

BREAK THE CYCLE **8**

Break the Cycle of Environmental Health Disparities

MONDAY APRIL 29, 2013
8:30AM - 5:00PM

Rita Anne Rollins Room, 8th Floor
Rollins School of Public Health, Emory University
1518 Clifton Road Atlanta, Georgia 30322

A Project of:

Southeast Pediatric Environmental Health Specialty Unit at Emory
Innovative Solutions for Disadvantage and Disability
Sustainability Initiatives at Emory University



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We thank the Office of Sustainability Initiatives at Emory University for their sponsorship of this conference. Emory's sustainability vision is to help restore the global ecosystem, foster healthy living, and reduce the University's impact on the local environment. Progress will be measured using the environmental, economic, and social "triple bottom line" of sustainability.

AGENDA

8:00 – 8:30	Registration and Continental Breakfast
8:30 am	Welcome to the 8th Annual Break the Cycle Conference – Leslie Rubin, MD
8:35 am	Welcome from PESHU – Robert Geller MD
8:40 am	Sustainability and the Environment – Ciannat Howett, <i>Sustainability Initiative</i>
8:50 am	BREAK THE CYCLE: Introduction and Perspective – Leslie Rubin, MD
	<i>Schools</i>
9:05 am	Jessica Knight (Carolyn Drews-Botsch, MPH, PhD, mentor) <i>Rollins School of Public Health, Emory University, Department of Epidemiology</i> The Identification of Children with Mild Intellectual Disability and Speech and Language Disorders in Schools
9:25 am	Jackie Towson (Peggy Gallagher, PhD, mentor) <i>Georgia State University, College of Education, Department of Educational Psychology and Special Education</i> Training Head Start Parents in Dialogic Reading to Improve Outcomes for Children
9:45 am	Xu Ji (Laura Gaydos, PhD, mentor) <i>Rollins School of Public Health, Emory University, Department of Health Policy & Management</i> Assessing the Effect of Commute Modes to School on Obesity Prevention in Chinese School-aged Youth
10:10 am	Health Stretch
	<i>Adolescents</i>
10:30 am	Ashley Bennett, MD (David Wood, MD, mentor) <i>University of Florida – Jacksonville, Department of Community & Societal Pediatrics</i> Finding Hope in Hopeless Environments
10:50 am	Brenda Levy, MD and Maureen Braun, MD (Cappy Collins, MD, mentor) <i>The Mt. Sinai Hospital, Department of Pediatrics</i> Off the Mat: Piloting a Mindfulness Based Curriculum with Adolescents in East Harlem
11:10 am	Michael Rudolph, DDS MPH Keynote Address: Health Disparities among Children in South Africa
11:50 am	Introduction to organic food truck <i>The Happy Belly Organic Food Truck</i>
12:00	Lunch <i>Join us for a sustainability lunch</i>
	<i>Environment</i>
1:00 pm	Sharisse Carter (Martine Hackett, MPH, PhD, mentor) <i>Hofstra University, Department of Health Professions</i> Hidden in Plain Sight: Community Attitudes, Knowledge and Action Plans to Remediate Roosevelt's Brownfields
1:20 pm	Meredith Martz (Pamela Maxson, PhD, mentor) <i>University of Michigan – Ann Arbor, School of Natural Resources and Environment</i> Pediatric Obesity and Food Access in Durham, North Carolina

- 1:40 pm** **María Soledad Matus, MD** (Patricia M. Valenzuela, MD, MSc; Helia Molina, MD, MPH, mentors)
Pontificia Universidad Católica de Chile, Department of Pediatrics
Community Role in Environmental Problems for Child Health in Santiago, Chile
- 2:00 pm** **Health Break**
- Maternal - Child Health**
- 2:20 pm** **Alexandra Jurewitz** (Colin Crawford, MA, JD, mentor)
Tulane University, School of Law and School of Public Health and Tropical Medicine
Law as a Tool to Reduce Mother-to-Child Transmission of HIV: Global Strategies for Antiretroviral Distribution
- 2:40 pm** **Danielle Oves** (Bruce Perry, MD, MPH, mentor)
Georgia State University, Department of Public Health, Healthcare Management and Policy
Impact of Maternal Health Literacy Training on the Behavior of Mothers Who Have Been Homeless
- 3:00 pm** **Melissa Anne Beaver** (Maeve Howett, RN, PhD, and Janice Nodvin, BA, mentors)
Emory University School of Nursing and Innovative Solutions for Disadvantage and Disability, Inc.
Project GRANDD Revisited: A Community-based Learning Experience for Nurse Practitioner Students
- 3:20 pm** **Health Break**
- Urban Gardening – Community Revitalization**
- 3:30 pm** **Michael Rudolph, MD MPH**
Siyakhana Urban Garden in Johannesburg South Africa: Responding to Food Insecurity
- 4:00 pm** **Art McCabe**
Breaking the Cycle of Teen Violence and Crime by Changing the Context: Ours, Theirs and Urban Agriculture
- 4:50 pm** **Maeve Howett/Janice Nodvin**
Introduction to Garden Bus Tour
- 5:00 pm** **Adjourn General Session**
- 5:00 pm** **Students' Orientation to Writing the Paper – Joav Merrick MD**
(Publisher and Editor in Chief of Break the Cycle Journals)

Conference Faculty and Presenters

Guest Speakers

Michael Rudolph, DDS MPH

Dr. Rudolph started the Health Promotion Unit at the University of Witwatersrand in Johannesburg, South Africa for teaching, training and research and involving National University partnerships, Government Departments, Metropolitan Councils, NGO's and private industry. This unit is now an active training and research entity. He initiated and manages the *Siyakhana Food Garden Project*, which has become a dynamic unit for research on food security and nutrition. The ***Siyakhana Initiative for Ecological Health and Food Security*** is now considered a hallmark for integrated programs to promote health in urban and peri-urban settings through improved food security, greater economic opportunities, and healthier environments linked to food production and distribution.

Art McCabe

Mr. McCabe is the Community Development Manager at the City of Lawrence, Massachusetts. Prior to working in Lawrence, he was in the private practice of law for 35 years, focusing on the creation of public private partnerships between community based organizations and the private sector. For many years, he played a significant role during the Northern Ireland peace process in bringing together the communities marginalized during the "troubles" and the new Northern Ireland Government. He is an expert on community organizing and utilizing Sustainable Urban Agriculture as a tool for neighborhood stabilization. He has presented at numerous regional and federal conferences and Brownfield workshops. He will share with us his work on recruiting and engaging young people to participate actively in strategic planning for and implementation of Community Gardens to stabilize neighborhoods, improve health and reduce crime.



Emory University

Rollins School of Public Health, Epidemiology

Student

Jessica Knight, MPH

Jessica Knight has her MPH in epidemiology and is currently a first year PhD student in the Epidemiology Department, Laney Graduate School, at Emory University. After receiving a BA in biology from University of Virginia, she became interested in public health, specifically in epidemiology, as a way to combine her interests in medicine, math and problem-solving. During this time, she also volunteered at a local Ronald McDonald House where she saw first-hand how serious medical problems impact the entire families of children affected. This experience convinced her to focus on pediatric and perinatal diseases. She has previously conducted research on academic outcomes in

children with orofacial clefts with the National Center on Birth Defects and Developmental Disabilities, which led to an interest in how a multitude of factors interact in the academic life of children, and especially how these occur in children with special needs. Ms. Knight hopes to continue studying pediatric and perinatal health outcomes and their lifetime effects, and is interested in chronic conditions that affect the development of infants and children, such as birth defects, developmental disabilities, and pediatric cancers.

Faculty Mentor

Carolyn Drews-Botsch, MPH, PhD

Carolyn Drews-Botsch is Professor of Epidemiology at Emory University Rollins School of Public Health. Dr. Drews-Botsch is a pediatric and perinatal epidemiologist who has worked on congenital cataracts, child abuse, mental retardation, intrauterine growth restriction, stillbirth and fetal alcohol syndrome. Her current research interests focus on parenting stress among parents of children with congenital cataracts, as well the interaction between biological and sociological factors in determining the administrative prevalence of intellectual disability.

Emory University

Rollins School of Public Health

Department of Health Policy & Management

Student

Xu Ji

Xu Ji is a MSPH Candidate 2013, Department of Health Policy and Management at Rollins School of Public Health, Emory University. She has been a Research Assistant at the Rollins School of Public Health, and at Nanjing Medical University, Nanjing, China. She worked as an intern at China's Ministry of Health, Beijing, China. Her personal and research experience has provided her with the attributes of perseverance, hard-working, sincerity, honesty, and strong sense of responsibility toward team and society. Ms. Ji has a strong passion in research and desire to contribute to society by doing research that adds valuable insights to the areas of health services.

Faculty Mentor

Laura Gaydos, PhD

Laura Gaydos is Research Assistant Professor of Health Policy & Management in the Department of Health Policy and Management at Emory University, Rollins School of Public Health. She is also the Director of the Masters of Science in Public Health (MSPH) program in the Health Policy and Management Department at the Rollins School of Public Health. She received her A.B. from Brown University in 1998 and her Ph.D. at the University of North Carolina at Chapel Hill in 2004. Dr. Gaydos' work focuses in the areas of unintended pregnancy prevention/ reproductive health, religion and reproductive health, women's fitness and nutrition, racial disparities in women's health, and legislative advocacy for women's health. Her work has been supported by the Centers for Disease Control, United States Department of Agriculture, the Atlanta Women's Foundation, and the Healthcare Georgia Foundation.

Emory University
Nell Hodgson Woodruff School of Nursing

Student

Melissa Anne Beaver

Melissa Beaver is a second semester student in the Emory Pediatric Nurse Practitioner Primary Care program. Melissa was awarded the prestigious Woodruff Fellow scholarship for all three semesters of this Master's program. She has been working as a registered nurse in the Cardiac Intensive Care Unit at Children's Healthcare of Atlanta for the past two years, and maintains part-time status during the school year. She earned her Bachelor of Science in Nursing from the University of Arizona in 2010. Melissa was awarded the Clinical Excellence title from her nursing professors at Arizona. She has greatly enjoyed her experience in the pediatric community with Project GRANDD (Grandparents Raising and Nurturing Dependents with Disabilities).

Faculty Mentor

Maeve Howett, PhD, APRN, CNP-Ped, IBCLC

Maeve Howett is a pediatric nurse practitioner, lactation consultant, and Clinical Associate Professor in the Nell Hodgson Woodruff School of Nursing at Emory University. She has over twenty-five years of pediatric nursing experience, with research interests in infant attachment and feeding, early childhood nutrition, toxic exposures in infants and lactating women and vulnerable pediatric populations. She is particularly interested in the at-risk mother-infant dyad made vulnerable by poverty or lack of resources. Dr. Howett sits on the Children's Healthcare of Atlanta (CHOA) Research Advisory Council, and is facilitator of the Neonatal and Birth Outcomes Research Group. She serves as secretary of the international board of the Lactation Education Accreditation and Approval Committee (LEAARC) and in that capacity is also the commissioner to CAAHEP - the Commission on Accreditation in Allied Health Education Programs. Dr. Howett also serves on the Sustainability Taskforce for Emory Healthcare, and was recently named a Nurse Luminary by Healthcare Without Harm for her work in sustainability. She has two grown children and is a foster parent for medically fragile infants. Dr. Howett joined the SE PEHSU team in June 2010.

Faculty Mentor

Janice T. Nodvin

Janice Nodvin serves as Project Administrator and Educator for the SE PEHSU. She is Program Director of Innovative Solutions for Disadvantage and Disability. One of ISDD's core programs since 2005 is Project GRANDD (Grandparents raising their grandchildren with disabilities and chronic illness). In this capacity, she works with Dr. Maeve Howett and Dr. Darla Ura of the Emory University Nell Hodgson Woodruff School of Nursing to provide consultation, direction and training to the Community Outreach nurse practitioner students. She is the liaison between the student nurses and the grandparent families.

Georgia State University
Educational Psychology and Special Education

Student

Jackie Towson, M.S., CCC-SLP

Jackie Towson has worked as a speech-language pathologist and special educator in the field of early intervention for the past fourteen years. Her experiences include teaching in a preschool special education classroom, assessment of children with disabilities, and being a due-process facilitator for the Cherokee County School District. She is currently a doctoral candidate at Georgia State University in the Department of Educational Psychology and Special Education, with an emphasis in Early Childhood Special Education. She has made presentations at several conferences including the Georgia Association on Young Children Conference, 2012 and Georgia Association for Positive Behavior Support Conference, 2012. As a preschool classroom teacher and therapist, Jackie focused her curriculum on literacy based instruction to facilitate language growth in children. During this project, Jackie hopes to initiate an on-going project to involve parents of high-risk children in regular reading activities with their children that will improve language outcomes. Upon completion of her doctoral program, Jackie plans to enter higher education, where she will focus on research in the area of early childhood special education and in the instruction of pre-service teachers.

Faculty Mentor

Peggy Gallagher, PhD

Peggy A. Gallagher is a Professor in the Department of Educational Psychology and Special Education at Georgia State University. She received her doctorate in Early Childhood Special Education from the University of NC at Chapel Hill, and her undergraduate and master's degrees from the University of Georgia. Gallagher directs Project SCEIs (Skilled Credentialed Early Interventionists), a collaborative of 4 Georgia universities which focus on the training needs of personnel in Georgia's Part C Babies Can't Wait program. She is Past President of TED, the Teacher Education Division of the Council for Exceptional Children. Her research interests are in inclusion of young children with disabilities, personnel preparation, and families of children with disabilities. Her book on siblings with T. Powell and C. Rhodes is in its third edition: *Brothers and Sisters: A special part of exceptional families*.

Georgia State University
School of Public Health

Student

Danielle Oves

Danielle Oves is an MPH candidate at Georgia State University with a concentration in Healthcare Management and Policy, who hopes to graduate in 2013. She has been working in the healthcare field for the past eight years, exporting refurbished medical and laboratory equipment at Instru-Med, Inc. Throughout this time, it has been increasingly apparent to Danielle that her interests include implementing change for those who do not have the ability or the power to do so themselves, due to age, race, class, disability, or lack of education. She has served as a research assistant at Innovative

Solutions for Disadvantage and Disability for the past year. During this time, she has analyzed the data of all past Break the Cycle students. Her current study has taken her to the Mary Hall Freedom House, where she is studying the effects of maternal health literacy training on the women with children in this behavioral health treatment program. Danielle's interest includes advocacy for those who are disenfranchised because of class, race, lack of power, and other inhibiting circumstance. She is especially interested in implementing change through children, since it is well known that habits, such as exercise, nutrition, and social skills, learned and adopted during one's childhood are often continued through adulthood. In addition, she wants to secure affordable and quality healthcare access for everyone.

Faculty Mentor

Bruce Perry, MD, MPH

Dr. Bruce Perry, Interim Director of the Division of Health Management and Policy, comes to Georgia State University after over 25 years of experience as a senior executive in integrated healthcare systems and multi-specialty medical groups. Most recently, he served for twelve years as the Executive Medical Director and Chairman of the Board of The Southeast Permanente Medical Group, a 400 practitioner multi-specialty medical group which provides professional services for Kaiser Foundation Health Plan members in the metropolitan Atlanta area. He was the chief physician quality officer for Group Health Cooperative of Puget Sound, the largest healthcare cooperative in the nation with over 1000 practitioners. Perry, a former Robert Wood Johnson Foundation Family Medicine Faculty Fellow at the University of Washington in Seattle, received his M.D. from Emory University School of Medicine, and his M.P.H. from University of Washington. He has maintained his Board Certification in Family Medicine and Geriatrics. His interests are in improving the performance of integrated delivery systems and multi-specialty group practices, leadership skills development, leading practitioners through major change initiatives, and redesigning primary care.

Hofstra University

Department of Health Professions

Student

Sharisse Carter

Sharisse Carter completed her undergraduate studies at Stony Brook University majoring in Women's Studies. She is currently at Hofstra University School of Law, where she has been for the past four years. Sharisse has past experience as an Emergency Medical Technician. Her background interest in this particular topic comes from the specific area in which the Brownfields exist. She grew up in Roosevelt, NY, and lived there for 27 years. She aspires to work in the community health sector, developing and organizing programs that target communities in need, focusing her career on the health of expectant mothers, infants and young children in low income areas. In regards to research, she would love to analyze expectant mothers and their relation to preeclampsia and gestational diabetes. She would like to travel more often and hopes to journey to Europe, Africa and the Caribbean and Pacific Islands.

Faculty Mentor

Martine Hackett, MPH

Martine Hackett is an assistant professor in the Masters of Public Health and Community Health programs at Hofstra University. Her research interests include infant mortality, health communication, and suburban health disparities. Her previous work experience includes service as a deputy director at the New York City Department of Health and Mental Hygiene's Bureau of Maternal, Infant and Reproductive Health and as a television producer. Dr. Hackett received her BFA in film and television from New York University, a MPH from Hunter College, and a doctorate in sociology from the City University of New York Graduate Center.

**Mount Sinai School of Medicine
Preventive Medicine**

Student

Maureen Braun, MD

Maureen Braun received her undergraduate degree at Yale University and her medical degree at Pennsylvania State College of Medicine. She is currently a third year pediatric resident at Mt. Sinai School of Medicine and The Kravis Children's Hospital. She is a certified yoga instructor and has received a number of awards and honors. In all the places she has lived, she had an interest in community involvement and service to young people. In all the places she did yoga, she found the physical challenge, the mental calming, and the personal satisfaction it provided to be necessary to live a full and happy life. During her residency, she has wanted to refer her patients to yoga, but she has found it to be difficult to find accessible, age-appropriate yoga for them in their community. In an effort to address this void in patients' lives, she proposed this project to bring yoga and its benefits that are seen on and off the mat to a community in need.

Student

Brenda Levy, MD

Brenda Levy received her medical degree at Albert Einstein College of Medicine, MD and is also currently a third year resident. She grew up just outside of Boston, where she stayed for college. She then worked as a research coordinator for brain tumor patients for 5 years after college, while also brewing over the decision to go to medical school. Brenda became heavily involved in many community outreach groups, including the student run free clinic, Physicians for Human Rights, and AMSA. She also pursued her other passion, global health, and was lucky enough to go to Ecuador and Uganda on medical volunteer trips. Brenda says, "Our project is the embodiment of so many different things I love about community outreach: accessing underserved groups, getting doctors out into the community, and delving into the social determinants of health." Her goals are to do an academic pediatrics fellowship to gain the research methodology skills and additional research experience to eventually conduct community based participatory research involving underprivileged children. Eventually, she wants to work in an urban academic setting doing part research and part clinical work precepting residents and in her own clinical practice.

Faculty Mentor

Geoffrey "Cappy" Collins, MD

Geoffrey "Cappy" Collins, MD received his art-semiotics degree from Brown University prior to a career in digital media art direction and design for clients such as Scholastic and PBS. His work in children's education was followed by medical training at the Mount Sinai School of Medicine and a pediatrics residency at the University of Rochester. His professional interests in child advocacy and urban health led to the creation of Cyclopedia (www.cyclo-pedia.org), a bicycle program that combines physical activity with collaborative online documentation to empower urban adolescents. He is co-creator of a community walking program, Cado Paso, designed to reduce the effects of toxic stress on families in East Harlem. He is also co-founder of the New York State Pediatric Advocacy Coalition (NYSPAC) dedicated to promoting child health advocacy training, supporting successful child advocacy programs, and providing a statewide legislative voice. He is currently a pediatric environmental health fellow at the Mount Sinai School of Medicine and a member of the Mt. Sinai Pediatric Environmental Health Specialty Unit (PEHSU).

Pontificia Universidad Católica de Chile
Department of Pediatrics

Student

María Soledad Matus, MD

Dr. Maria Soledad Matus completed her medical studies at Pontificia Universidad Católica de Chile (PUC). She was born in Santiago, Chile, where she attended The English Institute School. She graduated with High Honors from her undergraduate studies, and had the opportunity to work in rural medicine as a medical student, where the community needs are great. She is currently in her second year of residency in pediatrics at PUC. Maria Soledad's interest in environmental pediatrics began during her internship, where she published along with Dr. Valenzuela the review article *Environmental Pediatrics: An Emerging Issue*, J Pediatr (Rio J) 2011;87(2): 89-99. In her current project, one of her main goals is to help raise awareness of the importance of environmental health amongst health-based personnel and in communities where environmental hazards are related to circumstances of social and economic disadvantages. In addition, she hopes to help understand the relationship between environmental risk factors and infant respiratory diseases, and to work side-by-side with local authorities to help improve health-care inequities in her country.

Faculty Mentor

Patricia M. Valenzuela, MD, MSc

Dr. Patricia M. Valenzuela is from Santiago, Chile. She received her medical degree from the Pontificia Universidad Católica de Chile (PUC) School of Medicine in 1983 and completed her pediatric residency at PUC (1986). In 1986, she moved to Columbus, Ohio, USA where she was a visiting scientist at the Pharmacology Toxicology Department of the Children's Hospital in Columbus and worked with Dr. Philip Walson and Dr. Mary Ellen Mortensen in lead poisoning. During 1989 to 1991 she entered the Graduate School at the Ohio State University and obtained an M.Sc. in Preventive Medicine in 1991. She returned to Santiago, Chile in 1991, and since then has worked at the Ambulatory Unit of the

Department of Pediatrics, PUC. Currently, she is an Associate Professor, and spends most of the time teaching pediatrics to medical students. She coordinates the ambulatory pediatric rotation of interns and she is the main professor of a course, “Introduction to the Medical Studies” for first year students at the School of Medicine and Odontology, PUC. Her main interests include medical education, ambulatory pediatric care, well-child care, childhood injury prevention, epidemiologic surveillance of respiratory viruses, and research, especially on PFAPA syndrome and environmental pediatrics. Recently she published the review article: Valenzuela PM, Matus S, Araya GI, Paris E. Environmental pediatrics: an emerging issue. *J Pediatr (Rio J)* 2011;87(2): 89-99. Also, she is the first author of the book “Ambulatory Pediatrics: A holistic approach (in Spanish)”, 2011. She is member of the Board of directors of the Ambulatory Pediatric Branch of the Chilean Society of Pediatrics.

