Dawson was a contender, even against white candidates with strong African American support. In 1933, he was elected alderman of Chicago's Second Ward. Meanwhile, Democratic Party members, notably Chicago's progressive mayor Ed Kelly, began to invite the participation of a black coalition in their party. Following the lead of other black politicians, Dawson switched party affiliation in 1935. He became a Democratic Party committeeman in 1939.

During this time, areas of Chicago's South Side and South Loop were transitioning into majority African American districts, and Dawson realized that he might be able to leverage the black vote into national office. He was one of the first national politicians to use that tactic, and in 1942, he was elected to the U.S. House of Representatives as a congressman from Illinois' First District.

Once in office, Dawson participated in several landmark political battles. He



William Dawson

fought against the poll tax and helped to defeat the Winstead Amendment, which would have allowed members of the U.S. armed forces to opt out of racially integrated units.

By the late 1960s, Dawson was an established power. He was the first black standing committee chairperson in Congress, had played a key role in the first desegregated inaugural ball, and had opened the door for blacks to join the Democratic Party. But for all this success and power, Dawson was to face his greatest challenge from an unsuspected quarter: his successors.

Dawson and his contemporaries saw how other ethnic minorities, like the Irish and Italians, had sought to advance themselves in society by working within the political system. These African American politicians believed this would

work for them as well.

"They didn't have the concept of institutional racism—of how individuals in power would protect their privilege," says Manning. "This left them without a practical method for addressing it."

Impatient with what they saw as a lack of progress in civil rights, a bevy of younger activists rejected Dawson's approach and cast him as a villain.

"The younger generation preferred direct action as opposed to trying to work within the system," Manning says. By the time the Civil Rights Movement started in earnest, Dawson was already in his late 60s and was fearful of losing the power he had worked hard to attain.

"This younger generation didn't know how to organize politically and didn't know about the success that men like Dawson had had," Manning says.

This intergenerational conflict between the old and new guard of black leaders, in Manning's view, had special relevance during the candidacy of Barack Obama. Civil rights leaders like Jesse Jackson, who would have challenged Dawson in their youth, were slow to embrace a new generation of political leadership.

Manning believes it is also no coincidence that many of America's most powerful black politicians have come out of Chicago. "If you look closely, there's a line running from Dawson to Obama," he says. As a community organizer, Obama cut his teeth working for the Harold Washington campaign, which was a landmark Chicago political battle. Harold Washington's father, Roy, a first-precinct captain in Chicago, had learned his organizing techniques from Dawson's own lieutenant.

Although Dawson's effectiveness was questioned late in his career until he died in office in 1970, Manning's research into the life of this visionary reveals a political acumen that helped lay the groundwork for generations of black leaders and paved a road that eventually led to the White House.



"If you look closely, there's a line running from Dawson to Obama."

CHRISTOPHER MANNING



Fighting tropical disease

What is the best cure for malaria?

Malaria is a disease that most Americans, unless they travel abroad, don't have to think about. But Kim Williamson, PhD, a professor in Loyola's biology department, thinks about it a good deal. Since she started studying the disease 18 years ago, Williamson's malaria research has garnered international attention, and her fascination shows no signs of waning. "I'm more interested in it now than I was when I started," Williamson says.

Malaria is a parasitic disease carried by mosquitoes. It's worst in the tropics, where mosquitoes live year-round and flourish in the wet climate. Malaria causes just under a million human deaths per year. In infected humans, the malaria parasite develops in the liver and then bursts into the blood stream, where it replicates rapidly. Unfortunately, the only symptom is a fever, so for families who live far away from medical care, it's hard to know whether the fever is worth walking a child to the clinic.

The good news is that existing malaria drugs are effective on an individual basis. The bad news is that when drugs are widely used, the malaria parasite develops resistance. Now, the most effective drug therapy costs 10 times more than less effective drugs. Per dose, it's one to three dollars, which is a huge amount for many of the people it affects.

Current malaria research, including Williamson's, is geared toward identifying new drugs, and, hopefully, a vaccine. Specifically, Williamson studies the sexual maturation phase of the malaria parasite, which is required



for the parasite to be transmitted to another person. She studies the genes that are involved in the parasite's life cycle that could potentially be drug targets.

