THE AFFORDABLE CARE ACT
and what it means for the
MINORITY POPULATION
of the United States of America
ABOUT THE STUDENT NATIONAL MEDICAL ASSOCIATION
The Student National Medical Association is the nation’s oldest and largest independent, student-run organization focused on the needs and concerns of medical students of color. Membership includes more than 6,000 medical students, pre-medical students, residents, and physicians. Established in 1964, SNMA is dedicated to both ensuring culturally-sensitive medical education and services, as well as increasing the number of African-American, Latino, and other students of color entering and completing medical school.

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WINTER 2012 ISSUE

LETTER FROM THE EDITOR

INSIDE THE SNMA
Region III Report
Region IV Report
Region VII Report
January 2013 National Leadership Institute
Region IX Report
My 2012 NLI Conference Experience
Annual Medical Education Conference 2013

GLOBAL HEALTH
Breathing, a documentary film concerning the state of global health care
Women’s worth beyond their circumstances: HIV activists moving forward

SCIENTIFIC FOCUS
Dr. David E. Satcher, MD Research Fellowships, 2012-2013
Droperidol/ethinyl estradiol oral contraceptive pill as a treatment for acne vulgaris
Sensitization and prevalence of asthma and allergy in infants and young children six months to five years of age
Immune cell and neural stem cell colocalization to the infarct after ischemic attack in Mus musculus mice models

ARTISTRY
Master Your Stress
A small boy sees and touches a brain
The Cloaking
AMEC 2012 inspires new medical student newspaper

SPECIALTY CORNER
Gastric adenocarcinoma
Organ transplantation and mental illness

MAPS CORNER
Diversity meets medicine

COVER STORY
POLITICS AND HEALTH
The Affordable Care Act and what it means for the minority population of the United States of America
Seniors, Medicare, and the Affordable Care Act
The health of minority women in the new era of health-care reform
Affordable Care Act and our undeserved populations
Chronic illness v. Affordable Care Act
Obamacare: for better or for worse?

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WELCOME TO THE WINTER 2012 EDITION OF JSNMA!

I am excited to be the 2012-2013 Editor-in-Chief of the Journal of the Student National Medical Association. I am an avid lover of literature and the arts, having majored in Creative Writing as an undergraduate at Texas Tech University. The opportunity to revisit my passion of reading and writing is one that I cannot pass up, and I am thoroughly enjoying my time as Editor-in-Chief of a journal focused on the needs and concerns of medical students of color.

This issue is focused on the passage of the Patient Protection and Affordable Care Act. The bill became effective on March 23, 2010; however, it was not until the Supreme Court upheld the bill on June 28, 2012 that the Affordable Care Act became the law of the land. The liberal and conservative views of “Obamacare” are better discussed elsewhere. In this issue, we plan to look at the Affordable Care Act from the perspective of the minority population. Will the Affordable Care Act help the socioeconomically-disadvantaged populations who are underrepresented in health care? Or is the Affordable Care Act another example of uncontrolled healthcare spending that will not significantly benefit marginalized populations in health care?

Research, the arts, and articles on global health and medical specialties are excellent contributions from SNMA and MAPS members to this issue. The Winter 2012 issue will also highlight the dynamic events occurring in the Student National Medical Association.

I hope you enjoy the Winter 2012 issue of the Journal of the Student National Medical Association. Consider contributing to our Summer 2013 edition. As always, we would love to have you as part of the Publications Committee.

Yours in SNMA,

Chinelo Ikpeama, MBA
MD, MBA Candidate 2014
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Region III's annual joint Medical and Pre-Medical Student Conference was hosted by the LSU-New Orleans SNMA Chapter and Xavier University Pre-Medical Office in New Orleans, LA on November 10th, 2012.

With **over 100 attendees**, the conference hailed networking, mentoring, and information. The medical student track included sessions about the residency application process, what rotations are like, as well as a physician and resident panel. The pre-medical student track included sessions about the medical school application process, mock interviews, a medical student panel, and personal statement workshops.

Keynote speakers for lunch included a local New Orleans area physician, Stephen Jones, M.D., and Mr. Fernando Vasquez, Associate Director of Admissions for the University of North Texas Health Science Center- Texas College of Osteopathic Medicine.

During the last pre-medical session, **3 Free Kaplan MCAT prep course certificates were raffled off**. The conference ended with a networking mixer between the pre-medical students and medical students. **With lots of leftover food, regional officers donated the food to the New Orleans Mission.** Overall, the conference was a huge success, and next year will be even better!
Region IV: Encouraging and Supporting SNMA’s future physicians in becoming today’s leaders

Regional Director:
Jametria Howard-Jones
MD Candidate, University of Miami Miller School Of Medicine
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SNMA Region IV is composed of dedicated members attending school in North and South Carolina, Georgia, Florida, Alabama, The Caribbean and Puerto Rico. This dynamic region is filled with students who are passionate about fulfilling the purpose of SNMA through community service, mentorship, academic excellence, and the elimination of disparities in healthcare. The members of Region IV have been busy impacting local communities and changing lives as we take pride in our duties as today’s leaders in preparation for our future calling as tomorrow’s physicians. This year Region IV set out to embark on a Fun-filled, Outstanding, Unique and Resourceful year and we would love for the world to have a glimpse into all the wonderful things that our members of Region FOUR have been up to!