Faculty Mentor

Helia Molina Milman, MD MPH

Helia Molina Milman MD. MPH is Assistant Professor of Pediatrics and Assistant Professor in Public Health. She received her medical degree from the Universidad de Chile, and her Masters in Public Health, also from the Universidad de Chile. She has certification in Health Services Planning, Project Evaluation and Epidemiology for Health Managers, receiving this recognition at Johns Hopkins University. Dr. Molina Milman is author of many scientific publications and books at the national and international level, most of them in the child health and the environmental and development field. Currently Dr. Molina Milman’s main interest is teaching and research at the Department of Public Health at Catholic University. She participates in the child rights initiative at the Latin-American level, is advisor at the IDB supporting design, implementation, and evaluation of Infant Policies in four countries of the Latin American Countries.

Tulane University Law School
Payson Center for International Development

Student

Alexandra Jurewitz

Alexandra Jurewitz was born and raised in Los Angeles, California. In 2008, she received her bachelor’s degree in Business Administration from the University of North Carolina at Chapel Hill, where she also competed as a four-year varsity tennis player. Upon graduating, she returned to Los Angeles and worked at Team One Advertising as an Assistant Media Planner on the national Lexus Account. A decision to change to a vegan diet in 2007 sparked her interest in food policy, especially as related to the fight against childhood obesity. In August 2010, she moved to New Orleans to begin her graduate studies at Tulane University’s School of Law and School of Public Health and Tropical Medicine. Upon graduating from Tulane University in May 2014, she would like to be involved in some capacity with revamping public school food programs and increasing physical activity during the school day in order to reduce rates of childhood obesity. Alexandra’s interest in the HIV/AIDS epidemic started when a friend traveled to Africa to work with children living with HIV and AIDS. The experiences she has gained as a joint law and public health student have made her question what we, as a society, should be doing in order to decrease the spread of HIV. Through this project, she hopes to identify available paths to

ensure access to antiretroviral treatment and necessary education to break the cycle of mother-to-child transmission of HIV/AIDS and the inherent familial and behavioral problems that result from families facing HIV/AIDS.

Faculty Mentor

Colin Crawford, JD

Colin Crawford is the Robert C. Cudd Professor of Environmental Law at Tulane University Law School and Executive Director, Payson Center for International Development. He received his BA at Columbia University, his MA at the University of Cambridge, and his JD at Harvard University. Professor Crawford joined the Tulane faculty in 2010 after his tenure at the Georgia State University College of Law, where he founded and co-directed the Center for the Comparative Study of Metropolitan Growth and directed a summer program in Rio De Janeiro. He has also been a visiting professor at the University of Denver Sturm College of Law, the National School of Public Health, Oswaldo Cruz Foundation in Rio de Janeiro, and the Technological Institute of Santo Domingo in the Dominican Republic, where he was a Fulbright Scholar. Professor Crawford has significant expertise in international development, an area in which he will teach and work in his role as Executive Director of Tulane's Payson Center. He is currently completing execution of a three-year grant from Higher Education for Development/US Agency for International Development to direct an environmental law capacity-building project in Guatemala, Nicaragua, the Dominican Republic, El Salvador and Panama.

University of Florida – Jacksonville Department of Community & Societal Pediatrics

Student

Ashley Bennett, MD

Ashley Bennett is a fellow in Community and Societal Pediatrics. She grew up in Oklahoma, where she attended college, medical school, and residency. After finishing a residency in pediatrics, she moved to Florida to take part in a fellowship aimed at incorporating child rights into pediatrics to improve health equity. She is married and has a 10-year-old daughter. Growing up in a disadvantaged environment, Ashley has been aware of the differences in the way people are treated. She naturally finds the information about the social determinants of health and the pathologic consequences of these inequalities fascinating. In reviewing the literature, she became frustrated because most studies seemed to evaluate and focus on only those factors that one cannot modify (such as temperament) instead of focusing on the associated policies that can change. She hopes this project will contribute to the growing amount of literature that looks at these complex relationships.

Faculty Mentor

David Wood, MD, MPH

Dr. David Wood is board certified in Pediatrics and in Preventive Medicine and Public Health. He is currently a Clinical Professor of Pediatrics at the University of Florida. For over twenty years, his research and advocacy efforts have focused on improving health systems for underserved children and adults. He has published more than 150 peer reviewed publications, reports, and book chapters. He

has served on the American Academy of Pediatrics Council on Community Pediatrics and Committee on Psychosocial Aspects of Child and Family Health. He has been on state and local AAP leadership Boards and is the past President of the North East Florida Pediatric Society. For 6 years, he has directed the Jacksonville Health and Transition Services (JaxHATS) program. Since its inception, JaxHATS has received continuous funding from the Florida Title V program and has served approximately 1000 youth, providing a patient-centered medical home to medically complex and developmentally disabled young adults. Dr. Wood also has helped direct a statewide planning process for health care transition and the development of a state office of health care transition. Dr. Wood has been active in advocacy for children and adults with IDD, serving as a gubernatorial appointee to the Florida Developmental Disabilities Council for over 10 years. Dr. Wood is also Co-Director of the UF College of Medicine-Jacksonville Center for Health Equity and Quality Research, which promotes health equity for disadvantaged populations through education and applied community-based research.

University of Michigan School of Natural Resources and Environment

Student

Meredith Martz

Meredith Martz is an undergraduate student pursuing a degree in Applied Mathematics, with a minor in Computer Science at the University of Michigan (Class of 2014). She is currently serving as a Research Assistant at Children's Environmental Health Initiative, and is focused on developing her GIS skills as well as graphic design capabilities. Ms. Martz enjoys seeing how to apply mathematics and programming to address adverse environmental conditions, and is particularly interested in human nutrition and food environments. Through this project, she hopes to achieve a better understanding of how the research process works and the barriers that come along with it.

Faculty Mentor

Pamela Maxson, PhD

Pamela Maxson is the Research Director for the Children's Environmental Health Initiative (CEHI) at Duke University and the University of Michigan. She is Project Manager for the Southern Center on Environmentally Driven Disparities in Birth Outcomes (SCEDDBO). Dr. Maxson received her B.S from the University of Hawaii, and her M.S. and Ph.D. in Human Development and Biobehavioral Health from Pennsylvania State University. Her research interests lie in the interface of psychological, social, host, and environmental contributors to health, including chemical and non-chemical stressors and their influence on health. Specific interests include environmental and social justice issues.

Southeast Pediatric Environmental Health Specialty Unit Team

Emory University Department of Pediatrics

PEHSU

Robert J. Geller, MD

Robert Geller currently serves as the Chief of the Emory Pediatrics Service at the Grady Health System/CHOA- Hughes Spalding campus, as Medical Director of the Georgia Poison Center, and as Director of the Emory Southeast Pediatric Environmental Health Specialty Unit (PEHSU). Dr. Geller was graduated in 1979 from Boston University School of Medicine. He then pursued his residency and Chief Residency in Pediatrics at the Medical College of Virginia in Richmond, followed by a fellowship in Clinical Pharmacology and Toxicology at the University of Virginia in Charlottesville. He is a fellow of the American Academy of Pediatrics, the American College of Medical Toxicology, and the American Academy of Clinical Toxicology. He has been a member of the Southeast PEHSU since its formation in 2001. He is the author of more than 50 publications, and is one of the editors of the text, *Safe and Healthy School Environments*. He is the author or co-author of numerous community information sheets and has met with community members at many sites of children's environmental health concern throughout the Southeastern United States.

Emory University Nell Hodgson Woodruff School of Nursing

PEHSU

Maeve Howett, PhD, APRN, CNP-Ped, IBCLC

Maeve Howett is a pediatric nurse practitioner, lactation consultant, and Clinical Associate Professor in the Nell Hodgson Woodruff School of Nursing at Emory University. She has over twenty-five years of pediatric nursing experience, with research interests in infant attachment and feeding, early childhood nutrition, toxic exposures in infants and lactating women and vulnerable pediatric populations. She is particularly interested in the at-risk mother-infant dyad made vulnerable by poverty or lack of resources. Dr. Howett sits on the Children's Healthcare of Atlanta (CHOA) Research Advisory Council, and is facilitator of the Neonatal and Birth Outcomes Research Group. She serves as secretary of the international board of the Lactation Education Accreditation and Approval Committee (LEAARC) and in that capacity is also the commissioner to CAAHEP - the Commission on Accreditation in Allied Health Education Programs. Dr. Howett also serves on the Sustainability Taskforce for Emory Healthcare, and was recently named a Nurse Luminary by Healthcare Without Harm for her work in sustainability. She has two grown children and is a foster parent for medically fragile infants. Dr. Howett joined the SE PEHSU team in June 2010.

Nicole Makris, BA

Nicole Makris works as a Research Assistant for the Southeast Pediatric Environmental Health Specialty Unit and is a student in the BSN-MSN Segue Program at Emory University's Nell Hodgson Woodruff School of Nursing. Before pursuing a degree in nursing, she spent several years working as a reporter in the San Francisco Bay Area, writing for community newspapers, *Mother Jones*, and *Change.org's* Sustainable Food blog. She also worked in non-profit communications for the Independent Media Institute and the Breast Cancer Fund. Nicole holds a B.A. in Journalism and Environmental Science from Antioch College. Nicole first discovered her passion for the environment

and human health when she interned with an ecotoxicologist in Brazil, where she studied the water quality of a stream near a landfill and considered the health implications that heavy metals and fecal coliforms might have on the *leicheros*, or families that lived atop the landfill in shacks made of trash, earning income from the recyclable materials they found. She later worked as a Teaching Assistant on Antioch College's Environmental Field Program, visiting fenceline communities and superfund sites, and helping students connect the dots of environmental health disparities. Nicole came to nursing because she wanted to do hands-on work in the communities about which she once wrote and for which she advocated. Although it still pains her to end a sentence with a preposition, she's currently more focused on and excited about passing the NCLEX and eventually becoming certified as a Family Nurse Practitioner.

Emory University Rollins School of Public Health
Kaiser Permanente Center for Health Research, Southeast
PEHSU

Michele Marcus, PhD, MPH

Michele Marcus, PhD, MPH is Professor of Epidemiology and Environmental Health at the Rollins School of Public Health and Professor of Pediatrics in the School of Medicine, Emory University. She recently became Assistant Program Director for Kaiser Permanente's Center for Health Research, Southeast. Dr. Marcus has over 20 years experience as a reproductive and environmental epidemiologist. At Mount Sinai School of Medicine, she was Director of the Environmental Epidemiology Core of the NIEHS Environmental Health Sciences Center. As a Turner Foundation Fellow at the CDC, she coordinated the work of the Endocrine Disruptors Leadership Panel. She has published extensively in this field and has co-authored two book chapters reviewing the effects of environmental and occupational exposures on reproductive function. Her work includes studies of prematurity, low birth weight, congenital malformations, child growth and pubertal development, adolescent pregnancy, miscarriages, menstrual function, infertility and menopause. She has served on federal expert panels reviewing the health effects of exposure to electromagnetic fields, bisphenol A (BPA), phthalates, and gene/environment interactions following service in the Persian Gulf War. She served on the National Academy of Sciences Institute of Medicine Committee on the health effects of dioxin exposure among Vietnam Veterans. Dr. Marcus has also conducted research on genetic contributions to reproductive health and health effects of exposures to polycyclic aromatic hydrocarbons, pesticides, air pollution, solvents and lead.

Innovative Solutions for Disadvantage and Disability
PEHSU

Janice T. Nodvin

Janice Nodvin serves as Project Administrator for the Southeast Pediatric Environmental Health Specialty Unit. She is Program Director for ISDD, Innovative Solutions for Disadvantage and Disability, formerly Institute for the Study of Disadvantage and Disability. She also serves as Center Director for The Adult Down Syndrome Program. Ms. Nodvin directs Project GRANDD, a program providing intensive supports to grandparents who are raising grandchildren with disabilities. Most recently she serves as the Project Coordinator for Healthy Tomorrows Partnership for Children's grant awarded to the ISDD to work with children living with their mothers who have been homeless and are now in a

rehabilitation program. The Project is called Healthcare Without Walls: A Medical Home for Homeless Children (HWW). As Project Administrator and Educator of the PEHSU, Ms. Nodvin serves as the initial contact to the SE PEHSU as well as the project coordinator to our Break The Cycle Projects. Ms. Nodvin has over nine years experience as an educator and is the parent of an adult with a dual diagnosis. With this diversity, she shares insight with parents and professionals alike. She has over thirty years' experience in all areas of developmental disabilities and is a parent advocate. Ms. Nodvin has co-edited *Safe and Healthy School Environments* and all of the monographs for the Break the Cycle projects. She is the contact person for the SE PEHSU.

Morehouse School of Medicine Department of Pediatrics Innovative Solutions for Disadvantage and Disability

PEHSU

I. Leslie Rubin, MD

Leslie Rubin MD is Research Associate Professor in the Department of Pediatrics at Morehouse School of Medicine, Co-Director of the Southeast Pediatric Environmental Health Specialty Unit at Emory, President and Founder of Innovative Solutions for Disadvantage and Disability, and Principal Investigator of the Healthy Tomorrows Partnership Project – Healthcare Without Walls, a project to create a medical home for homeless children. He founded the Institute for the Study of Disadvantage and Disability (now renamed Innovative Solutions for Disadvantage and Disability) in May 2004 and launched the first Break the Cycle Program in 2004-2005! He is dedicated to improving awareness and understanding of the relationship between social and economic disadvantage and disabilities in children. Since 2000, he has been a Co-Director with the Southeast Pediatric Environmental Health Specialty Unit at Emory University, where he focuses on raising awareness of environmental health disparities and promoting health equity for children - particularly those who are most vulnerable from exposure to adverse environmental factors. In 2012, the American Academy of Pediatrics (AAP) presented Dr. Rubin with the Calvin C. J. Sia Community Pediatrics Medical Home Leadership and Advocacy Award. This award honors pediatricians who have advanced the medical home through practice and advocacy, especially for children with special health care needs. On behalf of ISDD, he received the 21st Annual Community Service Award from Emory University Rollins School of Public Health and The Goizueta Business School of Emory University.

Ciannat Howett, JD

Break the Cycle Consultant

Emory University Sustainability Initiatives

Ciannat Howett became Emory's first Director of Sustainability Initiatives in September 2006, managing a University-wide effort to ensure that Emory's actions and policies support environmental, social, and economic systems that provide a healthy, productive, and meaningful life for current and future generations. She is also an Adjunct Professor at Emory's Rollins School of Public Health. Ms. Howett attended Emory University as an undergraduate, receiving her B.A. in 1987. She then worked at Emory until 1989 as Associate Director of Alumni Giving and the first Director of the Emory Parents Fund. She received her law degree from the University of Virginia in 1992. She practiced environmental law with Kilpatrick-Stockton in its Atlanta and Washington, DC offices for four years, with the U.S. Environmental Protection Agency in Washington, D.C. as Senior Attorney with the Water Enforcement

Division for six years, and then served for four years as Director of the Southern Environmental Law Center's Georgia and Alabama office. She is a Trustee for the R. Howard Dobbs, Jr. Foundation and serves on the Board of Emory Law School's Turner Environmental Law Clinic, The Livable Communities Coalition, Sustainable Atlanta, and Grants to Green. She also serves on the DeKalb County Green Commission, the Agnes Scott National Sustainability Advisory Committee, the Oak Ridge National Laboratory Sustainability Task Force, and the President's Council of the Southern Environmental Law Center. She is a frequent regional and national speaker on sustainability issues, and, for four years, has been named a "Georgia Super Lawyer" by Atlanta Magazine.

**George Washington University
Children's National Medical Center in Washington D.C**

Break the Cycle Consultant

Benjamin Gitterman, MD

Benjamin Gitterman, MD is Associate Professor of Pediatrics and Public Health at George Washington University and Children's National Medical Center in Washington D.C. His major activities include Children's Environmental Health, Child Advocacy and Community Health-focused training and program development. Prior to coming to Washington DC, he was the Director of Ambulatory Pediatric Services for Denver Health and Hospitals and was on the faculty of the University of Colorado School of Medicine. In Washington D.C., he has been the Chair of General and Community Pediatrics at Children's National Medical Center. Dr. Gitterman was a co-founding Director of the Mid-Atlantic Center for Children's Health and the Environment (the PEHSU serving the mid-Atlantic region). He is a member of the Governor's Council on Children's Health and the Environment for the State of Maryland, the Scientific Advisory Board of the Environmental Protection Agency for Children's Environmental Health, and a liaison member to the Advisory Committee on Children's Lead Poisoning and Prevention for the CDC. He has been a member of the American Academy of Pediatrics Committee on Children's Environmental Health. He also co-directs the Specialty Track in Environmental Health at George Washington University School of Medicine.

**Health Services, Division for Intellectual and Developmental Disabilities,
Ministry of Social Affairs and Social Services, Jerusalem**

Break the Cycle Consultant/Editor-in-Chief

Joav Merrick, MD, MMedSci, DMSc

Joav Merrick, MD, MMedSci, DMSc, is Professor of Pediatrics, Child Health and Human Development, Kentucky Children's Hospital, University of Kentucky, Lexington, United States and affiliated with the Division of Pediatrics, Hadassah Hebrew University Medical Center, Mt Scopus Campus, Jerusalem, Israel. He is the Medical Director of the Health Services Division for Intellectual and Developmental Disabilities, Ministry of Social Affairs and Social Services, Jerusalem, and the founder and director of the National Institute of Child Health and Human Development in Israel. He has authored numerous publications in the fields of pediatrics, child health and human development, rehabilitation, intellectual disability, disability, health, welfare, abuse, advocacy, quality of life and prevention. Dr Merrick received the Peter Sabroe Child Award for outstanding work on behalf of Danish Children in 1985 and the International LEGO-Prize ("The Children's Nobel Prize") for an extraordinary contribution towards improvement in child welfare and well-being in 1987.

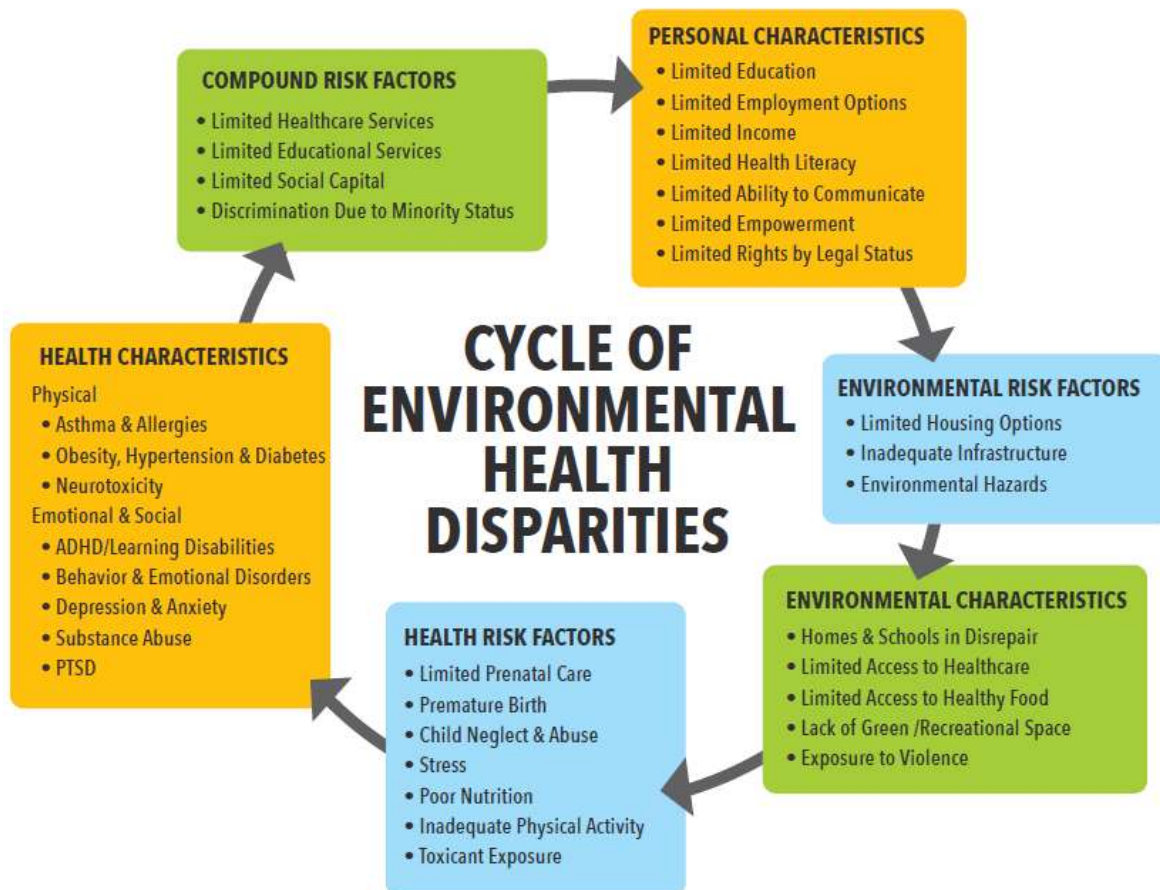
Overview of Break the Cycle

The threats to children's health and well-being are often multiple and complex. Children are uniquely vulnerable to environmental toxicants for several reasons: they are growing rapidly; they have a more active metabolic rate than adults; they breathe larger amounts of air for their size; they have a greater surface area-to-body mass; they are closer to the ground, and they may pick up and play with objects and then put these objects in their mouths and may even swallow them. They are at risk, therefore, to absorb more toxins in the environment through their skin, from the air they breathe, from the food they eat, and the water they drink. Also, they do not yet have the fully sophisticated metabolic systems to detoxify some chemicals, or they may metabolize chemicals into toxic metabolites at a different rate than adults. Furthermore, because they are growing rapidly and their organs and organ systems are developing, they may incorporate toxins into their developing organ systems which can have immediate adverse impact. They are more likely to suffer long-term consequences on organ structure and function, that may only be evident much later in life.