There are several reasons Williamson has chosen to devote her life to studying and, ideally, eradicating malaria. "It's interesting how hardy this parasite is," she says. "It's evolved with us for millennia, which is why it's hard for us to fight it." But more importantly, Williamson wants to help the people affected by malaria. "This disease causes huge amounts of suffering," she says. "It's actually oppressive in these tropical regions, where people and even economies can't develop the way they would otherwise due to the stress of combating malaria." Williamson believes that malaria doesn't receive the attention it should precisely because it affects those in less-developed nations, and she thinks it is important to combat both the disease and negligence surrounding it.



Finding la familia

How do Mexican family dynamics affect immigration issues?

As the nation grapples with solutions to the challenges of immigration, a lack of concrete data about migrant families presents a roadblock to creating sound policy—and sound policy starts with understanding. That's why several Loyola faculty members are engaging in a study that will shed some light on families from Mexico, both documented and undocumented, who are living in Chicago.

The comprehensive study is being spearheaded by Maria Vidal de Haymes, PhD, and Marta Lundy, PhD, professors of social work, along with Susan Grossman, PhD, Shweta Singh, PhD, and Philip Hong, PhD, from the School of Social Work and Regina Trevino from the School of Business Administration. The research project replicates, in part, a national study recently carried out by the Mexican federal human service agency, Sistema Nacional para el Desarrollo Integral de la Familia (SNDIF), in which 125,000 families were surveyed to gain a better understanding of Mexican family composition and dynamics.

"Since roughly one in ten Mexican nationals resides in the United States," says Vidal de Haymes, "in order to understand the Mexican family, you have to understand those who live here, as well as transnational family systems that defy borders."

In light of that figure, Loyola's School of Social Work has partnered with SNDIF to add a U.S. sample to the study. Initially, the study began with 125 families and has since gained financial support from the Graduate

School's Global Initiative Incentive Fund and the Samuel and Lois Silberman Fund. The study aims to interview 500 families. In Mexico, the results from the study will be used by SNDIF to guide public policy and social programming that will support families, and the hope is that the results will be used in a similar way in the United States.

"While other studies have been performed in this area, they have never been at this scale, or this comprehensive," says Vidal de



"We hope that the findings will help shape policy recommendations that promote the well-being of immigrant families."

MARIA VIDAL DE HAYMES

Haymes. "We hope that the findings will help shape policy recommendations that promote the well-being of immigrant families and will better integrate people into the education system and labor market."

Immigration is a controversial and complex topic, and Mexican immigrants are one of the most rapidly growing demographics in the United States. Greater knowledge and understanding of those who have crossed that border will lead to better informed attitudes, policies, and legislation regarding this significant group of people in the United States.



Working toward independence

How can we help children with spina bifida become more self-sufficient?

Developing self-reliance is enormously challenging for people with spina bifida, a congenital birth defect associated with paralysis and neuropsychological disabilities. But thanks to a recent grant to Grayson Holmbeck, PhD, professor of clinical psychology and director of clinical training for the Department of Psychology, and Kerry O'Mahar, a graduate student who works with Holmbeck, children, adolescents, and young adults with spina bifida could soon be closer to achieving greater independence.

The 5-year, \$100,000 grant from the Spastic Paralysis Research Foundation—Illinois-Eastern Iowa District of Kiwanis International was awarded by William Piper, foundation chairman and a Loyola alum. The grant will go toward expanding a highly specialized summer camp program, which is designed to help individuals with spina bifida become more self-sufficient and more confident in their ability to make social connections.

"In keeping with Loyola's social justice mission, we want to keep these at-risk kids from becoming disenfranchised or marginalized," says Holmbeck. "We feel there's a lot of hope for them to eventually go on to college and get jobs if they become more independent."



"In keeping with Loyola's social justice mission, we want to keep these at-risk kids from becoming disenfranchised or marginalized."