REGIONAL LEADERSHIP RETREAT

The 2012 Regional Leadership Retreat was held at the Morehouse SOM on Saturday June 23rd in Atlanta, GA with the purpose of the Region 4 Executive Board convening to discuss and outline goals for the annual term as well as to receive an orientation to regional duties & responsibilities. Each Regional Exec member was well-equipped to serve our regional members successfully after this meeting.

Welcome!! NEW SNMA Chapters 😊!!

Edward Via Virginia College of Osteopathic Medicine-Carolinas Campus (VCOM-CC) in Spartansburg, SC
University of South Carolina School of Medicine Greenville in Greenville, SC
American University of Antigua College of Medicine in St. John’s, Antigua and Barbuda

REGIONAL LEADERSHIP INSTITUTE (RLI)

The 2012 Regional Leadership Institute (RLI) was hosted by the Brody School of Medicine at East Carolina University in Greenville, NC on Saturday August 18th. This event brought together many of the Chapter leaders including Presidents, Treasurers & other Exec members in order to provide a forum for ideas to be exchanged and to prepare local chapter SNMA leaders with the tools for a successful term.

Presentations were featured by all the Regional Exec members as well a guest keynote speaker, Dean Carl Cunningham of the Brody SOM, who spoke about the importance of team building and collaboration to promote success.
Regional Medical Education Conference:

“Melting Pot of Modern Medicine: Exploring Cultural & Sociopolitical Barriers Within the Practice of Medicine.”

The 2012 Region IV Medical Education Conference was hosted by the University of Miami Miller School Of Medicine on Nov 9\textsuperscript{th}-11\textsuperscript{th} in sunny Miami, FL.

The event was attended by over 150 SNMA and MAPS students from across the region and featured numerous workshops including discussions about the Business, Politics & Love of Medicine. The conference focused on equipping regional members with the tools for success in the modern era of medicine.
Greetings from Region VII! Over the summer we decided it was necessary to incorporate new community service and policy components into the regional conference in order to develop our region’s capacity to inform the process and structures that shape the health of our communities. We opted to keep our traditional tracts for high school and college students to encourage the growth of our pipeline-success program. And of course, we had to have an after-party to celebrate our efforts and to relax a little.

From Friday November 16th to Saturday November 17th we hosted our regional conference entitled Healing and Transforming Our Communities: Empowering Our Leaders, Strengthening Our Businesses, and Creating Meaningful Policy.

On Friday evening, Dr. Michael L. Jones, the Chief Medical Community Health Officer for the University of Mississippi Medical Center’s Office of External Affairs, led a “Know Your Numbers” workshop. That training equipped all those participating to go back to their schools and communities to give lifestyle-related counseling to combat obesity and diabetes, two of the top public health problems in our communities.

Early the next morning we were at it again. The day was divided into three tracts, one for high school students, one for college students, and one for those in medical school.

Under the astute leadership of Johnothan Smileye Jr., our SNMA Region VII Pre-Medical Representative, we established two new MAPS chapters.

At the conference, we encouraged the growth and success of our pipeline programs, especially the MAPs programs, in the region.

The highlights of the medical tract included our focus on global health and health disparities. There, the esteemed Ronald W. Dunlap, M.D., President-Elect of the Massachusetts Medical Society, used concrete examples to show how policies can create or eliminate health disparities.

Karen Marie Winkfield, MD, PhD, the new president of the New England Medical Association, challenged us to think about the root of health disparities present in African-American communities in order to truly come up with solutions that would increase the presence of African-Americans in medical school and improve the health of African-Americans in this country.

The conference drew about 200 attendees, with a strong presence from every chapter in the region, and with many chapter presidents committing to doing more community service and policy work back at their schools.

All this was the culmination of hard work by a committee seamlessly headed by Jade Anderson, the Boston University chapter president and Jason Sherer, the Political Advocacy Liaison for our region. We are very excited for the next semester as we hope to see some of this work come to fruition.
Your attendance is requested at this year’s third and final National Leadership Institute (NLI)–Leadership Training, Friday, January 25 – Sunday, January 27, 2013 in Las Vegas, NV. The host for this quarter’s meeting is the University of Nevada School of Medicine. This training session is for all members including those currently holding or interested in SNMA leadership positions at the Chapter, Regional and National levels.

The January NLI will focus on providing attendees with the tools necessary to fulfill personal goals of academic and personal success. Sessions include residency panels, leadership training and key note speakers in addition to professionalism and board development workshops. The SNMA has an important mission focused on both the advancement of our membership and the betterment of our community. It is only through the effective development of future leaders of medicine that these goals will be met.