Today, some of the major health concerns for children, such as asthma, obesity and its complications of hypertension and diabetes, and neurodevelopmental disorders (most commonly learning disabilities, attention deficit hyperactivity disorder and autism), are often caused or exacerbated by environmental factors. Not only does the presence of a disorder or disability create significant complications that affect the child's health as well as learning and social opportunities, but it may adversely the child's potential for self-actualization and fulfillment. This is a challenge, not only at an individual level, but also at the level of the family and community and, ultimately, it also has an impact on society in terms of prevention and management strategies, and utilization of resources as well as how society cultivates its future citizens, workforce, and leaders.

Not only are children vulnerable to the chemical, physical and microbiological factors in their environment, they are uniquely sensitive to the social and economic environment in which they live, learn, and play. It has become increasingly evident that children who grow up in an environment of social and economic disadvantage are at greater risk for exposure to toxins like lead and other chemicals. They are impacted by the age and quality of the houses in which they live as well as the schools where they learn, the infrastructure of the communities in which they live, the risks of violence that they may experience, and the associated emotional stress that they face on a day to day basis. The vulnerability of these children is therefore greater, by virtue of their risks for exposure, magnified further by limitations in support for optimal education, access to quality health care, infrastructure, and limited Social Capital; and the impact is even greater because the risks are cumulative.

The diagram below illustrates the elements that operate when children are born into circumstances of social and economic disadvantage and the resultant impact that manifests in disparities in health and education. The diagram also illustrates how the pattern becomes intergenerational and traps people in this cycle.



Our real challenge is how to Break the Cycle and liberate the children by providing a more nurturing and supportive environment, greater access to quality education and health services and to opportunities for success in life. We know this can be achieved at many different levels.

At a fundamental level, the idea of changing the life of one child for the better can have a positive impact not only for that child, but also for the family, for other people who know that child and for what that child can do in the present and in the future to change the world for the better. So, it might be said that “if you save the life of one child, you may be saving the whole world!” Ideally, it would be desirable to improve the lives of as many children as possible today, so that we have a better world in the future. Realistically, however, doing so would require substantial changes, if not complete redesign to many of our social institutions, including the health care delivery system, educational system, social safety net systems and economic and financial systems. Because those changes are beyond our scope and require large shifts in politics and economics over long periods of time, we have developed an approach to *Break the Cycle* and change the world a little at a time towards achieving health and educational equity for our most vulnerable children.

Project Presentations

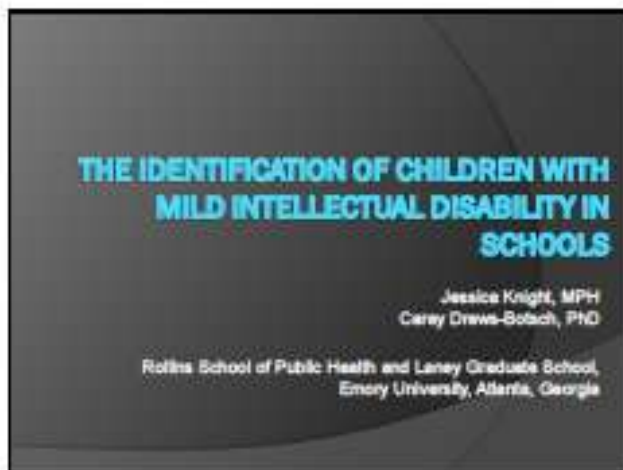
Theme: Schools

The Identification of Children with Mild Intellectual Disability and Speech and Language Disorders in Schools

Jessica Knight (Carolyn Drews-Botsch, MPH, PhD, mentor)

Rollins School of Public Health, Emory University, Department of Epidemiology

This study aims to assess the association between socio-demographic characteristics of schools' populations and their surrounding communities, and trends in the number of children with special education needs attending these schools. We hypothesized that schools in rural areas, those with lower SES populations and those with lower standardized test performance would experience higher levels and higher rates of children with mild intellectual disability (ID), but would identify lower levels and lower rates of children with speech and language disorders. This study was conducted using 2001-2005 public elementary school records and 2006-2010 Criterion Referenced Competency tests (CRCT) data from all counties in Georgia spanning first through fifth grade (N=159 counties). This ecologic study focused on school- and community-based characteristics, as well as school-wide pass rates of the CRCT. The outcomes of interest was measured by percent of children in each school identified with speech and language disorders and percent identified with mild ID in third and then fifth grade. Schools were compared at both grade levels, and compared on the increase or decrease in indicated children between the two grades. Analyses were conducted using regression models.



Background Mild ID



- IQ 50 -70
- Diagnosis
 - At least 2 assessments of IQ and adaptive behavior
 - Adaptive behavior - the social, practical, and conceptual skills needed to function in daily life

Background: Mild ID and Sociodemographics

- More common among lower sociodemographic groups
- In schools with predominately lower sociodemographic populations...
 - Academic performance of children with mild ID may be more similar to general student body
 - Have fewer resources to diagnose and offer special needs education

Research Question

- Assess whether socioeconomic/ demographic characteristics of schools predict the number of children with mild intellectual disability and the timing of their identification.

Methods Data Sources

- Department of Education student records in Georgia, 2001-2005
 - Identification of mild ID
 - Socioeconomic characteristics
- CRCT scores, 2008-2010
- Five Georgia county classification
 - Urban, urbanizing, suburban, rural growth, rural decline



Methods Analysis

Outcomes

- Prevalence of mild ID in 3rd and 5th grade averaged over 5 years
- The proportional change in prevalence of mild ID between 3rd and 5th grade

Covariates:

- CRCT scores
- Free or reduced lunch eligibility
- African American/black race
- Five Georgias categorization

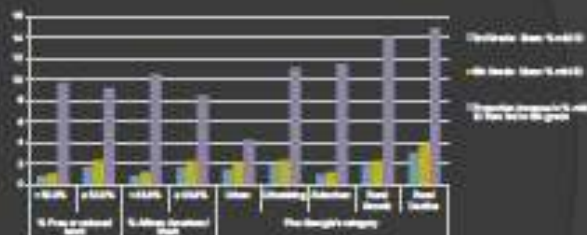
Results

School characteristics	Mean	Standard Deviation	25 th Percentile	75 th Percentile
% Children eligible for free or reduced lunch in each school	49.3	23.9	31.0	66.4
% Children of African American/ black race in each school	41.0	30.3	12.6	80.8
% Children in each school that do not meet expectation: Math CRCT ^a	30.3	10.4	12.6	36.9
% Children in each school that do not meet expectation: English CRCT ^a	13.1	7.3	7.6	17.7
% Children in each school that do not meet expectation: Reading CRCT ^a	18.2	9.1	9.2	21.8

^aLevels of not meeting expectation differs by grade level. Here only 3rd grade level are shown, but 3rd grade levels are slightly lower.

Five Georgia's category	N	%
Urban	302	32.8
Urbanizing	128	10.9
Suburban	563	46.0
Rural Growth	63	5.4
Rural Decline	56	3.1

Results



Dichotomization of % free or reduced lunch and African American/ black race only used here to display differences between high and low cut point for both is the median

Results

School characteristics: 3 rd vs. 5 th grade	Prevalence Odds Ratio	95% Confidence Interval	Prevalence Odds Ratio	95% Confidence Interval
Free or reduced lunch ^a	2.1	1.0, 3.3	1.8	1.7, 1.9
African American/ black race ^a	1.1	1.1, 1.2	1.1	1.0, 1.1
Rural decline vs. suburban	1.8	1.7, 2.0	2.0	1.8, 2.2
CRCT below expectation ^a	-	-	1.2	1.2, 1.3
3 rd - 5 th grade/ 5 th grade	Change in proportion	95% Confidence Interval	Change in proportion	95% Confidence Interval
Free or reduced lunch ^a	6.7	-7.3, 20.8	7.9	-7.9, 23.7
African American/ black race ^a	-6.5	-20.7, 7.8	-8.8	-30.6, 8.9
Rural decline vs. urban	7.9	-25.4, 41.2	7.8	-25.5, 41.1
CRCT below expectation ^a	-	-	-2.1	-14.5, 10.3

^aModel A includes: free or reduced lunch eligibility, African American/ black race, and the rural to urban categorization.

^aModel B includes: free or reduced lunch eligibility, African American/ black race, the rural to urban categorization, and a sum of the % of children who do not meet expectations in math, English, and reading.

Discussion Strengths

- Large dataset of all public schools in GA spanning five years
- Able to assess timing
- Five Georgias classification

Discussion Limitations

- CRCT data from later years
- No information on how each student was diagnosed
- No data on the true prevalence of mild ID in each school to compare with those identified
- Estimates used to describe timing of identification were fairly imprecise

Conclusion

After controlling for overall aptitude of the students:

- Free or reduced lunch was strongly associated with all 3 outcomes
- Being in an area of rural decline was a strong predictor of late identification

Conclusion



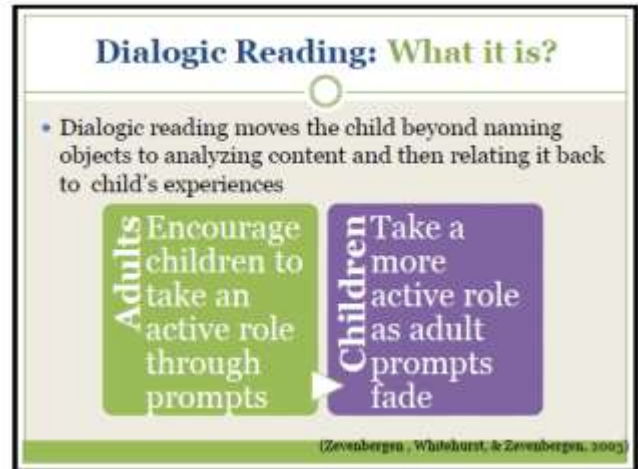
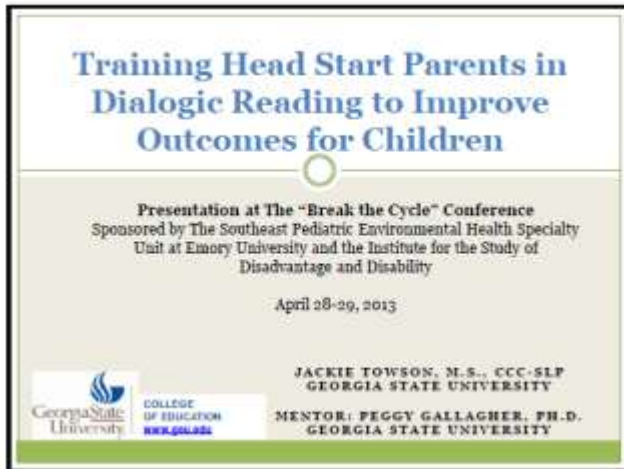
Training Head Start Parents in Dialogic Reading to Improve Outcomes for Children

Jackie Towson (Peggy Gallagher, PhD, mentor)

Georgia State University, College of Education,

Department of Educational Psychology and Special Education

This randomized control study provides training on dialogic shared book reading to parents of three year old children enrolled in Head Start centers. Children from low-income families often have decreased language and literacy skills upon entering kindergarten. This is attributed to decreased access to books and shared reading experiences and parents who do not have the skills to engage their children in reading in a way that positively affects their children's language and literacy skills. This study will seek primarily to extend findings in previous studies, which show that providing specific training to parents in dialogic reading will improve outcomes in the areas of language and literacy for these children. Training in dialogic shared book reading will be provided to parents using Pearson's "Read Together, Talk Together" videos. Parents in both the treatment and control groups will be encouraged to read to their children over a five week period using books provided. Pre and post-testing of children using standardized measures in the areas of receptive and expressive vocabulary, language and literacy skills will be utilized to determine the effects of the intervention. It is expected that families in the treatment group will show greater gains in all areas when compared to the control group.



Dialogic Reading Strategies: CROWD

- Completion** • When it snows we use our _____?
- Recall** • What did Jack do when Jill fell down the hill?
- Open-ended** • Now you tell me what happened on this page.
- Wh-questions** • What is the name of that toy?
- Distancing** • You went on a bus like Tawanna. Where did you go?

(Zevenbergen et al., 2003)

Dialogic Reading Strategies: PEER

- Prompting** • Look at that page, what color is the ball?
- Evaluating** • Yes, that is right! The ball is blue.
- Expanding** • Yes, that is a ball. The ball rolled down the slide.
- Repeating** • Say that again. What did the ball do?

(Zevenbergen et al., 2003)

Breaking the Cycle

- Parents increase skills in reading to children
- Parents and children increase access to books and shared reading experiences
- Children show increased language/literacy skills in Kindergarten
- HOPEFULLY,** Children show improved graduation outcomes, attendance at college, and future job prospects

Previous Research: Children at Risk

- Positive effects on oral language (What Works Clearinghouse, 2007)
- Meta-analysis: Oral language skills and expressive vocabulary showed greater gains than print awareness (Mol, Bus, & de Jong, 2009)
- Training with parents in low-income families: Significant gains expressive vocabulary and oral language (Whitehurst et al., 1994; Lonigan & Whitehurst, 1998)

Previous Research: Children with Developmental Delays/Disorders

Research focused on 1:1 Parent-Child Dyads

Half examined dialogic reading while half investigated informal shared book reading

Research focused on children with language delays

Research Questions:

Do three year old children in a Head Start program who participate in shared dialogic reading with their parents show significantly;

greater oral vocabulary and expressive language skills growth than children who do not?

greater growth on basic print knowledge than children who do not?

Does training parents of three year old children in Head Start classrooms in shared dialogic reading strategies change parents' report of the frequency, duration and/or their quality of reading with their children?

Methods

• Participants

- 25 Three year old children and parents
- Three Head Start centers in Northeast Georgia
- Primary language English or Spanish
- May receive special education services

Methods

• Design

- Group design; Randomized experimental and control groups
- Children/Parent Dyads assigned to dialogic shared book reading intervention (13 children; 50%).
- Children/Parent Dyads assigned to control condition; participated in math or behavior workshop (12 children; 50%)

Methods

• Measures

- Children Pre/Posttest:
 - ✦ Peabody Picture Vocabulary Test (PPVT-4)
 - ✦ Expressive One Word Picture Vocabulary Test (EOWVT-4)
 - ✦ Get Ready to Read! (GRTR-R)
- Parent Survey (Pre/Posttest)

Methods

• Intervention

- "Read Together, Talk Together" Video and Handouts
- 5 Picture books
- Weekly reading logs
- Parents in both groups encouraged to read at home 10-15 minutes/day, 3 days/week, 5 weeks

Data Analysis & Results:

- Study is in progress, with expected statistical measures of:
 - ✦ Gains measured from pretest to posttest using procedures such as ANOVA or ANCOVA
 - ✦ Descriptive Statistics

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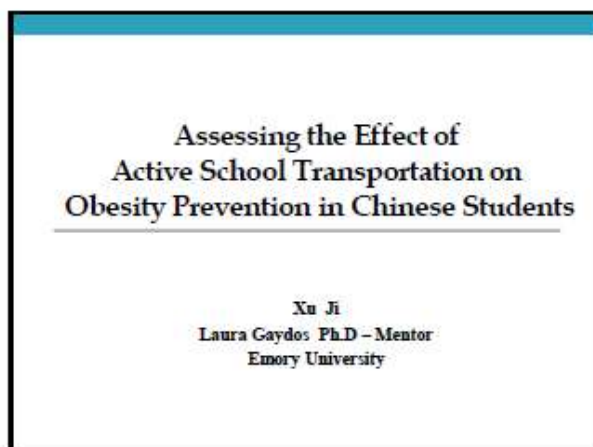


Assessing the Effect of Active School Transportation on Obesity Prevention in Chinese Students

Xu Ji (Laura Gaydos, PhD, mentor)

Rollins School of Public Health, Emory University, Department of Health Policy & Management

Our project is examining whether, in China, students who use active commute modes to and from school are less likely to be obesity than those who passively commute to school. Specifically, we are exploring whether the impact of active school transportation (AST) on obesity is higher for rural children than for urban children, for children who have a walkable or bikable distance from school than those living far away from school, and for boys than girls. We will conduct trend analyses to show the changes in both AST and childhood obesity in China, as well as regression analyses to examine whether AST actually predicts overweight/obesity using econometric methods, when controlling for other socio-demographic factors and environmental factors, such as urbanicity and access to public schools in community as a proxy of the distance from school. We expect a significant and negative association between AST and childhood overweight/obesity, especially in boys, urban residence, and students who have a walkable or bikable distance from school, and would make a recommendation on these sub population groups among school-aged youth in China.



Background

Active School Transportation (AST)

- ❑ An important source of obesity prevention among students
- ❑ Dominant forms of transportation in students in China
- ❑ Decreasing prevalence of AST in China
 - Increased affluence
 - Increased competition
 - Busier commute paths



Study Significance

- ❑ Very few studies explored relationship between AST and childhood obesity in China
- ❑ No evidence of AST effect on obesity in Chinese youth and how this varies in sub-populations
- ❑ Provide insight into this relationship in Chinese students aged 6-18
- ❑ Understand if AST promotion or other environmental intervention is effective to reduce obesity in China

Research Questions

Q1: Are students who spend more time on AST less likely to be overweight or obese, in China?

Q2: Are all students impacted equally, or does AST effect vary for sub-population groups?



Data

- China Health and Nutrition Survey (CHNS)
- Longitudinal
- Five waves: 1997, 2000, 2004, 2006, 2009
- Included students followed up at least two times

Sample Size
n=3,932



Methods

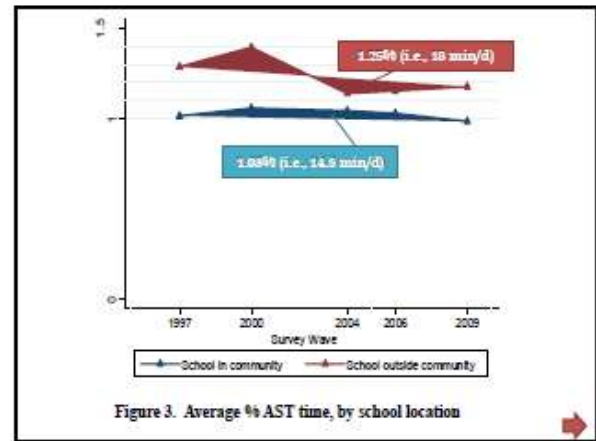
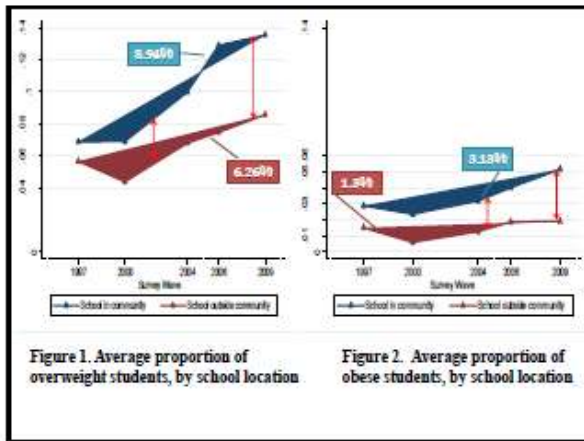
□ Trend Analysis

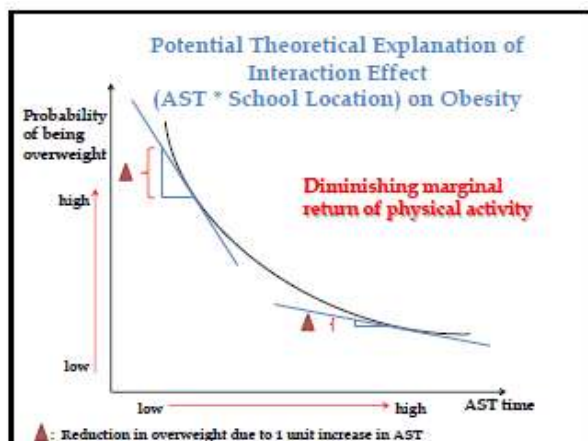
□ Regression Analysis

- Level effect of AST time and school location
- Interaction term: % AST time * school location

Methods

Outcomes	Key Explanatory	Other Covariates
<ul style="list-style-type: none"> • Overweight • Being obese • BMI z-score 	<ul style="list-style-type: none"> • % AST time • School located within or outside local community 	<ul style="list-style-type: none"> • Other exercises • Calorie intake • Household factors • Individual factors • Urbanization indices





AST, School Location, and Obesity			
Outcomes	Independent Variables	Without Interaction	With Interaction
Being overweight	% AST time	-0.00186	0.0109
	School location	0.0124	0.0424+
	% AST time * School location		-0.0269*
Being obese	% AST time	-0.00336	0.00516
	School location	0.00412	0.0241+
	% AST time * School location		-0.0179*
BMI z-score	% AST time	0.0199	0.0530+
	School location	0.0135	0.0911
	% AST time * School location		-0.0696