GRAYSON HOLMBECK

Results from the first year of the camp's programming are promising. Campers and parents reported significant improvements in reaching individual independence goals, as well as becoming more independent with general spina bifida tasks. The intervention was embedded within a typical week-long camp experience and focused on self-care tasks and social skills that are often challenging for people with this condition. Data gleaned from this investigation will guide programming in subsequent years.



Setting the bar for success

What will encourage high school students to live up to academic and social standards?

High school is a formative time for most teenagers, both academically and socially. Hank Bohanon, PhD, and Pam Fenning, PhD, both associate professors in the School of Education, understand this crucial phase, and they are working to create systems of positive behavioral support in Chicago high schools. "It's important because of the critical challenges that are faced in high schools," says Fenning. "You start to see dropouts or students not hitting academic benchmarks, especially in urban settings. Hopefully positive behavior support will help out with this."

In 2001, Bohanon and Fenning began to replicate at a North Side Chicago public high school a study that had been successful in elementary and middle schools. They added a second high school two years later. Their methods include advising teachers and administrators on how to set a behavioral expectation for students from day one through orientations, classes, and posters around the school building. "If the expectations are clear, taught, and supported, we've found that about 80 percent of students will live up to them," says Bohanon. Teachers and administrators are then trained to effectively deal with individual infractions.

Some students require even more support, based on any number of factors, including home life. "We're working toward future planning and getting them to where they need to be," says Bohanon. Bohanon and Fenning help teachers and administrators to define, identify, understand, and cor-

rect defiant behavior. "We hope to create a circle of support," Bohanon says. "At the most intense level, the point is to identify the student's goals, and then connect them

with people who can help them get there." The ultimate goal is to improve the lives of students, teachers, and families in a measurable way.

And it seems to be working. There have been reductions in discipline referrals, which means more time for teachers and administrators to focus on other things, including increased instructional time. "We're helping to create a set of procedures that administra-



"Our vision is to improve the lives of students, teachers, and families in a measurable way."

HANK BOHANON

tors can follow," says Fenning. "This is like a toolbox to deal with the problems that schools face." Bohanon and Fenning hope to see increasing academic achievement next, and they hope that their model will be replicated and adapted around the city, state, and country. "Just because something works in a part of a city doesn't necessarily mean it'd be accepted somewhere else," says Bohanon. "But once you see it work in one school, you get inspired."



The statistics of societal problems

Is there a relationship between subprime mortgages and homicide?

Gideon Bahn, a graduate student in research methodology in the School of Education, actually works in dozens of fields. From sociology to medicine, every academic discipline needs research methods, models, and measures of success, and that's where Bahn comes in. For example, he's been working for some time to analyze the number of homicides in Chicago census tracts in relation to the rates of subprime lending, of foreclosure, and of vacancy. In many fields of statistical analysis, 0 is insignificant and is thrown out. "In this case, when you're working with homicide in given neighborhoods, 0 is a significant value in analyzing the data," says Bahn. "I thought, 'What is the best way to analyze this? What is best for the data?' and I worked out a way to mathematically confront this nothingness."

With the five new models in place, Bahn compared them, finding which model fit the best in his data set, and presented his paper at the Joint Statistical Meeting 2009 in Denver. According to Bahn, there is a significant relationship between subprime mortgages and homicide, and foreclosure rate and homicide as well. He has found vacancy, however, to be statistically insignificant when other social demographic variables were entered in the model.

In fact, he also presented the paper decrying subprime lending to Fannie Mae. "I told them they should not be giving mortgages to people who would not be able to make payments on them," Bahn says. "They needed to set the bar for lending higher, and they were unhappy to hear that. Maybe that is not easy to do, but it should have been done before."

Bahn is currently working on several projects, which include the academic achievement of Korean-American students, effective hospital care, and Luxemburg Income Study data. "You need someone to analyze data in every field," says Bahn. "When they run into a wall, when their methods have problems, that's where we come in."



"The inability to get prime lending really strains a household to the point where homicides become more probable."

GIDEON BAHN



A breath of fresh air

How can we help teens cope with asthma?