+p<0.10, *p<0.05, **p<0.01, ***p<0.001

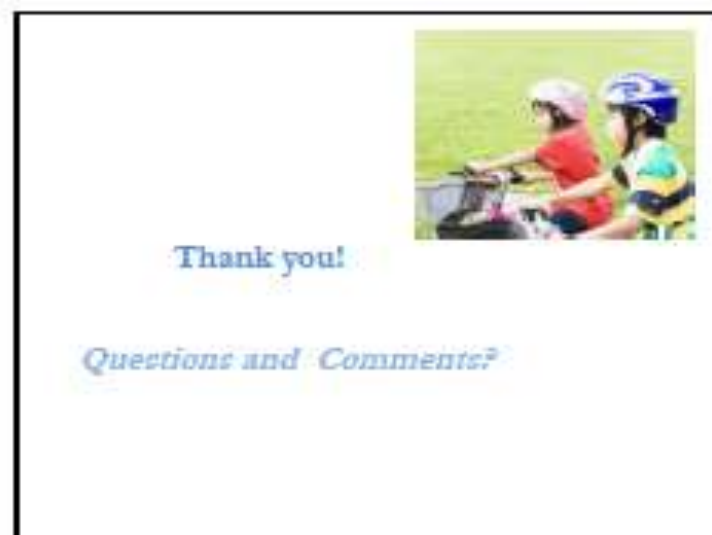
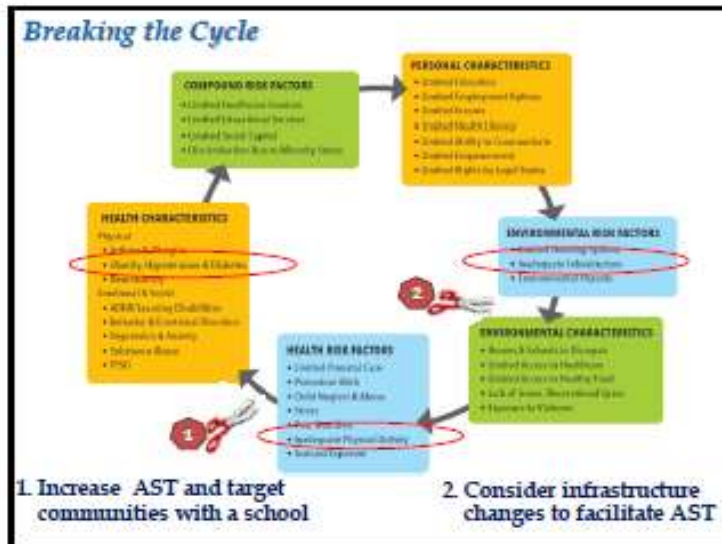
Summary of Key Findings – Differences Related to School Location

- ❑ Overall, no significant independent AST effect on obesity among all students
 - AST is not likely to impact every student
- ❑ A significant negative interaction effect of AST time and school location on obesity
 - AST is more effective in obesity prevention for students whose school is within community

Policy Implication – Based on Affluent Environment in China

- ❑ AST promotion in students spending less AST time
- ❑ Specially target students whose schools are in communities and the increase in their total AST quality
- ❑ AST alone is insufficient to address overall childhood obesity problem in China
- ❑ Obesity Vs. Hunger
– may be a different picture in less affluent environment of China





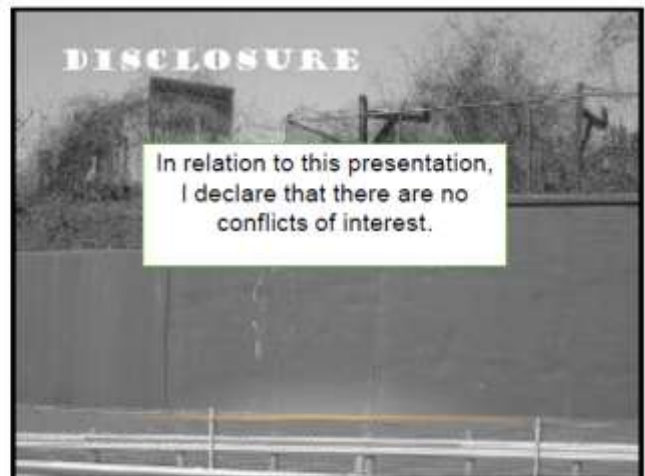
Theme: Adolescents

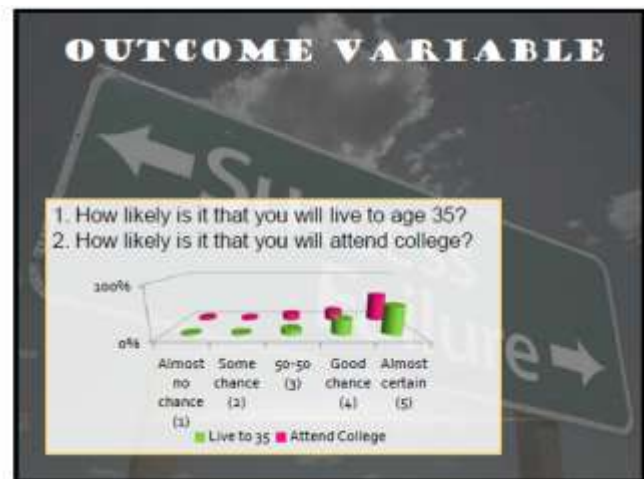
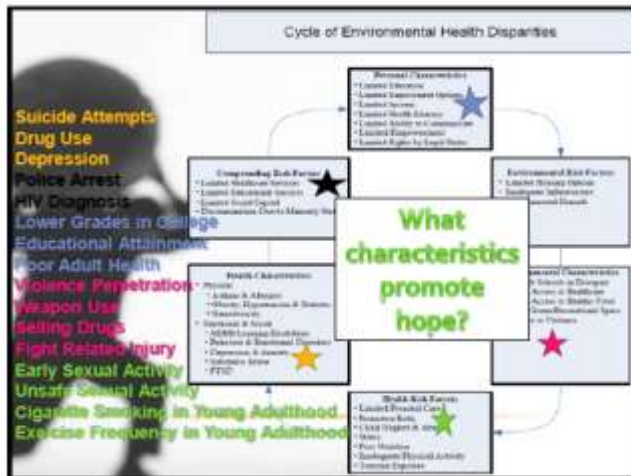
Finding Hope in Hopeless Environments

Ashley Bennett, MD (David Wood, MD, mentor)

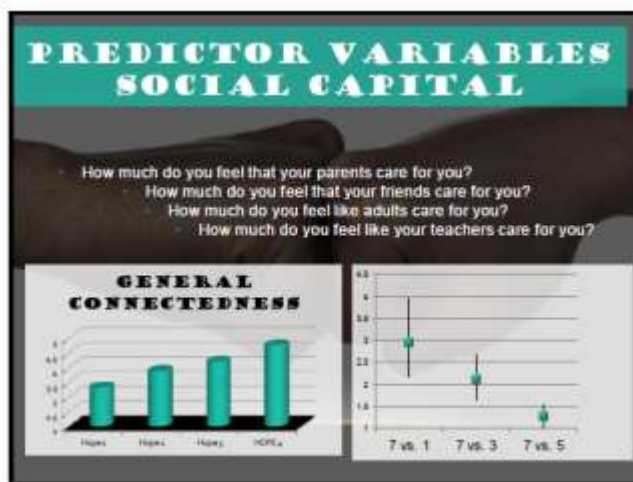
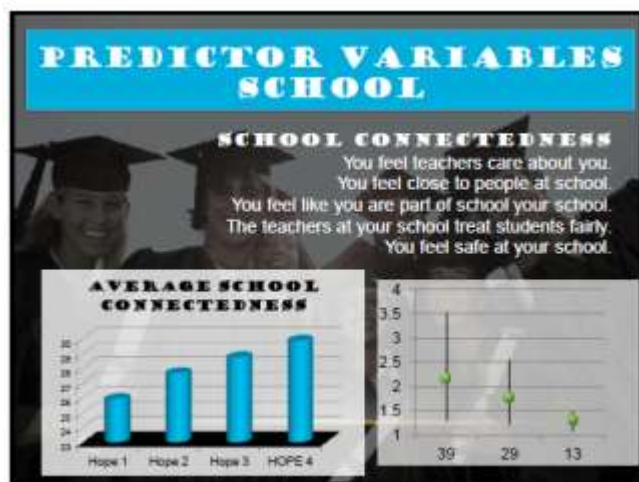
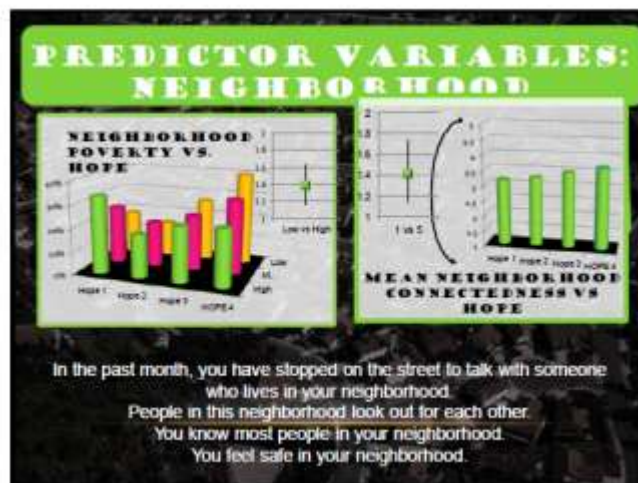
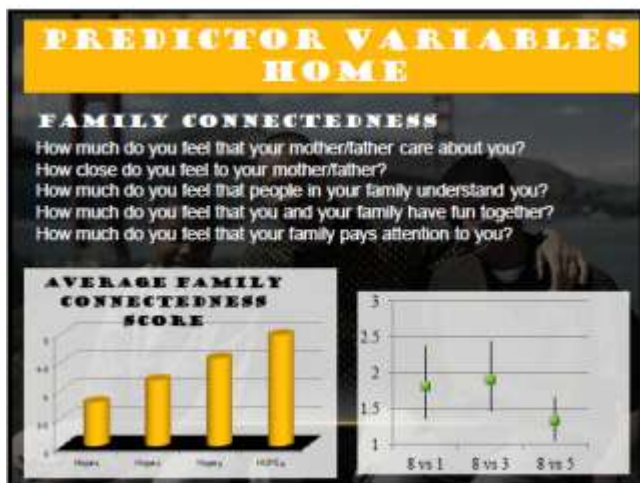
University of Florida – Jacksonville, Department of Community & Societal Pediatrics

The perception of hope influences an adolescent's risk for suicide and other risk-taking behaviors and is an important component of resiliency. Environmental characteristics influence the ability of an adolescent to maintain an internal state of hopefulness through the interaction of risk factors and protective factors in various domains. We propose to analyze Add Health, a nationally representative sample of adolescents in grades 7-12, to identify the contextual characteristics that influence adolescent hope and explore the interaction of the modifiable factors in disadvantaged environments. The database combines respondent in-home interviews and characteristics of their neighborhoods with data collected from their peers, school administrators, parents, siblings, romantic partners. We will use statistical methods such as hierarchical modeling and multiple logistic regression analysis to evaluate the magnitude and direction of associations between environmental characteristics and hope.









TAKE HOME MESSAGE

Hope is an important component of resiliency

Lack of hope results in significant morbidity and mortality as it is related to suicide and other negative outcomes

Adolescent hope is impacted by:

- Demographic characteristics at the individual and family level
- Educational Capital at the individual and household level
- Financial Capital at the household and neighborhood level
- Temporal characteristics from early childhood
- Environmental Capital and distribution of community resources at the household, school, and neighborhood level
- Social capital at all levels

Social Capital measurements strongly correlate with hope
AND mitigate effects of race and family structure

FUTURE CONSIDERATIONS

Which school policies promote school connectedness?

Does the income inequality of a neighborhood have a greater impact than neighborhood poverty?

Does public assistance increase the rate of hope in adolescents living in low income households?

How do parental reports of social capital impact adolescent hope?

How can public policy affect the allocation of other forms of capital?



ACKNOWLEDGEMENTS

Southeast Pediatric Environmental Health Specialty Unit

Innovative Solutions for Disadvantage and Disability

Sustainability Initiatives at Emory University

Center for Health Equity and Quality Research (CHEQR)

The National Longitudinal Study of Adolescent Health

This research uses data from Add Health, a program project directed by Kathleen Mullan Harris and designed by J. Richard Udry, Peter S. Bearman, and Kathleen Mullan Harris at the University of North Carolina at Chapel Hill, and funded by grant P01-HD31921 from the Eunice Kennedy Shriver National Institute of Child Health and Human Development, with cooperative funding from 23 other federal agencies and foundations. Special acknowledgment is due Ronald R. Rindfuss and Barbara Entwisle for assistance in the original design. Information on how to obtain the Add Health data files is available on the Add Health website (<http://www.cpc.unc.edu/addhealth>). No direct support was received from grant P01-HD31921 for this analysis.

Off the Mat: Piloting a Mindfulness Based Curriculum with Adolescents in East Harlem

Brenda Levy and Maureen Braun (Cappy Collins, MD, mentor)

The Mt. Sinai Hospital, Department of Pediatrics

There has been a growing interest among the general population in yoga and other mindfulness based practices (MBP) to decrease stress and improve mental and physical wellness. As popularity has grown, evidence for the emotional and physical benefits of these techniques has also grown. Studies have shown that yoga and relaxation techniques can significantly reduce aggression and helplessness and increase stress-coping in adults, but little research has been done in children. We conducted 10 weekly yoga and mindfulness sessions with 14 adolescent females at a local community-based organization in East Harlem. The program included a discussion of a pre-selected mindfulness topic, a yoga practice, and a health question and answer session based on anonymous health questions submitted by the participants. Mindfulness topics discussed included such topics as self-acceptance, focus, and resilience. To assess response to the program, we used two surveys, the Perceived Stress Scale (a validated tool) and a health utilization and access questionnaire, both administered before and after the 10 week program, to assess the usefulness of MBP in improving the teens' coping strategies and levels of stress. We hypothesize that MBP will increase healthy coping strategies and promote healthy behaviors in this high-risk population.

Off The Mat: Piloting a Mindfulness-Based Curriculum with Adolescents in East Harlem

Maureen Braun and Brenda Levy
Cappy Collins, MD mentor
Supported by a CATCH grant through the AAP





THE PROGRAM

10 weekly sessions

Fourteen female participants ages 12-16



A healthful snack

Health question and
answer session



Perceived Stress Scale

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate by circling how often you felt or thought a certain way.

Name _____ Date _____
Age _____ Gender (Circle) M F Other _____

0 = Never 1 = Almost Never 2 = Sometimes 3 = Fairly Often 4 = Very Often

1. In the last month, how often have you been upset because of something that happened unexpectedly? 0 1 2 3 4
2. In the last month, how often have you felt that you were unable to control the important things in your life? 0 1 2 3 4
3. In the last month, how often have you felt nervous and "on edge"? 0 1 2 3 4
4. In the last month, how often have you felt confident about your ability to handle your personal problems? 0 1 2 3 4
5. In the last month, how often have you felt that things were going your way? 0 1 2 3 4
6. In the last month, how often have you found that you could not cope with all the things that you had to do? 0 1 2 3 4
7. In the last month, how often have you been able to control irritations in your life? 0 1 2 3 4
8. In the last month, how often have you felt that you were on top of things? 0 1 2 3 4
9. In the last month, how often have you been angered because of things that were outside of your control? 0 1 2 3 4
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? 0 1 2 3 4

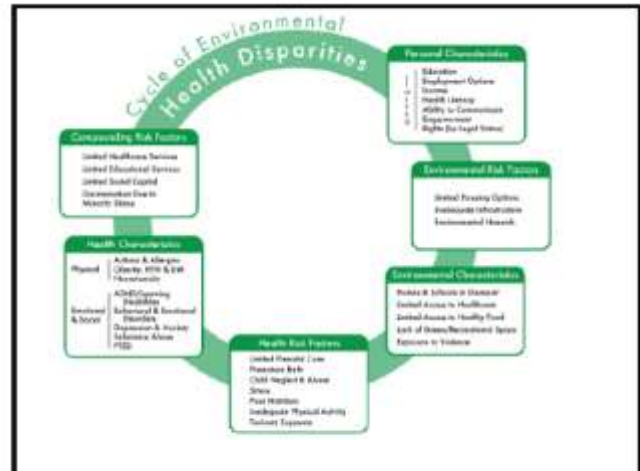
RESULTS

	Pre	Post	p-value
Overall PSS	28.9	25.6	0.05
nervousness and stress	3.6	2.9	0.03
ability to handle personal problems	2.1	2.6	0.05
ability to control irritations	2.4	2.9	0.03

LIMITATIONS

All Hispanic population
 Selection bias in who participated
 Female only
 Small sample size

• No control



Thank you

Cappy Collins

Leora Mogilner

Break the Cycle

The American Academy of Pediatrics/CATCH

Martha Andrade and Trish Gough, LSA
 Chia-Ti and Beth Navon, Lineage Project

Theme: Environment

Health Environment Including Oral Health Disparities in South Africa

Michael Rudolph, Wits Health Consortium



South Africa 2013

- Poverty - Gini Co efficient (measure of inequality greater than any other country)
- White/Black disparities remain
- Male/Female (regarding education and HIV)
- Urban/Rural - millions of SAs have migrated to 'richer' provinces in search of jobs and basic services- Gauteng population 9.2-million to 12.3-million
- Educational disparities
- Water and Sanitation
- Unemployment
- Health
- Food Security

SA Census Results - 2012

HUGE DISPARITIES IN SCHOOLS

Schools experience a wide range of health problems and some of them lie within the school:

- Drugs
- Teenage pregnancy
- Vandalism
- Poor nutrition
- Dirty toilets
- HIV/AIDS/STI
- Sexual harassment
- Worms



Others are problems of the surrounding community which impact on the school environment and on the health of learners and staff:

- Gangsterism, bullying, unhealthy homes

Health Disparities

- Quadruple scourge HIV/ TB; NCD; Maternal mortality; injuries MVA
- Lower socio-economic status is associated with a higher frequency of a variety of health problems
- Those needing good quality health care seldom receive it
- Lower socio-economic groups more likely than higher socio-economic groups to suffer from undiagnosed illness
- 16% of population have health Insurance

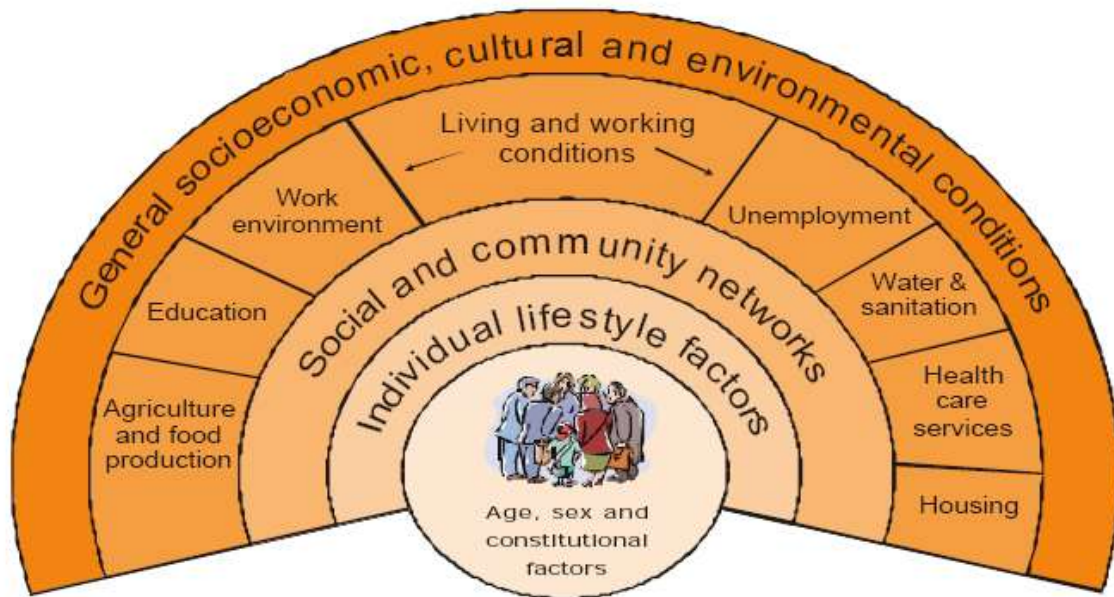
Socioeconomic Inequalities

- WHO- reducing inequities in health is an ethical imperative
- Socio-economic inequalities - substantial influence on health
- Inequality in income distribution not only affects the health of the poor, but also influences society as a whole
- Socio-economic inequality is observable both in the distribution of most health conditions and in the access to health care services

Oral Health Disparities

- Increasing trend of dental caries in the primary dentition
- Only 40 % of 6-year-old children are caries free, which is below the goal of 50%.
- The Decayed Missing Filled Tooth (DMFT) of 1.1 for the 12-year-old group is relatively low, but the major component of this index is untreated decay
- 20% of children presented with definite signs of dental fluorosis
- 60-80% of HIV+ and AIDS patients manifest with one or more oral lesions.
- 32% of 12-year-old children needed definitive orthodontic treatment.

Figure 1 *Factors Influencing Health*



Source: Dahlgren G and Whitehead M, 1991.

Oral Health Disparities

- Good oral health is a fundamental human right and an essential component of good health
- Ongoing oral health inequalities
- Lack of access to oral healthcare
- Unaffordability of OHC treatment
- Growing demand for oral health services
- Inadequate financial and human resources and facilities
- Inadequate political will/low priority
- Ineffective and inefficient application of evidenced based practice

Obstacles to successful oral health interventions include:

- Financial constraints
- No or little reference to oral health in National/provincial strategic plans for health
- Inadequate application of integrated & multi-disciplinary vision for district

Understanding Disparities

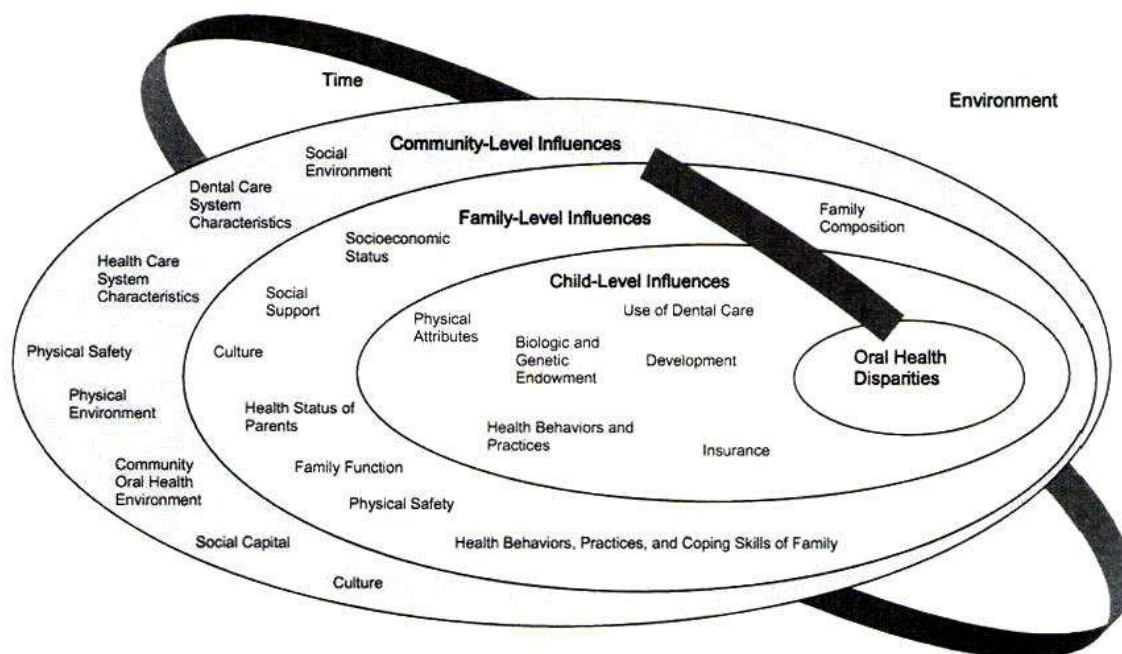


Figure 1 Conceptual model to understand oral health disparities [Adapted from *Pediatrics* (5)]. Adapted from *Pediatrics*, Vol. 120 (3), Page e512, Copyright (c) 2007 by the American Academy of Pediatrics.

Child/Family/Community Level Influences on Children's Health Disparities

Child-level domains	Family-level domains	Community-level domains
<i>Physical attributes</i> - Race/ethnicity/sex	<i>Family composition</i> - Family structure/household size	<i>Social capital</i> - perceived neighbourhood support
<i>Biologic/genetic endowment</i> - Birth order	<i>Socio-economic status</i> - Education/economic status	<i>Social environment</i> -% of population in poverty -neighbourhood attributes
<i>Development</i> - Age	<i>Health status of parents</i> - Physical/mental/education	<i>Physical environment</i> - % with access to fluoridated water
<i>Health behaviours & practices</i> - Special healthcare needs	<i>Health behaviours, practices & coping skills of family</i> - Parental child-rearing practices	<i>Dental care system characteristics</i> -Supply/race/ethnicity of dentists -Oral health professional shortage areas
<i>Medical insurance</i> - Public/private/none	<i>Culture</i> - Home language	
<i>Use of dental care</i>		

Oral Manifestations of HIV

- Erythematous and Pseudomembranous Candidiasis , Hairy leukoplakia , Recidivant aphtous ulcers
- Angular Cheilitis , Papilloma Human Virus , Herpes Virus and Non-Hodgkins Lymphoma
- Acute necrotizing gingivitis

Approaches and interventions - Primary Health Care Approach

- Equity
- Community participation
- Appropriate technology
- Intersectoral collaboration
- Health Promotion
- Re Engineering of PHC
- Team approach/district/management/leadership

Health Goals

- The provision of secondary & tertiary level care for all citizens
- Prevention of oral diseases & promotion of oral health
- Reduction of the burden of untreated oral diseases
- The Common Risk Factor Approach
- The development of population-oriented interventions
- The integration of oral health across health disciplines & sectors
- The implementation of evidenced based interventions
- Customized local oral health operational plans

Oral health interventions and programs:

- Are limited, isolated and compartmentalized, separating the mouth from the rest of the body
- Developed in isolation from other health initiatives
- Resulted in conflicting and contradictory messages being delivered to the public

Health Strategies

- The Reengineering of the Primary Health Care Approach
- Implementation of the Integrated School Health Programme
- Introduction of the National Health Insurance
- Task shifting/sharing/re profiling
- Morale and motivation of staff
- Taking services to where the people are

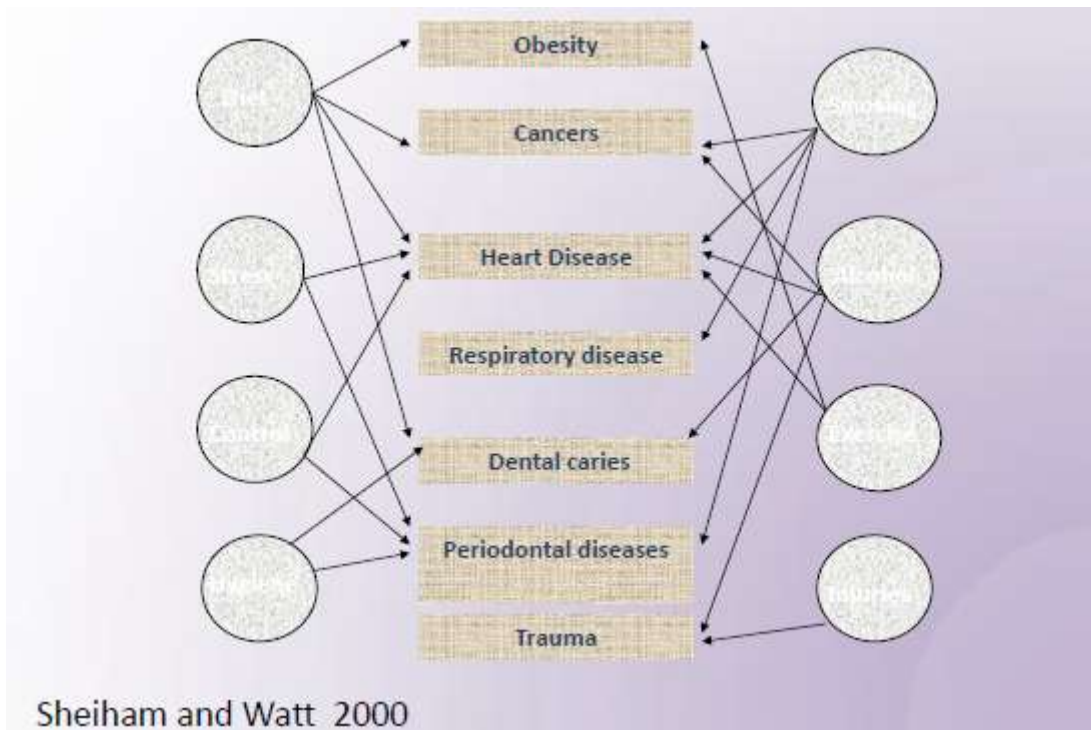
Integrated SCHOOL HEALTH



**Nutritious Food
Access to Health Services
Living Healthy
Rounded Education
Culture, History & Spiritually
Good friends
Control over Life**



Common Risk/Health Factor Approach



Typical Diets for school children



Millennium Development Goals

Reduce poverty and hunger, ('hidden hunger')

Biggest contributing factor for co-morbid diseases was **hunger**

- To achieve universal primary education.
- To promote gender equality and empower women.
- To reduce child mortality.
- To improve maternal health.
- To combat HIV/Aids, TB and other chronic diseases.
- To ensure environmental sustainability.
- To develop a global partnership for development.



Conclusion

- Lower socio-economic status is associated with a higher frequency of a variety of health problems
- Socio-economic inequality is observable both in prevalence of health conditions and in access to health care services
- High prevalence of (untreated)dental caries
- Addressing the broader social determinants has shown to be effective
- Common Risk Health Factor Approach (CRHFA) is a strategy that addresses broader social determinants

Recommendations

- Health promotion and disease prevention
- Effective and efficient use of human and material resources
- School-based children targeting preschools/ECDCs & primary schools
- Inter and multidisciplinary approach
- Good leadership/management
- Monitoring and Evaluation

In a world filled with complex health problems:

WHO cannot solve them alone.

Governments cannot solve them alone.

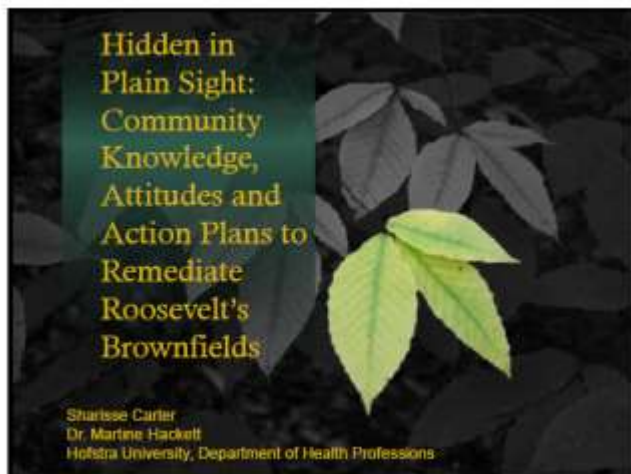
NGOs, the **private sector** and **foundations** cannot solve them alone.

Only through **new and innovative partnerships** can we make a difference.

Hidden in Plain Sight: Community Attitudes, Knowledge, and Action Plans to Remediate Roosevelt's Brownfields

Sharisse Carter (Martine Hackett, MPH, PhD, mentor)
Hofstra University, Department of Health Professions

Brownfields which are in close proximity to residential housing are a major concern for the community's children, and how their physical and mental developmental growth may be affected due to contaminants. Roosevelt, New York is a one square mile underserved, isolated community, with a population consisting primarily of blacks and Hispanics. Roosevelt is the home of three properties that have been identified by the New York State Superfund Program as Brownfield sites in need of remediation due to chemical contamination. Since these sites were designated over 5 years ago, little has been done to investigate the contamination to local groundwater and soil or the health consequences to children in the community. We hypothesize that local community members, including parents of children <18 years of age, are unaware of the existence of local Brownfield sites in the community and the risks they pose to their children's health. We have utilized Community Based Participatory Research techniques, including interviews, surveys, and focus groups with parents of children <18 and local stakeholders. By assessing the community's attitudes and knowledge of the risks of the Brownfield sites and developing a plan of action to address the concerns of the community, participatory action can be taken to improve children's environmental health.



Hidden in Plain Sight



Roosevelt: not your typical suburban community



Racial and spatial segregation



Background of the site: 20 West Centennial



Background of the site: 20 West Centennial



Method: Community Based Participatory Research

- Identifies and builds on the strengths, resources and relationships within communities and incorporates local knowledge to address communal health concerns (Minkler & Wallerstein, 2003; Metzler, Higgins, and Beeker 2003)
- To address environmental injustices CBPR recognizes that local people have a privileged form of knowledge and expertise about the places where they live. (Corburn, 2002)

Method: Community Participatory Based Approach

Key informant interviews with community leaders and environmental professionals (n=4)

Focus groups (n=9)

- community members who met specific requirements
 - They must live in Roosevelt.
 - They must have a child under the age of 18 years old.
 - And/or they live in close proximity to the brownfield located at 20 West Centennial Avenue, Roosevelt, NY.

Document review

Results

- 
- Most residents do not know what a brownfield is
 - All residents were outraged that one had existed in their community for so long without knowing

Results

- Spread information about environmental injustices by building community advocacy within the younger generation.
 - It is not a brownfield, it is a Superfund site!
- 

Thank you!

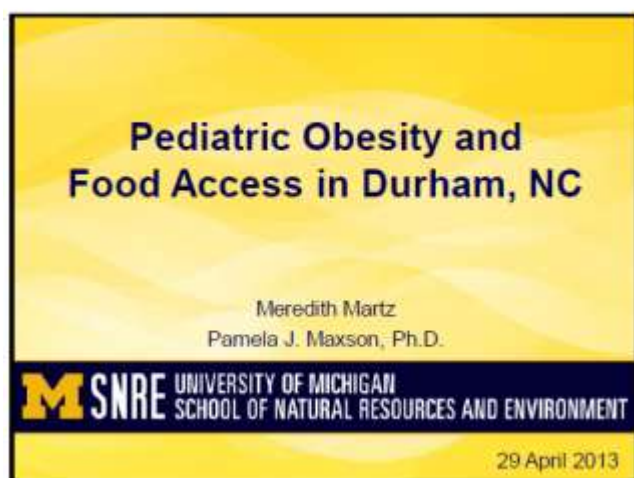
- Jacob Dixon
- Clara Gillens-Eromosele
- Choice for All Community Center
- Marlena Hamman
- Sustainable Long Island
- National Center for Suburban Studies at Hofstra University
- Lawrence Levy
- Dr. Leslie Rubin, Janice Nodvin, Break the Cycle 8 team

Pediatric Obesity and the Built Environment in Central Durham, North Carolina

Meredith Martz (Pamela Maxson, PhD, mentor)

University of Michigan – Ann Arbor, School of Natural Resources and Environment

Pediatric obesity is a burgeoning public health problem. Previous work has found that measures of the built environment are associated with childhood obesity. We will seek to evaluate the association between resources, both food and social, with childhood obesity in central Durham, NC, US. Measures of resources will be created through public and county data from Durham at the primary adjacency community level, which accounts for the environment of both the Census block in which a child resided and directly adjacent blocks. We will link built environment measures to 2007-2011 Duke University Medical Center well child visits for children aged 2-18 years. Using 2000 Centers for Disease Control Growth Charts, we will calculate age- and sex-specific body mass index percentiles to classify children as normal weight ($>5^{\text{th}}$ and $\leq 85^{\text{th}}$ percentile), overweight ($>85^{\text{th}}$ and $\leq 95^{\text{th}}$ percentile), or obese ($> 95^{\text{th}}$ percentile). We plan to use ordinal logistic regression models with cluster corrected standard errors to evaluate the association between childhood weight status and the built environment. This study leverages two unique databases (geo-referenced patient data on pediatric well child visits and a highly resolved characterization of the built environment) to explore key components of the built environment as they relate to childhood obesity. We hope to enumerate some specific approaches to breaking the cycle of pediatric obesity.



MSNRE | Food Access

- A poor food environment may lead to unhealthy dietary patterns
- Certain food environment characteristics may contribute to childhood obesity
 - High access to unhealthy food
 - Low access to healthy food
 - Food deserts

MSNRE | Food Access and Obesity



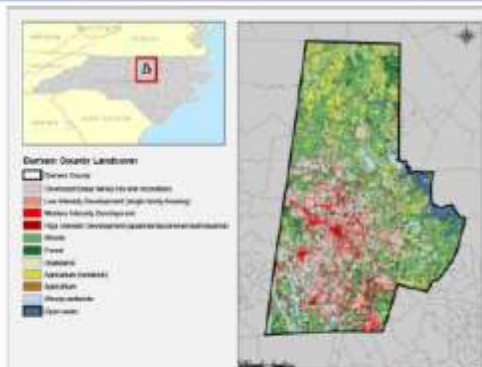
- High density of convenience stores → Less successful weight control
- High density of chain supermarkets → Lower BMI in adolescents
- Food-desert districts → Higher rates of overweight students and at-risk students

MSNRE | Research Question

Is food access in Durham, NC associated with BMI levels in children?



MSNRE | Study Area - Durham County



MSNRE | Duke University Medical Center Data

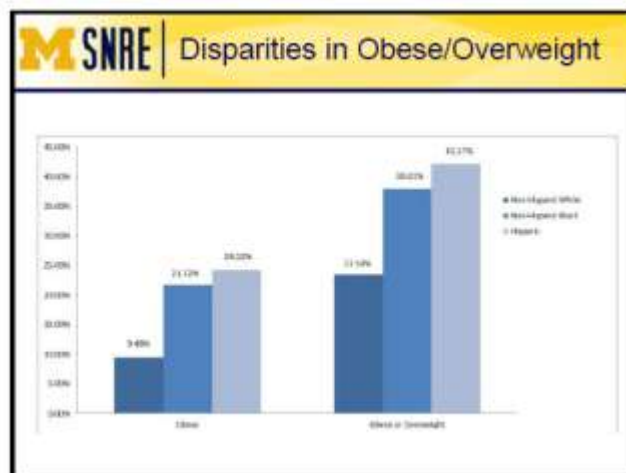
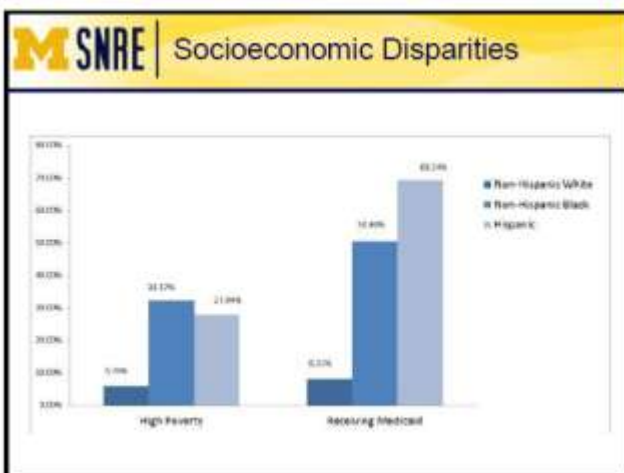
- Well-child visits
- 2008 – 2009
- Ages 2 – 18 years
- 7557 unique patients
- Weight classification based on 2000 Centers for Disease Control Growth Charts
- Addresses geocoded in ArcGIS

MSNRE | North American Industry Classification System

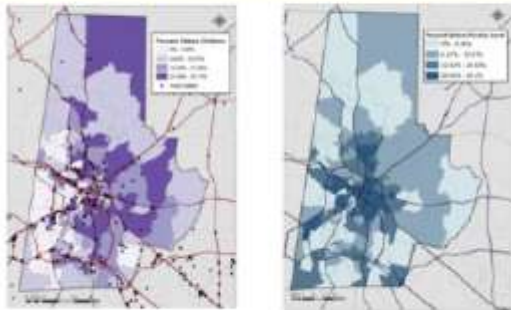
Classifications:

- Large Grocery
- Small Grocery
- Convenience
- Specialty

Food access represented by tertiles of each food category



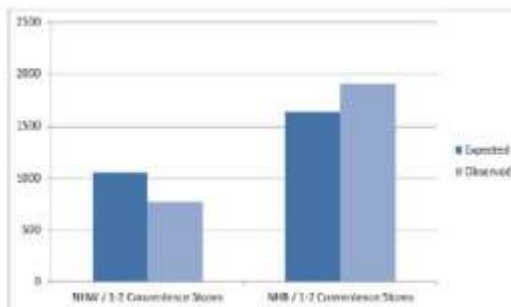
MSNRE | Obesity and Poverty



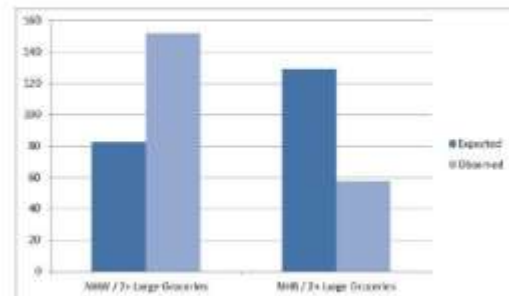
MSNRE | Analysis

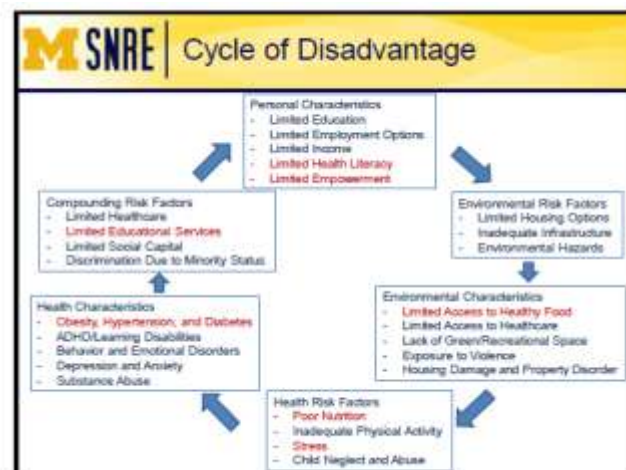
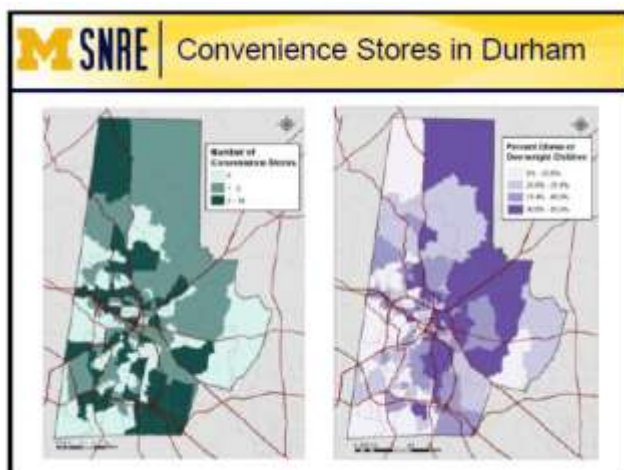
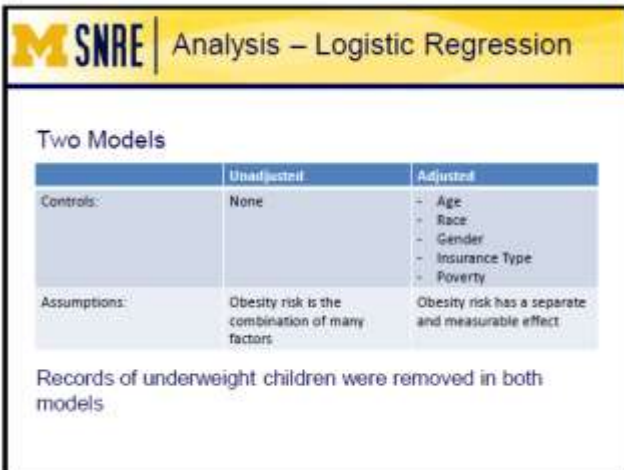
- Chi-square test
- Logistic multivariable regression
 - Food access predicting obesity
 - Food access predicting obesity/overweight
 - Controlling for age, race, gender, insurance type, and poverty

MSNRE | Food Access – Convenience Stores



MSNRE | Food Access – Large Grocery Stores







- ## MSNRE | Conclusion
- The effect of particular food outlets in Durham, NC on childhood obesity is unclear.
 - Low-income, minority communities have poorer quality food access.
 - Breaking the cycle is crucial to improving the health and well-being of our children.