African Americans, as a group, suffer disproportionately from the effects of asthma. They are more likely to have, struggle with, and die from the lung ailment. To better understand this phenomenon and to provide some solutions, an interdisciplinary group of researchers is studying how intervention programs can mitigate the lung disease's harm.

Barbara Velsor-Friedrich, PhD, of the Niehoff School of Nursing and Maryse Richards, PhD, of the Department of Psychology are heading up a research program at several Chicago high schools, targeting African American students. All of the participating students are educated about asthma, while students at select treatment schools are given additional training in specific coping skills. The remaining schools are used as a control group. "The hope is that the group receiving the additional coping skills training will show a marked improvement in their condition," says Richards. "Among other strategies, we're trying to help them communicate more effectively about their condition."

As part of the coping skills training, the students are taught how to be assertive about protecting their health. Some days the students role-play, for example, how to tell a gym teacher about having asthma or how to deal with being teased over the use of an inhaler. In addition to a team of student researchers who collect data, a nurse practitioner travels with the group and assesses the students' lung health during school visits.



"Working with these teenagers has helped me map out who I want to help in the future and where I want to focus my energies."

STEVEN PEARCE

Steven Pearce, who has been involved with the program for a year, is an undergraduate psychology major who won a Provost Scholarship for his involvement with the program. "The students seem to be responding well," Pearce says. "Sometimes just making the effort to communicate with them seems to make a difference." Pearce was initially surprised by how some of the students had been

given medication but were never told how to use it properly, while others were sheepish about discussing their condition.

The study is in its second year of a planned four-year program, but Pearce's involvement has already made a difference to him. "Working with these teenagers has helped me map out who I want to help in the future and where I want to focus my energies," he says. As the program progresses, the work of Velsor-Friedrich, Richards, Pearce, and their co-researchers will help many children and teens breathe a little easier.



Neighborhood watch

What will help social workers get foster children involved in their communities?

As a Provost Scholar, Nital Patel spent her summer creating a database for Department of Child and Family Services case workers. Patel, along with Scott Leon, PhD, of the psychology department, did field work and came up with a list of schools, churches, and non-profits that serve youth in the Humboldt Park community. The purpose of the database is to allow DCFS case workers to find out what community organizations are available to their foster children. “The past model was to have mentoring,” says Patel. “While this is useful, Leon’s research shows that what is even more important to a foster child is being plugged into the community.”

The database, which would be user-friendly and online so that case workers could find out what opportunities were available in the foster child’s neighborhood, is in pilot testing right now.

Leon hopes to expand the database beyond the Humboldt Park neighborhood once it is up and running. “[Patel] really dug herself into the project,” says Leon. “She went out into our communities, talking to people on streetcorners and buses to find out where the local resources were for kids in the community. She wanted to leave a mark, and to leave Loyola having done something, and I think that passion really guided her.”



“These two projects really let me explore the different sides of psychology, from the social to the clinical.”

NITAL PATEL

Patel is also working with psychology professor Fred Bryant, PhD, and graduate student Adam DeHoek to create a measure of ingratitude by surveying students to find out in what situations they do or do not express gratitude. “These two projects really let me explore the different sides of psychology, from the social to the clinical,” says Patel. “The ingratitude surveys are a good way to learn statistical analysis—these are advanced things I normally wouldn’t learn until grad school.” Patel and Bryant hope the gratitude study will yield a useful survey model to help ascertain how people both feel and express their gratitude.

Loyola’s Centers of Excellence share faculty across disciplines to tackle some of society’s toughest problems.

- Center for Catholic Intellectual Heritage • Center for Science and Math Education • Center for the Human Rights of Children • Center for Urban Environmental Research and Policy • Center for Urban Research and Learning • Gannon Center for Women and Leadership • Parmly Hearing Institute • Center for Ethics

We are Chicago’s Jesuit Catholic University—a diverse community seeking God in all things and working to expand knowledge in the service of humanity through learning, justice and faith.



Office of Research Services

6439 N. Sheridan Road, Suite 400
Chicago, IL 60626-5309

Non Profit Org.
U.S. Postage
PAID
Permit No. 5539
Chicago, IL

Office of Research Services · 773.508.2471 · LUC.edu/ORS