- ## MSNRE | Acknowledgements
- Children's Environmental Health Initiative
 - Rebecca Anthopolos
 - Ben Strauss
 - Claire Osgood
 - Joshua Tootoo
 - Mara Geller
 - Innovative Solutions for Disadvantage and Disability
 - Sustainability Initiatives at Emory University
 - Southeast PEHSU
 - EPA grant RD-83329301-5

Community Role in Environmental Problems for Child Health in Santiago, Chile

María Soledad Matus, MD (Patricia M. Valenzuela, MD, MSc; Helia Molina, MD, MPH, mentors)
Pontificia Universidad Católica de Chile, Department of Pediatrics

In Chile, Acute Respiratory Infection (ARI) is the most common cause of pediatric hospital admissions and repeated visits for health care attention. Household pollution is one of the main risk factors. This problem is more critical in poor areas and crowded homes. Awareness and better understanding in families and communities about the relationship between environmental risk factors and infant respiratory diseases is essential to increase community mobilization and promotion of more frequent and targeted initiatives to improve both health and the environment. These initiatives seek to develop solutions from and with the local authorities. A questionnaire to measure the knowledge about the potential environmental risks at home will be applied to 50 families who attend a primary health care center in a poor and low income community in Santiago, Chile. Also, a participative diagnosis will be developed together with the community. Both results will be analyzed. A participative plan of action with the community and primary health center in terms of advocacy, resource mobilization, and solutions will be presented. Community involvement is a vehicle to achieve local solutions to improve health and children's development.




Department of Pediatrics
Facultad de Medicina
Pontificia Universidad Católica de Chile

Community role in environmental problems for child health in Santiago, Chile

Resident in Pediatrics: Maria Soledad Matus, MD
Mentors: Patricia M. Valenzuela, MD, MSc
Helia Molina, MD, MPH

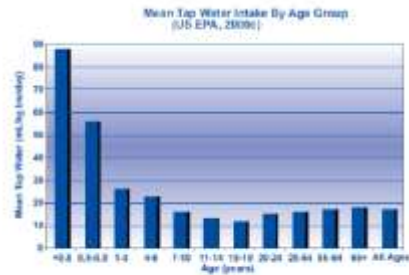
Introduction

- Health is determined not only by age, sex or constitutional factors.
- Between 30-40% of childhood diseases are associated with environmental factors.
 - Especially respiratory diseases.
- Every year, more than 3 million children under 5 years old die from environment related causes.



Introduction

- Childhood is a highly vulnerable period.



Introduction

- Children under 5 years old spend more than 90% of their time indoors.



Introduction

- In Chile, Acute Respiratory Infection (ARI) is the leading cause of pediatric hospital admissions and repeated health care attentions.
 - Household pollution is one of the main risk factors.
 - Critical in poor and crowded homes.



Research Question

- Which are the potential environmental risk factors at homes in families with children under 5 years old who attend a primary health center in a poor and low income community in Santiago, Chile?
- Are there any differences between healthy and asthmatic children?
- Does awareness and better understanding in families about the relationship between environmental risk factors and infant respiratory diseases increase community mobilization to improve health?

Method

- Descriptive study.
- Adapted "Breathe Easier" questionnaire applied to 50 families who attend a primary health center in a poor and low income community in Santiago, Chile.
- Convenience sampling.
- Participatory diagnosis together with the community and design a participatory plan of action.



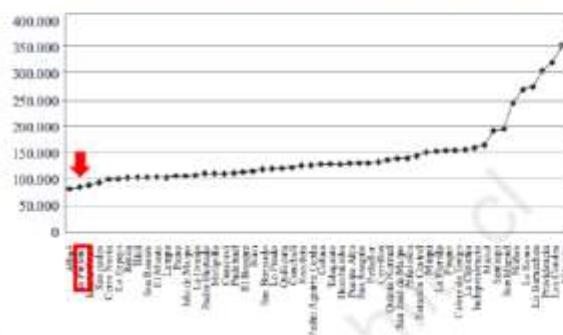
Method

- La Pintana: Low income area in Santiago, Chile.



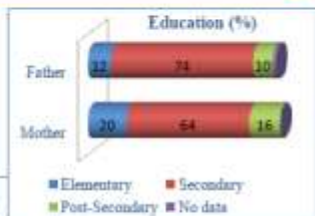
Method

Per capita household monthly income by county (pesos)

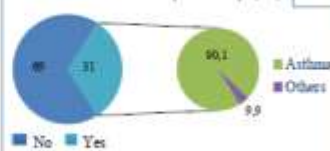


Results - Demographics

Residents at home = 6.1
(mean)
Children at home = 2.6
(mean)
Per capita household monthly income: 56% less than US\$210



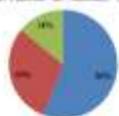
Morbidity History (%)



Results

How far is your home from a busy street or highway?

LESS THAN 1 BLOCK 1-4 BLOCKS 5+ BLOCKS



Does anyone smoke inside your home?

YES NO



Do you have animals living inside your home?

YES NO



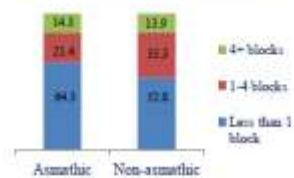
What is your principal heating source at home?

GAS ELECTRIC HEAVY OIL BOILER HEAT PUMP HYDRO HEAT WOODSTOVE



Results – Asmathic v/s Non Asmathic

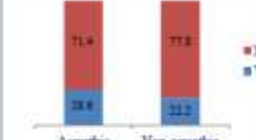
How far is your home from a highway? (%)



Results – Asmathic v/s Non Asmathic

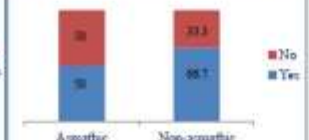
Does anyone smoke inside your home? (%)

YES NO



Do you have animals living inside your home? (%)

YES NO



Results – Asmathic v/s Non Asmathic

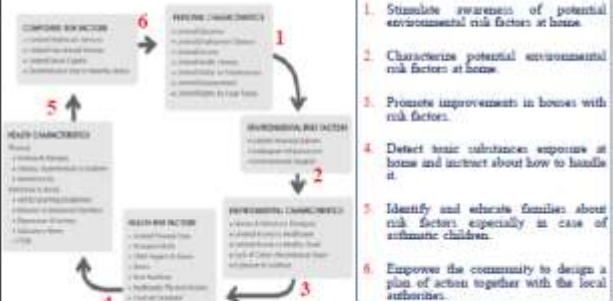
What is your major source of heat?	Asmathic (%)	Non-asmathic (%)
Gas	14.3	36.1
Electric	21.4	27.8
Peruffin	14.3	22.2
Woodstove	7.1	2.8
Don't have	42.9	11.1

Results – Participatory Diagnosis



How can we Break the Cycle?

CYCLE OF ENVIRONMENTAL HEALTH DISPARITIES



Acknowledgments

- Southeast Pediatric Environmental Health Specialty Unit, Emory University.
- Facultad de Medicina,
Pontificia Universidad Católica de Chile.
 - Trinidad Sánchez (Medical Student).
 - Javiera Martínez M.D. Ph.D.
 - Jaime Cerda M.D.
 - Nora Donoso (Social Worker).



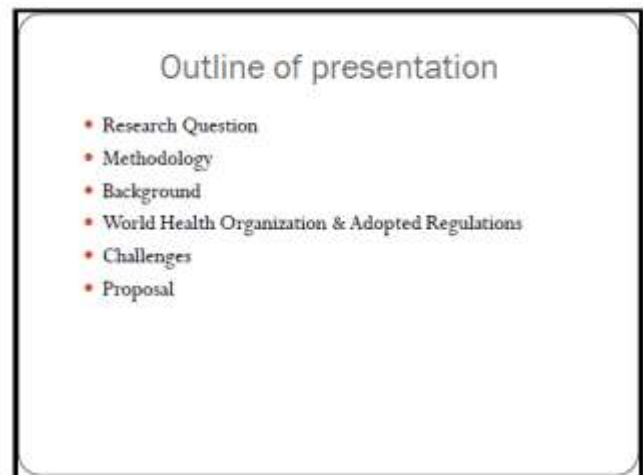
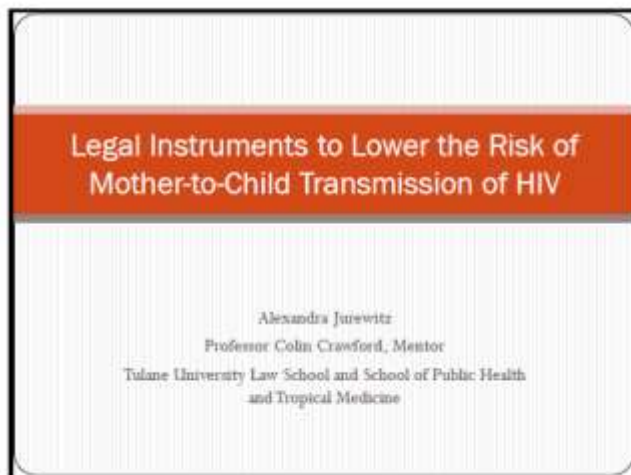
Theme: Maternal-Child Health

Legal Instruments to Lower the Risk of Mother-to-Child Transmission of HIV

Alexandra Jurewitz (Colin Crawford, MA, JD, mentor)

Tulane University, School of Law and School of Public Health and Tropical Medicine

In 2010, almost 400,000 children became infected with HIV, and mother-to-child transmission was a leading cause. In general, only around one third of those in need of antiretroviral medication actually have these medications available to them. Access to, as well as the timely use of, essential antiretroviral drugs can drastically lower the rate of HIV infections attributed to mother-to-child transmission. If an effective enforcement regime were in place that would guarantee delivery of, and adherence to, these medications among the most vulnerable, it would break the cycle of parent to child health disparities and help solve the problem of orphaned and vulnerable children due to HIV. By providing adequate treatment and educational support, especially to HIV-infected women desiring to start a family, the risk of future generations to acquire HIV from their mothers would be very low. By analyzing and comparing existing legal instruments regarding health and access to medication, as well as national responses to HIV epidemics, their shortcomings that allow this vicious cycle of mother-to-child transmission to continue will be apparent. A study of the aforementioned topics will come together as proposals of reform that will more reliably guarantee delivery of, and access to, antiretroviral drugs to those in need in developing and low-income countries where the problem is most severe, and especially to future mothers, in order to reduce future cases of mother-to-child HIV transmission and break this cycle of health disparity.



Research Question

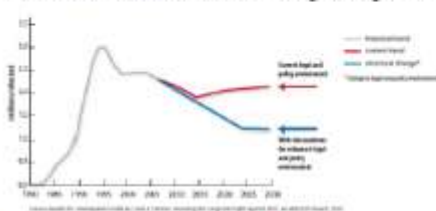
- How can legal instruments be used to increase access to antiretroviral therapy in order to halt mother-to-child HIV transmission and break the cycle of health disparities?

Methodology

- Description of HIV situation
- Analysis of problems arising from HIV infections
- Statutory analysis of relevant international laws
- Review of relevant national programs & case law
- Application of analysis to propose ways to 'break the cycle'

HIV/AIDS

Annual Number of new HIV infections among adults aged 15-49



- 2011: 2.5 million individuals newly infected with HIV
- Leading cause of death among women of reproductive age worldwide

Women and HIV



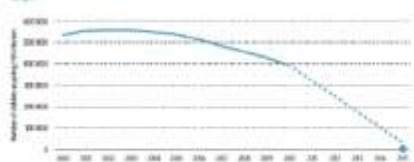
- Sub-Saharan Africa responsible for 72% of new infections in 2011
- 26 million HIV-positive individuals in sub-Saharan Africa
 - 57% are women
 - Account for 92% of world's population of HIV-positive pregnant women

Cover of "Countdown to Zero: Global Plan Towards the Elimination of New HIV Infections Among Children by 2015 and Keeping Their Mothers Alive, 2011-2015" - UNAIDS

Mother-to-Child HIV Transmission

- 2010: ~400,000 children infected with HIV
- MTCT = a leading cause
 - In utero
 - Labor and delivery
 - Breastfeeding

Figure 2: New HIV infections in low- and middle-income countries, 2000–2009, and 2010 target

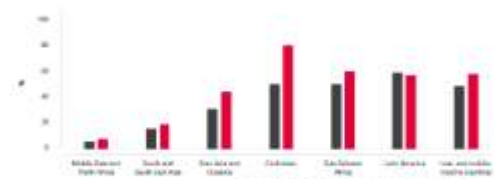


Source: WHO & UNICEF, Global Monitoring and Framework Strategy, 2012

Mother-to-Child HIV Transmission

- 2011: only 30% of treatment-eligible HIV-positive pregnant women received antiretroviral therapy

Percentage of pregnant women living with HIV receiving effective antiretroviral regimens for preventing mother-to-child transmission, by region, 2010 and 2011



Source: WHO & UNICEF, Global Monitoring and Framework Strategy, 2012

Orphaned and Vulnerable Children

- 2010: 25 million children orphaned due to HIV/AIDS
 - Orphan Children (as defined by United Nations)
 - Vulnerable – "One who is below age of 18 and meets 1+ additional criteria..."
- Increased
 - Poverty, discrimination, risk of labor & sexual exploitation
- Loss of:
 - Access to health care, family, education, nutrition

International Bodies and Laws

- World Health Organization
 - 1946 declaration
- Global AIDS Strategy
- WHO Constitution
 - Article 21
- International Bill of Human Rights
 - Universal Declaration of Human Rights
 - International Covenant on Economic, Social, and Cultural Rights
 - International Covenant on Civil and Political Rights
- International Health Regulations

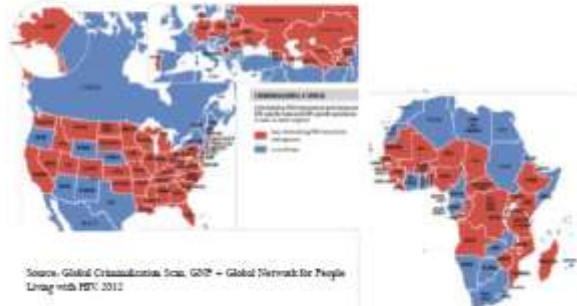


National Initiatives

- Brazil
 - Free antiretroviral therapy for HIV-positive citizens
- South Africa
 - National Strategic Plan for HIV & AIDS and STI
 - Treatment Action Center v. Minister of Health (2002)
- Zambia
 - Communication Intervention for MTCT Initiative

Practical Challenges

- Existing laws criminalizing HIV transmission

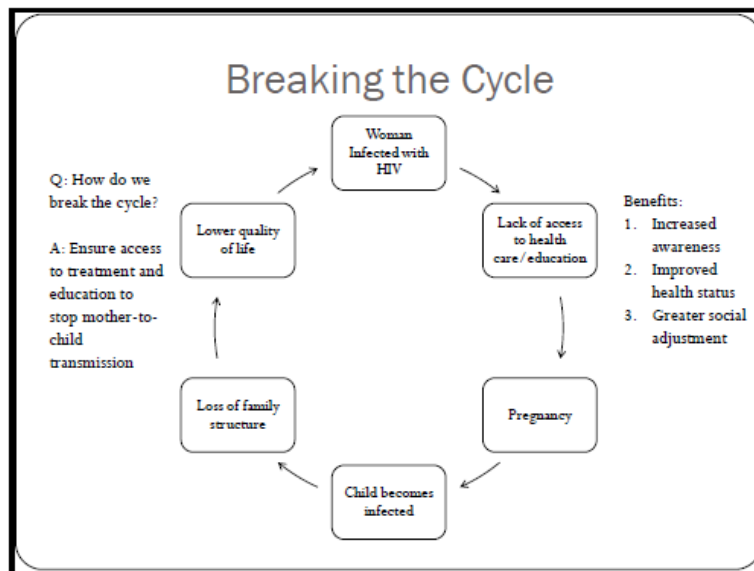


Practical Challenges

- Cultural barriers
 - Male Involvement
 - Customary and religious laws
 - Stigma
- Funding for treatment, education, monitoring, and evaluation

Proposals

- Continued Increase in Access and Availability of Antiretroviral Drugs
- Amend Laws Criminalizing HIV Transmission
- Increased Support and Protection for Orphaned and Vulnerable Children
- Increased Education
- International Monitoring & Responsibility



Acknowledgements

Southeast Pediatric Environment Health Specialty Unit,
Emory University

Centers for Disease Control and Prevention,
Global HIV/AIDS Program

Impact of Maternal Health Literacy Training on the Behaviors of Mothers Who Have Been Homeless

Danielle Oves (Bruce Perry, MD, MPH, mentor)

Georgia State University, Department of Public Health, Healthcare Management and Policy

Children's health outcomes are affected by multiple variables, including biological, environmental, psychological and social factors. Many determinants are decided after birth, depending on the surrounding physical and social environment that the child enters. Elements such as socioeconomic status, marital status, race, education level and access to healthcare, greatly affect the mother's health literacy, and, thus, her ability to adequately care for her child(ren). This project looks at the impact of maternal health literacy training on the behavior and knowledge of the mothers who have been homeless, at Mary Hall Freedom House, and ultimately their children. A survey was administered before and after the six-hour maternal health literacy training. The hope is to establish both short and long-term benefits, so an additional questionnaire was given to several women who were still in the program a few months after the training. In addition to the surveys at the Mary Hall Freedom House, extensive research will be done to compare the findings against past studies with larger sample sizes to establish consistency. Due to the small sample size and the transient population within the Mary Hall Freedom House and Healthcare Without Walls, there is a chance that the data may not be statistically significant or that follow-up may be difficult with most of the women. The ultimate hope is that enough data will prove the benefits of the maternal health literacy training in order to move forward with the implementation of a more consistent and mandated program within Mary Hall Freedom House and Healthcare Without Walls.



HEALTHCARE WITHOUT WALLS

- A medical home for children who have been homeless
- Provides access to medical care for the children
- Monthly clinics are held to respond to acute and chronic healthcare needs.



IMPORTANCE OF HEALTH LITERACY

- Definition: "An individual's ability to read, understand and use healthcare information to make decisions and follow instructions for treatment."
- Low health literacy affects 90 million people in the United States
- Women's health knowledge greatly affects their decisions prenatally and once the child is born.



BREAK THE CYCLE

CYCLE OF DISADVANTAGE AND DISABILITY



CYCLE OF CHANGE



MATERNAL HEALTH LITERACY TRAINING AT MARY HALL FREEDOM HOUSE



- Research Question: Will maternal literacy training impact the behaviors of the mothers, who have been homeless, at Mary Hall Freedom House in the short-term and the long-term?
- Ultimate Goal: The ultimate hope is that enough data will emerge regarding the benefits of this maternal health literacy training to move forward with the implementation of a more consistent and mandated program within Mary Hall Freedom House and Healthcare Without Walls.

TRAINING AND MANUAL DETAILS

- Childkind, Inc. is a team of professionals that include social workers, nurses and other experts within the community that promote safe homes for children with all levels of need.
- The manual and training module were a collaboration between Childkind, Healthcare Without Walls and the staff from Mary Hall Freedom House.



TRAINING DETAILS

- Childkind, Inc. facilitated and co-designed the training and manual
- 6 hour comprehensive training
- Pre and post multiple-choice questionnaires were administered before and after the training
- Each woman received a manual to keep after the training with detailed healthcare needs for their children
- A short answer questionnaire was given post 2-4 months



POST-TRAINING QUESTIONNAIRE

- General Information about questionnaire:
 - Questionnaire given 2-4 months after both the August and the December 2012 trainings to assess any attitude and behavior changes post training.
 - 5 women each from August and December trainings filled out the questionnaire.

OVERVIEW OF TOPICS COVERED

- Healthcare issues such as the importance of vaccines and protocols for fevers and injury
- The importance of establishing a medical home
- Helpful and necessary programs including Babies Can't Wait
- Actions to avoid: Smoking and drinking while pregnant, feeding children caffeine and leaving prescriptions accessible to children, etc.



RESULTS OF THE PRE AND POST QUESTIONNAIRES

	Pre-Test 1	Post-Test 1	Pre-Test 2	Post-Test 2
Date of Training	April, 2012	April, 2012	August, 2012	August, 2012
Number of Women	23	20	23	19
Results	83.61%	90.19%	85.40%	90.30%
Improvement		6.57%		4.84%
	Pre-Test 3	Post-Test 3	Pre-Test Overall	Post-Test Overall
Date of Training	December, 2012	December, 2012	Overall	Overall
Number of Women	15	13	65	62
Results	94.80%	95.32%	84.80%	84.32%
Improvement		1.02%		-0.50%

QUESTIONNAIRE FINDINGS

- Training topics most frequently recalled by the women:
 - Parental rights and legal processes within Georgia once child is removed from one's home
 - Understanding the accessibility of Medicaid and other needs based programs
 - Importance of finding a good pediatrician and medical home
 - Improved hygiene practices to reduce risk of illness
 - Milestones for healthy development
 - Appropriate methods of discipline

OBSTACLES AND ADAPTATION

- Obstacles and Limitations:
 - Not all mothers had all their children with them
 - Not all women who took pre-test were able to stay for post-test
 - Small sample size
 - High turnover rate and transient nature of population, thus inability to follow-up with many of the women in the long-term
 - Difficult to assess behavior changes toward children since a significant amount of the children were offsite with relatives or in foster care
- How we adapted:
 - By implementing post-training questionnaires that allowed the women to share their challenges and triumphs in their own words

RECOMMENDATIONS

- Used evidence based health literacy assessment tools, such as Rapid Estimate of Adult Literacy in Medicine (REALM) or Test of Functional Health Literacy in Adults (TOFHLA) to measure initial health literacy
- Validate the training throughout each component
- Focus on more preventative and prenatal elements
- Follow up with the women monthly



ACKNOWLEDGMENTS

I would like to thank the following people and organizations for their immense help throughout this process:

- PEHSU
- ISDD
- Mary Hall Freedom House
 - childkind, Inc.
 - Dr. Bruce Perry

Project GRANDD Revisited: A community-based learning experience for Nurse practitioner students

Melissa Anne Beaver (Maeve Howett, RN, PhD, and Janice Nodvin, BA, mentors)

Emory University School of Nursing and Institute for the Study of Disadvantage and Disability

This project is an activity within the larger scope of Project GRANDD. Seventeen pediatric and geriatric nurse practitioner students from Emory paired up to meet nine grandparent families in September 2012. METHOD: Students performed a windshield survey of each grand-family's surrounding community, a safety assessment of each home environment, and ultimately created care plans for each grandparent and a specified grandchild. Each pair of students met with their grand-family three times in the fall semester and three times in the spring semester. Barriers to healthy living environments and health care access were identified in every grand-family's situation. Monthly "lunch and learn" sessions were held for students to share barriers identified, progress made, and to give support. There were many common barriers such as lack of transportation, lack of healthy food options, lack of social support, and inadequate access to health care identified among the grand-families. The list of resources identified by the nursing students will be compiled into a booklet to be handed out to new families selected for Project GRANDD starting in August 2013.

Project GRANDD Revisited:

A community-based learning experience
for nurse practitioner students

Melissa Beaver, RN, BSN
Emory University, Nell Hodgson Woodruff School of Nursing
Mentors: Maeve Howett, PhD, APRN, CPNP-PC, IBCLC, and
Janice Nodvin, BA

Background

- Support program for grandparents who are primary caregivers of grandchildren with developmental, behavioral, or learning disabilities and chronic illnesses
- Participating grandparents usually have poor health & lack of access
- Project pairs nurse practitioner students from Emory University with these grandparents to improve overall family health



GRANDD overview (Grandparents Raising and Nurturing Dependents with Disabilities)

- 17 Pediatric & Geriatric NP students
- 8 grandparent families in Sept 2012

Methods Used

- Windshield survey of surrounding community.
- Safety assessment of each home environment.
- Health assessments
- Created care plans for each grandparent and a specified grandchild.
- Personal in home visits – 6 within year
- Barriers to healthy living environments and health care access were identified.
- Monthly sessions held for students to share barriers identified, progress made, and to give support.

Research/Discussion

- Identified common barriers during monthly lunch sessions with NP students in Fall 2012
- Brainstormed useful resources to help each family in Spring 2013



Environmental Barriers

Grandchildren	Grandparents
Hazardous living conditions (smoke, mold, cats, roaches)	Lack of transportation
Unsavory local influences	Lack of mobility devices within house

Economic Barriers



Grandchildren	Grandparents
Lack of proper therapy/programs	Too young for Social Security
Lack of afternoon supervision or activities	Inadequate finances for family size

Health Barriers

Grandchildren	Grandparents
Not enrolled with Medicaid	Not yet eligible for Medicare
Inadequate nutrition	Lack of self-care



Home Visits



Student Perspectives

"Actually accessing resources is even more complicated than these grandfamily environments"

"We've seen that persistence pays off"

"I feel like the family I work with has taught me more than I could ever have imagined teaching them."

Case study: Our experience



Before & After



Resources Identified

- Atlanta Regional Commission
- Emerging Lifelong Communities
- Project Helping Hand
- Upwards for kids
- Section 8 housing
- Food pantries
- Smoking cessation hotline

How We Are Breaking the Cycle



Theme: Urban Agriculture

The Siyakhana Initiative for Ecological Health & Food Security



Siyakhana Initiative for EcoHealth and Food Security

Siyakhana = 'building one another'

- A division of the Wits Health Consortium and linked to several departments at Wits and other tertiary institutions
- demonstration sites of urban and peri-urban vegetable gardens/farms in Joburg Metro
- A national teaching, training and research centre

Focus areas

- **Education and Training** in sustainable agriculture, ecological health, nutrition, health promotion
- **Food security and Health Promotion**
- **Advocacy and Consultancy**
- **Urban design**
- **Policy and Strategic Planning**

Food security

- Availability production distribution
- Accessibility allocation preference
- Affordability
- Utilization- nutritional value, social value, social aspiration, food safety
- Resilience/ Stability over time

South Africa Statistics

50% of the South African population
(many unemployed and living in poverty)
are food insecure

Starvation of Micronutrients
Hidden Hunger
A Health and Social Crisis

Lancet Report

Science and Media Centre - Jan 2008



- Nutrition has slipped through the net
- One third of child deaths are due to under nutrition
- The nutrition system is fragmented, dysfunctional and in desperate need of reform

Policies and programmes



- Primary Health Care approach
- Re engineering PHC
- Health promotion policies
- Food Security
- Integrated School Health Programme
- Scaling up Nutrition

Siyakhana Approach – ECOLOGICAL HEALTH PROMOTION



Source: Hancock, T. 2003. Health, Human Development and the Community Ecosystem.
From ecological models for health promotion International JH 3: 44-49



MILLENNIUM DEVELOPMENT GOALS (MDGS)

Reduce poverty and hunger, ('hidden hunger')

Biggest contributing factor for co-morbid diseases was not HIV **but hunger**

- Achieve universal primary education.
- Promote gender equality and empower women.
- Reduce child mortality.
- Improve maternal health.
- Combat HIV/Aids, TB and other chronic diseases.
- Ensure environmental sustainability.
- Develop a global partnership for development.

ECOLOGICAL HEALTH PROMOTION IN URBAN DESIGN

- Health benefits to the wider population can be achieved by facilitating the development of urban environments that promote health, equity and economic development.



Frieden, T.R. 2010. A Framework for Public Health Action: The Health Impact Pyramid. *American Journal of Public Health*

PERMACULTURE

Care for the Earth,
Care for People,
Fair Share
Promote Life

Mirrors the **bottom line** of environmental, social and economic sustainability and health.



Siyakhana Interventions

- Siyakhana Garden
- Schools
- Health centres
- Small scale farm

The Siyakhana Garden

- Supplies produce to local **ECDCs** and NGOs that provide home-based care to HIV+/AIDS patients
- Employs **9** full time gardeners
- Ecological and integrated model
- **Training and research platform**
- Community engagement



Building Capacity and Skills Transfer

- sustainable agriculture
- mushroom production
- business
- set up a food garden in your community
- training of trainers
- health promotion



School programmes

ISHP

Yeoville Boys

Yeoville Community

Community

Health Care Centres

Children homes

WRHI



Government

Health

Agriculture

Economic Development

Education

Social Development

Ekhurhleni Metro Health Dep.

Joburg and Tshwane

Universities

UJ

UCT

AFSUN

Global

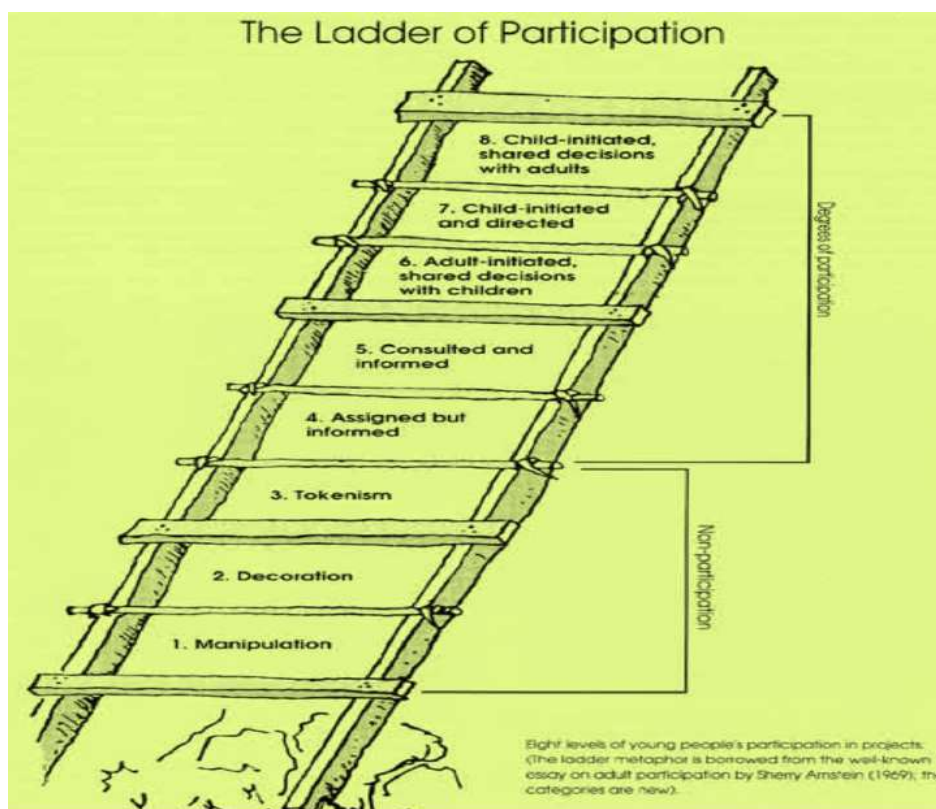
School Settings

1. **Nutrition:** provide diversity of fruits and vegetables
2. **Learning opportunities:** learning spaces, curriculum implementation
3. **School upliftment:** school greening, environmental awareness, aesthetic ownership
4. **Integrated School Health Programme**
5. **Community engagement**

Eco orientated Schools:



- Provide frameworks for integrated curriculum development
- Help to organise environmental activities
- Enable co-operative policy development
- Help manage a school's resources wisely
- Learners participation in a pleasant environment



Yeoville Boys' School & Yeoville Community School



Children who **exceed** WHO/FAO intake recommendations for:

Sugar	82%
Trans-fats	41%
Total fats	43%

Children who **fall short** of WHO/FAO recommendations for:

Fibre	66%
Protein	45%
Vitamin A	36%
Vitamin C	25%
Calcium	22%

Energy intake below FAO energy requirements estimates:

1746.2 kcal vs. 2150 kcal

Vegetable & fruit intake:

Less than 1 portion of each per day on average

Costs

1 Case Study Project / 1 school/year

Equipment and inputs > R25000
Establishment (training school gardeners) > R15000

PM and Facilitators = R150000
1x Curriculum Integration Specialist
1x School Garden Implementer
1x Community engagement facilitator

AWARENESS, INTEREST, OWNERSHIP, INTEGRATION of DISCIPLINES

UPSCALING WOULD COST LESS /SCHOOL

Commercialisation

Buy-back schemes

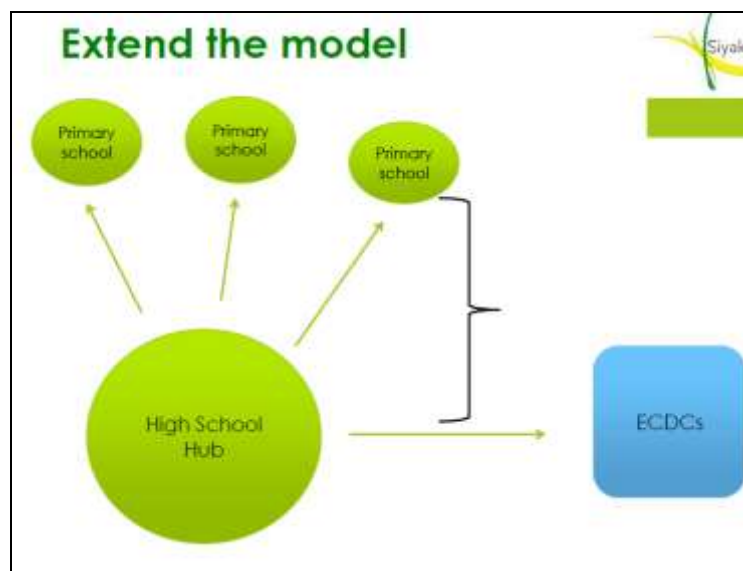
Box schemes

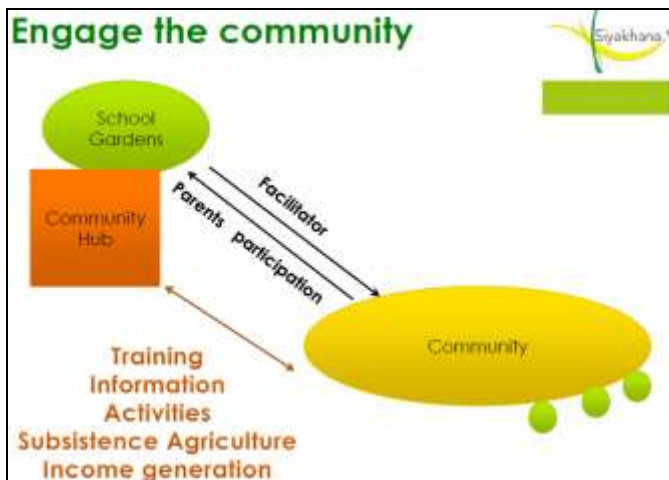
Salts creams

Micro-credit

Co-operatives organisation

Business development and entrepreneurship training





Siyazondla Homestead Food Gardens Programme



Findings

Many of recipients still gardening 1-2 years after initial training and tools. **BUT**

Food security outcomes could be greatly improved with investment in **longer-term sustainability**

- **training** should address resilience and techniques for long term productivity of gardens. It cannot be once-off.
- **increase follow-up**
- **develop local networks**
- **focus on winter productivity and pest management**

Resource HUB

Application of lessons learnt

1. Decentralised and localised extension model: enable peer teacher and community learning
2. Utilization and enhancement of existing resources:
 - Schools as Supportive hubs**
 - Gardens to be initiated or improved**
3. Budgets
4. Sustainable methodology and technology
5. Building skills: gardening, business management
6. Logistic
7. Access to water and Land
8. **Institutional linkages**



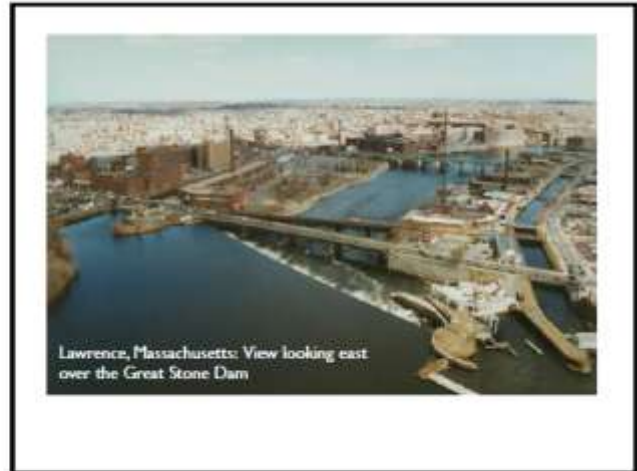
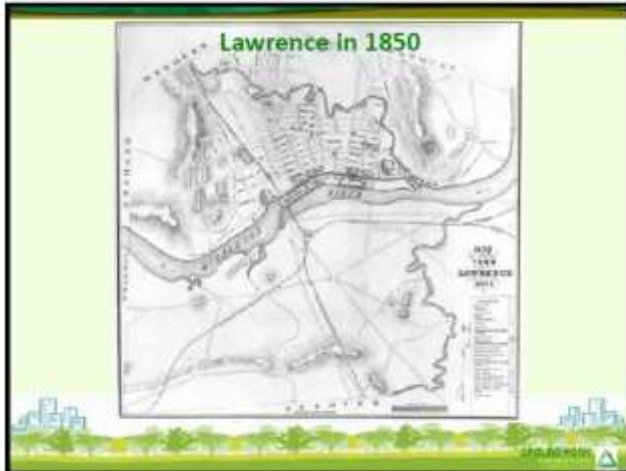
Education
Nutrition
Health promotion
Environment
Community engagement
Job creation
Income generation

*Only through strong leadership,
new and innovative partnerships
can we alleviate poverty and
hunger, address nutrition,
improve education, restore
dignity and hope and thus make
the difference we all want.*

Breaking the Cycle by Changing the Context - Ours, Theirs and Urban Agriculture

We all know the many adverse factors that contribute to poor health in the inner city, particularly among the young: neighborhoods with poor soil and air quality; urban food deserts resulting in poor nutrition, obesity, diabetes, psychological disorders, deficient growth of infants; unwanted or inadvertent pregnancies, suicide, substance abuse, perpetual trauma. All of those factors are exacerbated by poverty, high unemployment, broken homes, neighborhood instability, civic disengagement, crime, and youth violence. Too often, the devastation caused by youth violence is categorized as a tangential separate criminal justice issue, but the violence itself is a serious health issue that needs to be included in the recipe for breaking the cycle. Urban agriculture is a cost- efficient, trans-generational tool that can be utilized to address all of the other issues. It is increasingly recognized that the greening of the inner city stabilizes neighborhoods, induces civic engagement and reduces crime and violence - all resulting in healthier citizens. Mr. McCabe will discuss the relationship of all these factors and give some real life examples from his work and that of his colleagues in Lawrence, Massachusetts.





Conditions



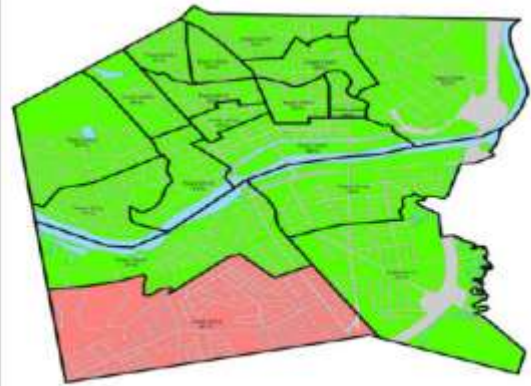
- 6.8 square miles of area
- Divided by a post-industrial river
- Highest number of environmental justice communities in the state
- High levels of residential density in close proximity to downtown
- Existing vacant lots with varying levels of contamination
- Remnant building materials from mill demolition
- Ideal for Smart Growth- Back to the Future- A planned city

Social Services Dilemma
or
Urban Planner's Dream?

City of Lawrence in Context

- One of the FIRST planned industrial cities (circa 1845)
- focused on living near the mills and efficient planning
- 30 miles north of Boston
- One of the poorest cities in New England with over 50 % of families below poverty level
- Population approximately 76,400
- Per capita income of just \$14,753
- Homeownership rates 35% citywide (1/2 state average)
- Unemployment rate 18% (twice the state average)
- 37% of residents hold HS degree
- Young population (41% under age 24-33% under 15)
- Diet and lifestyle-related disease rates soaring
- Highest rate of obesity and diabetes in Ma.
- Highest rates of foreclosure in MA
- 78% of population is Latino
- State's First Elected Latino Mayor

Low/Mod Percentage (by census tract)



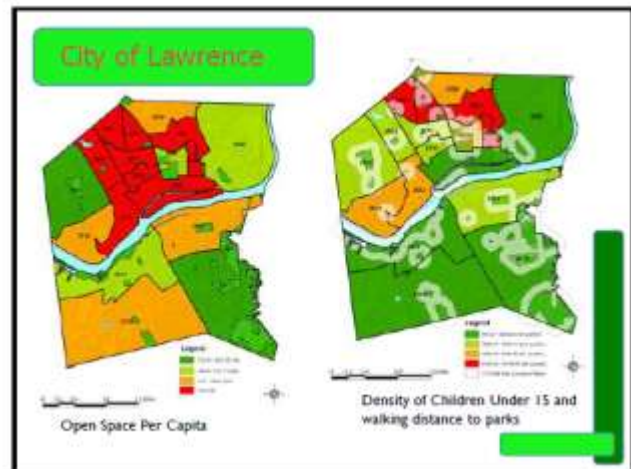
GIS Services
Lawrence IT Department
Mayor Wilfredo Rodriguez



City of Lawrence



Arlington Neighborhood



Opportunities

- Proximity to urban transportation center makes Lawrence ideal for development
- Density and access to amenities creates opportunities to develop communities that support live/work/play
- Missing component is high quality of life which will evolve with an engaged constituency of residents
- These efforts are building blocks and part of a much larger plan
- These projects have become a vehicle for community organizing
- Urban Agriculture for community gatherings or contemplative area
- EMBRACE OUR FUTURE – ENGAGE OUR YOUTH

Short Term & Long Term Goals

- Clean up abandoned space
- Utilize abandoned space
- Provide space for growing own food
- Provide opportunity for microenterprise (farm stands)
- Increase sense of safety and well-being
- Stabilize neighborhoods
- Ideal for teaching life / work skills
- Reduce Youth Violence
- Create Opportunities for Civic engagement

Site Selection

- < 3000 square feet (too small for redevelopment)
- High employment- transient population -high crime
- Brownfield site : presence of real or perceived contamination
- Environmental Site Assessment (Phase I, Phase II)
- Located within a floodplain (prohibitive for development)
- Accessible by foot for much of the neighborhood
- A minimum of part-sun exposure / solar orientation
- Consideration of sustainability and stewardship for future care and maintenance
- Highly visible from streets
- Source for water for irrigation
- Don't be afraid to approach the neighbors for help!



Neighborhood Community Garden Initiative

Methods

- Identify city-owned vacant lots
- Prioritize based on established criteria:
 - Location/neighborhood
 - Size
 - Flood plain
- Initiate Phase I Environmental Review
- If feasible, design community garden or open space



Map created by MIT Lawrence Foundation, 2010. Data compiled from MIT Lawrence Foundation, 2001 and 2006, Lawrence Division's Office, and Lawrence residents.

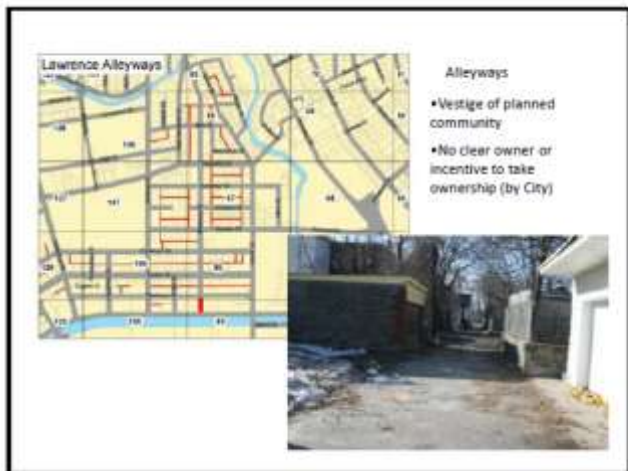
City of Lawrence



Examples of Vacant lots in the City







Alleyway and Vacant Lot Cleanups



Construction of Alleyway Garden-Union Mechanic Community Garden



Union Mechanic Alleyway Community Garden



Union Mechanic Alleyway Community Garden



Union Mechanic Alleyway Community Garden



Sherry and Victor Steward in the Garden

Alleyway Reclaimed Orchard and Garden Alleyway



Keys to Success

"Gardening is a universal
and timeless language."

Keys to Success

ALWAYS: PATIENCE & PERSISTENCE

"Every journey of a thousand miles . .
. . . begins with a single step"

Keys to Success

- KNOW YOUR COMMUNITY
- HAVE A VISION
- BUILD PARTNERSHIPS AND CREATE SHARED OWNERSHIP
- INVOLVE YOUTH
- ALWAYS: PATIENCE & PERSISTENCE

Keys to Success

• HAVE A VISION

Set Long-term Goals and Break them into Manageable Parts

- Establish careful site selection criteria
- Identify resources | opportunities and challenges | impediments
- Analyze and differentiate between resources and obstacles
- Establish Open Space Plan, City-wide Master Plan, Consolidated Plan, Action Plan, State guidance documents, Regional Planning Organization technical assistance

Leverage Resources and Cluster Projects

- Match and leverage complimentary funding sources : local | state | federal | private
- Marshal resources and leverage assets by identifying complimentary and clustered projects
- Be conscious of the opportunity to use the garden as a vehicle for bringing the community together

Keys to Success

What's not to like about urban agriculture?

What is community?

The Village elder - Old can teach the young, Young can energize the old!

Parents can put fresh vegetables and fruit in the table!

The neighborhood can have its watering hole where to congregate!

Isolated teens can reconnect with the neighborhood

".....the presence of the youth of eternal summers
in the garden." Van Morrison, 1968



Use right all of the work & your communities

- have long term plan like the Lawrence open space plan;
- break it into manageable parts like Spicket River Greenway Project;
- identify key building block parcels;
- demolish blighted properties in target area;
- set aside vacant parcels for open space or future use;
- combine funding and cluster projects;
 - A. EPA and State environmental funding;
 - B. HUD, CDBG, AND NSF funds;
 - C. Open space funding;
 - D. Private foundation funding;
 - E. Not for profit funding;
 - F. Private sector funding or sponsorship;
 - G. Identify partners and spread ownership



Patience and Persistence



Contact

Art McCabe, Manager
Community Development
City of Lawrence
225 Essex Street
Lawrence, MA 01840
Direct: 978-620-3516
amccabe@cityoflawrence.com



Urban Garden Tour

Nickel Bottom/Zonolite: Reclaiming an Urban Brownfield Community



This is an example of inspiration: The desire to build a food garden and walking trails along the South Fork of Peachtree Creek led the South Fork Conservancy, Lindbergh LaVista Corridor Coalition, and Zonolite businesses to plan for improvements to 14 acres of DeKalb County park land in collaboration with the EPA and its remediation of Brownfield areas.

For years, a neglected dozen acres of DeKalb County land sat lumpy beside a main tributary to Peachtree Creek. Neighbors would turn up Creek Indian pottery in the water, but nobody could see the land for the kudzu and privet choking the banks. The manufacturer that had processed vermiculite there long ago left it contaminated with low but still potent traces of asbestos, defying a cleanup for decades.

Until three years ago. Neighbors wanting more room for a community garden joined neighbors wanting trails along the half mile creek bank. The EPA heard of the plans for a garden, with children tossing dirt happily into the air. Soon, scientists in space suits tested the dirt and forced the former polluting manufacturer to remove 27,000 tons of contaminated dirt.

The flood plain loved having more room to let storm water ease into the creek. A rain garden now holds bog plants and iris. A nearby restaurant is helping raise money to build raised bed plots. And Trees Atlanta joined the trail planners, restoring green trees and bushes, including blue berries, beside the rain garden. DeKalb County built a bridge, and the trails are welcoming to hikers and gardeners who want to see the creek and the forest on its banks.

Barundi Women's Farm



Located at 121 Sams Street in Decatur (across from the Avondale MARTA station on College Avenue), this start-up urban farm project is a partnership with Susan Pavlin, Refugee Family Services, and farmers from Burundi who have come to metro-Atlanta as refugees. With leadership from experienced Burundi farmers, a group of Burundi women are joining together to grow food, exchange farming knowledge, and develop a greater understanding of farming practice in the Atlanta area. Practical farm experience, combined with workshops and field trips to local farmers markets, will create new opportunities in production, distribution and marketing. The farm will also provide families, which are often facing food security risks, with healthy food for their tables.

Historic Westside Gardens



Historic Westside Gardens, Inc (HWG) is a community-based nonprofit organization addressing disinvestment and food security in the in-town Atlanta neighborhoods of Vine City and English Avenue, home of Dr. Martin Luther King Jr. We are coordinating a grassroots project that involves urban agriculture, healthy food, and entrepreneurship: an emPOWERment incubator for urban farmers. We are rooted in the community, growing outward from our Elm Street headquarters and farming training ground.

EmPOWERment is a word play on 'empowerment' that indicates that by plowing we create power. At the base of the PLOWerment concept is the idea that, in the process which develops around work, a relationship will emerge with more equity, based on solidarity and community building. HWG promotes local, independent training with community members.

The incubator is a small plot located near 280 Elm Street, operating year-round to produce vegetables. Since 2009, we operate by providing seeds, water and tools; trainees are responsible for the management of the plot, the day-to-day maintenance of the crops, and their harvest and sale. Trainees reap all of the proceeds from their efforts, and they may accrue additional land through a demonstration of commitment to the process.

In 2013, a trainee has become an independent contractor on his own plots. He received a scholarship from the Cousins Foundation to focus his efforts as a Community Farming Development Coordinator with local residents in their own yards.

HWG is part of The Historic Westside Wellness Coalition, a collaborative with Sisters Action Team, the Hagar Center, and community leaders in the Historic Westside neighborhoods of Atlanta. Each of us recognize that individual health and wellness make an essential contribution to the wellbeing of a community, and we are dedicated to empowering citizens to build a stronger community. The HWWC enhances existing community-based activities in NPU-L and NPU-K by helping residents to become aware of and reduce cardiovascular disease risk factors.

Summary of Academic Partnerships (2005 – 2013)

University Partners and the Departments:

- Clark Atlanta University, School of Social Work
- Duke University – Children’s Environmental Health Initiative
- Duke University – Trinity College
- Emory University Barton Law Center
- Emory University Nell Hodgson Woodruff School of Nursing
- Emory University School of Public Health
- George Washington University School of Medicine & Health Sciences
- Georgia Institute of Technology, Department of Architecture
- Georgia State University Department of Educational Psychology and Special Education
- Georgia State University, Department of Public Health, Healthcare Management and Policy
- Georgia State University School of Law
- Hofstra University, Department of Health Professions
- Mercer University School of Medicine, Department of Community Medicine
- Morehouse School of Medicine, Department of Community Health and Preventive Medicine
- Morehouse School of Medicine, Masters in Public Health
- Mt. Sinai School of Medicine, Preventive Medicine
- Pontificia Universidad Católica de Chile, Department of Pediatrics
- Spelman College, Department of Biology
- Tulane University Law School
- Tulane University, School of Public Health and Tropical Medicine
- University of Florida in Jacksonville, College of Medicine and College of Public Health
- University of Michigan – Ann Arbor, School of Natural Resources and Environment
- University of North Carolina-Chapel Hill, Gillings School of Global Public Health
- Wayne State University, School of Medicine

Total: Universities: 24 Students Mentored: 71

Selected Comments from this Break the Cycle 8 Student Researchers and Mentors

Fostering the health of children is the implicit mission of all pediatricians. It seems obvious, but that underlying intention often gets lost in the clutter of a working day. It is a practical luxury to have the time to step back, step out of the office, and step into the community to understand how children are fundamentally affected by their physical and social environments. Break the Cycle (BTC) supports the efforts of students, researchers and health care providers who are intent on identifying the sources of health disparities and implementing solutions to create health equity. I have had the luxury to work with BTC on two occasions, as a student and a mentor, and I am grateful for the privilege to work among such dedicated colleagues. This is pioneering work. But it shouldn't be. I hope the quality of BTC becomes the established norm for improving the health and wellbeing of children. To echo Frederick Douglass, "It is easier to build strong children than to repair broken men". It is imperative we dissolve the pernicious cycle of health disparities in favor of a cycle of resiliency and support for our children.

Cappy Collins, MD, mentor

Pediatric Environmental Health Fellow

The Mt. Sinai Hospital, Department of Pediatrics

Being part of the research program Break The Cycle has been an important opportunity in many ways. First of all is the opportunity to share, with nine other researchers, their projects, ideas, and comments, and realize that it is possible to work together, although we are far away and our realities and resources may be different. The second very important aspect is that, for the first time in our pediatric unit, we have been able to work on a topic that pushes us out of the clinical work, and on to other aspects of health, where inequity can be reduced by an appropriate intervention of the community to improve health. Also of great importance has been the support we have received from the coordinators of this group through the monthly conference-calls, their comments on our work, and how this has stimulated the whole progress of our work. We think that being part of Break The Cycle has been a privilege. The systematic work monitored from Atlanta helped us to maintain focus and make progress in our projects. We are sure that this international collaboration has been an excellent opportunity for everyone in the team but especially for our residents and medical students to learn and train in research.

María Soledad Matus, MD

Patricia Valenzuela, MD

Helia Molina, MD

Pontificia Universidad Católica de Chile, Department of Pediatrics

Being a first year doctoral student, I was at the same time initially overwhelmed and excited to be accepted into this program. This program, and the support I have been provided, has allowed me to complete my residency study in the first year of my studies. I feel the experience of designing and implementing an intervention research study from start to finish has taught my infinitely more than I could have learned in a classroom alone. Further, the ability to work with children and families who are at risk has been invaluable. I can see now, more than ever, the need for work in this area. Additionally, the support I have received, both from my mentor Dr. Gallagher, and the monthly conference calls, has been truly helpful and inspiring. I feel part of a larger "global community" and it has been an honor to work with everyone.

Jackie Towson, M.S., CCC-SLP

Georgia State University

Doctoral Student, Language & Literacy Fellow

While working on my Break the Cycle project with the women of Mary Hall Freedom House, it became apparent to me that maternal and child health and education is in dire need and is a field about which I am very passionate. Through this project, I have been able to learn much more in practice than I ever would while reading a book or taking a course, and for that, I am extremely thankful and ahead of those who have not been given this experience.

Danielle Oves

Georgia State University

Department of Public Health, Healthcare Management and Policy

My fellow Nurse Practitioner students and I truly enjoyed the opportunity to serve the families of Project GRANDD this past year. Although our purpose was initially that of healthcare, we quickly realized that offering support to these caregivers through listening and building trusting relationships was much more beneficial. Our perspective as providers in the future will undoubtedly reflect this new perspective. Thank you, Project GRANDD!

Melissa Beaver

Pediatric Nurse Practitioner

Emory University School of Nursing

Break the Cycle has given me an opportunity to begin my research in disparities in pediatric health in an ideal environment, by having a large amount of support from others doing similar research. This project has been a stepping stone for me to begin to think about the issues related to disparities in pediatric health, to continue on with my research. Furthermore, it has been a great experience to learn from the projects of others and have a better understanding of what projects are being done in other fields. In my future research, I will be more likely to look at research or collaborate with those outside of epidemiology, because this experience has reinforced my view that pediatric disparities must be addressed from multiple sides.

I plan to continue the research I started with Break the Cycle by pursuing standardized test scores for years that match my other school data. I am also working on using more complex methods to predict the true prevalence of mild ID in each school to compare with the observed prevalence. Furthermore, in April, I am presenting my project to the Developmental Disabilities Branch in CDC, in order to get feedback on obstacles I've encountered and advice for the future of this project.

Jessica Knight, MPH

PhD student, Department of Epidemiology

Rollins School of Public Health, Emory University

I feel extremely honored to be able to participate in this year's Break the Cycle. It has been quite an eye-opening experience. From a practical perspective, I gained a greater understanding of research design and data analysis. I feel more confident in my ability to incorporate research into my career. I have a profound appreciation of the work behind each article in the journals I read every month.

The depth of my knowledge in mental health and social determinants of health also expanded, largely from the literature search. Altering my research question with each discovery of "new" evidence evoked mixed feelings. Obviously, frustration was one of those feelings. Coincidentally, I also felt a sense of comfort each time I discovered so many others shared my "novel" ideas.

Ashley Bennett, MD

Community and Societal Pediatrics

University of Florida- Jacksonville

Break the Cycle Project

We have developed an approach to Break the Cycle that is modest, manageable, incremental and achievable. We focus on university students who are in a learning phase and are excited about making a difference in the world. We realize that we, in our generation, may not be able to achieve our ultimate goal but, if we can establish the system and set the process in motion, our goals will be achievable in the future. In other words, we are cultivating our future leaders to improve the lives and the potential of our most vulnerable children and, in so doing, change the world for the better.

The model is simple; we invite students from a variety of different disciplines in universities around the country and the world to develop projects to Break the Cycle that they can achieve in one semester. They are required to have a mentor from their academic discipline who will coach them and guide them through the research process.. Some projects are descriptive and some interventional, but all of them contribute significantly to our knowledge of what the challenges are and how we may act to make a positive difference.

The Break the Cycle Program thus is a collaborative, interdisciplinary set of creative projects developed by university students from different schools in different states that specifically address the challenge to *Break the Cycle of Environmental Health Disparities*. Each year, students from a variety of universities and academic disciplines are invited to submit proposals that will Break the Cycle. The application process with selection criteria judging the likelihood that the students selected will ultimately complete a project that conceptually will break the cycle in a meaningful way. This competitive process enables the selection of those projects with the most promise to become the cadre of students for that particular year. The students will then work collaborative and collectively with their academic mentors and Break the Cycle faculty, towards completion of the projects.

The process is time-limited and time sensitive. From the moment that the students have been selected, we hold conference calls with all students and mentors to have each describe the projects, the research methodology, and describe how their projects will contribute to break the cycle. These conference calls occur monthly in order to keep track of the students and keep them on track. The students and their mentors also have the opportunity during these conference calls to become familiar with the work of the other students from the other universities and disciplines and expand their understanding and appreciation for the complexity of the challenges and solutions. Completion of the project coincides with a conference in which the students are required to present their work to their Break the Cycle peers and to a broader academic and community audience. For many, this may be their first formal public presentation. Once the project and presentation are completed, they are required to write up their work, which then is published collectively in a supplement to an international journal. Thus, the project, the presentation, and the paper become valuable experiences and achievements for the students that will guide, shape, and support their future success.

Since its inception in 2004-2005, we have had over 70 students from 24 different departments of 14 different universities from seven states in the continental USA. This year, we now have our first international student, from Santiago Chile. In 2012, we conducted a survey of all the students who had

been part of the program from 2004-2011 and learned that an overwhelming number –indeed, almost all – felt the project was worthwhile. Most reported that it increased their knowledge and understanding of children’s environmental health disparities and that they valued the exercise and the outcomes of their involvement in the program. Many graduates reported that they are currently involved in a similar field of practice in academic settings, in the community or in the private sector. The details of this report will be published in the near future.

The important message is that the Break the Cycle Program can make a difference in generating projects that raise awareness of children’s environmental health disparities. It inspires and cultivates a group of students for whom this program is a step towards a career and towards leadership in reducing health disparities and promoting health equity for all children, regardless of their social and economic circumstances.

This year, we have another set of exciting projects from 10 university departments, from 5 universities in 4 states. The projects are grouped into 4 categories: Maternal and Child Health, Schools, Adolescents and the Environment. We have a keynote speaker, Michael Rudolph, from Johannesburg, South Africa, where he has been intimately involved in identifying health disparities and addressing the real and painful subject of food insecurity. He has started an urban garden which has grown significantly in scope, and he will tell us about that as well. In addition, we have a speaker, Art McCabe, from the town of Lawrence, Massachusetts, where unemployment and crime has been a big challenge. He will tell about the development of an urban garden, which has helped significantly to reduce crime.

On the day after our conference we will have a field trip with our Urban Garden experts traveling with us to a set of urban gardens in Atlanta, where we will discuss the details of forming a garden and what gardens can do to build community, provide employment and, most important, give people a sense of meaning in life.

Summary

Children living in circumstances of social and economic disadvantage are at higher risk for experiencing health problems caused or exacerbated by environmental factors. They are more likely to be trapped in the cycle of environmental health disparities as a result of family stress, limited quality education, limited social capital, and lack of access to comprehensive healthcare and appropriate educational services. Furthermore, the homes and neighborhoods in which they live, learn and play are inadequate at best, and may even result in a serious impact on the child’s health, growth and development.

Given the current economic realities, it seems unlikely that many children and families will escape this cycle unless resources and public policies make children’s health and the environment a priority.

The Break the Cycle project is a replicable means by which to promote student interest in addressing issues related to environmental health disparities. It serves as a catalyst through which academic mentors committed to issues of children’s health and environmental justice can inform, guide, and

inspire future professionals to become actively involved in finding creative solutions to environmental health dilemmas that the children of tomorrow will face.

This suggests that the incorporation of children's health and the environmental into various college curricula is likely to play an important role in shaping future leaders who will be invested in breaking the cycle of environmental health disparities.

Resources

AAP Policy Statement, Early Childhood Adversity, Toxic Stress, and the Role of the Pediatrician: Translating Developmental Science Into Lifelong Health. www.pediatrics.org/cgi/doi/10.1542/peds.2011-2662

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Executive Order no. 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." Federal Register 59 (1994), 7629.

Gee GC, Payne-Sturges DC. Environmental health disparities: a framework integrating psychosocial and environmental concepts. *Env Hlth Perspect* 2004; 112:1645

Hood, Ernie. Focus: Dwelling Disparities. *Environ Hlth Perspecs* 2005; 113:5

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Lavizzo-Mourey, R. Why Health, Poverty, and Community Development Are Inseparable Open Forum: Voices and Opinions from Leaders in Policy, the Field, and Academia. Investing in What Works for America's Communities

Middlebrooks JS, Audage NC. The Effects of Childhood Stress on Health Across the Lifespan. Atlanta (GA): Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; 2008.

Rubin, I.L., Nodvin, J.T., Geller, R.J., Teague, W.G., Holzclaw, B.L., Felner, E.I. Environmental Health Disparities and Social Impact of Industrial Pollution in a Community – the Model of Anniston, AL *Pediatric Clinics of North America*. 2007 54:375-398

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Rubin IL, Ace K, Nodvin J, Geller RJ, Marcus M, Merrick J. Special Issue on Vulnerable Children: Break the Cycle of Environmental Health Disparities. *International Journal of Child Health and Human Development* 2010; 3:357-453

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Shonkoff JP, Garner AS. The Lifelong Effects of Early Childhood Adversity and Toxic Stress. *Pediatrics* 2012;129 : e232-e246

BREAK THE CYCLE **9**

Break the Cycle of Environmental Health Disparities in Children

APPLICATION FORM

TITLE: Break the Cycle 9

TIME FRAME: September 2013 – June 2014

DEADLINE FOR APPLICATION: September 27, 2013

TENTATIVE DATE OF SELECTION: October 11, 2013

TENTATIVE DATE OF CONFERENCE: April 7, 2014

BREAK THE CYCLE DIRECTOR: Leslie Rubin, MD

.....
SUBMIT THIS APPLICATION TO : Leslie Rubin MD, lrubi01@emory.edu and CC Janice Nodvin, jnodvin@emory.edu

STUDENT NAME : _____

EMAIL : _____

WORK PHONE : _____ CELL PHONE : _____

STUDENTS EDUCATIONAL STATUS: UNDERGRADUATE GRADUATE OTHER

UNIVERSITY : _____

DEPARTMENT: _____

FACULTY SUPERVISOR: _____

FACULTY SUPERVISOR EMAIL: _____

FACULTY SUPERVISOR PHONE: work _____ cell _____

Please describe how you propose to Break the Cycle of Environmental Health Disparities in vulnerable children using the format below (in about 250 words) and attach it to your application.

- Background
- Hypothesis
- Method
- Discussion