The weekend’s schedule is also adapted to allow for attendance at the January Board of Directors meeting, held quarterly and currently scheduled as the backbone of the NLI. Interested attendees will be able to witness the managerial aspects of our national organization, and will be invited to provide input to your elected leaders that represent your collective interests. Additionally, our premedical members will focus on non-traditional paths to medicine.

Greetings from Region IX: With 19 SNMA and 17 MAPS chapters hailing from the great states of New York and New Jersey, our students are among the most energetic and passionate premedical and medical students in the country. Region IX's commitment to SNMA's mission of leadership and service is apparent in our dedication to addressing issues of health inequalities in our medically underserved communities, diversity in medical education and youth mentorship. Here is a quick look at how we GO HARD before we GO HOME in Region IX.

National Leadership Institute
In June, the Mount Sinai School of Medicine Chapter of the SNMA worked with the SNMA's National office to host the June NLI. The event was extremely successful, consisting of a variety of clinical skills workshops, leadership forums and lectures for approximately 50 students in attendance. Speakers at the event included Dr. Valerie Pakian, Dean of Medical School Admissions, Dr. Gary Butto, Associate Dean for Diversity and Director of Mount Sinai's Center for Multicultural and Community Affairs, and Dr. Celia Divino, Chief of the Division of General Surgery.

Regional Leadership Retreat
Thirty-three Region IX Leadership Retreat was held at the Weill Cornell Medical College in Manhattan. As the official kickoff event for the 2012/2013 academic year, the meeting provided an opportunity for the Regional E-Board and SNMA and MAPS students in attendance to engage in several team building activities, discuss regional business, and finalize upcoming regional events. Furthermore, this meeting was a forum within which chapter presidents were able to share leadership strategies and community service ideas with each other, and for the Regional E-Board to serve as a resource for the incoming leadership as they transitioned into their new roles.

Sickle Cell Walk
On September 19th, Upstate medical students joined with Upstate employees, pediatric patients and families, and members of the People’s AME Zion Church of Syracuse for the fifth annual Sickle Cell Walk to raise money for the children’s sickle cell disease fund at Upstate.

Upcoming Region IX Events
Regional SNMA/MAPS Joint Conference (February 2013)
hosted by Albert Einstein College of Medicine
Region IX's tireless commitment to mentorship and promoting interest in medical professions is evident in our theme for the 2013 SNMA/MAPS Joint Regional Conference: Youth in Medicine: Building Our Tomorrow.
Register at: http://region9conference.2013.eventbrain.com/

Regional Walkathon (March 2013 jointly hosted by UMDNJ/Hofstra)
Sophie Davis Fall Kick Off Event
On September 20th, Sophie Davis SNMA chapter partnered with Vison Latino/AMSA to host a Fall Kick Off to welcome old and new students. Students from various years took to the field in a year against year soccer tournament. Friendly competition, teamwork, athleticism, and good eats made for a good time had by all attendees!

Winter Business Meeting
The 2012 Region IX Winter Business Meeting was held in October at Columbia University’s College of Physicians and Surgeons. This event was a great opportunity for Region IX SNMA chapters to update each other on the different activities going on across the region.

Annual Charity Date Auction, UMDNJ-SOM
On August 7th, the SNMA chapter at University of Medicine and Dentistry of New Jersey-School of Osteopathic Medicine held their annual Charity Date Auction. Proceeds from this event go towards funding new SNMA membership and Project Bookin for children in Camden, NJ.

We hope that we have given you a taste of the kind of work going on in Region IX, thanks to the tireless efforts of our SNMA and MAPS chapters. We look forward to our continued exploration of exciting possibilities and opportunities for service as we enter the new year, especially in the aftermath of the devastation of Hurricane Sandy. We invite you to contact Regional Director Lawal with any questions.

On October 1st, the Daniel Hale Williams Society kicked off the year with a Welcome Reception for Downstate’s incoming First Year class. In conjunction with the Office of Minority Affairs, our annual New Student Welcome Reception featured greetings and words of advice for the new students. The keynote driver was Dr. Ramnax Samantar — a SUNY Downstate Graduate Medical Education Alumni and Psychiatry attending at University Hospital of Brooklyn. Our focus of the New Student Welcome Reception was to increase membership within our local chapter as well as National SNMA membership.

On November 9, 2012, the Daniel Hale Williams Society invited undergraduate MAPS students from Brooklyn College to our College of Medicine to learn about topographical anatomy and get a feel for the anatomy lab. For most of these students, this was the first time they were around cadavers. They were very excited and refreshingly enthusiastic to spend the afternoon with us and get their feet wet in the life of a first year medical student at Downstate.

Registration:
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“YOUTH IN MEDICINE: BUILDING OUR TOMORROW”
Albert Einstein College of Medicine
February 10, 2013
Register at:
http://region9conference-2012.eventbrite.com/

Region IX Joint SNMA/MAPS Conference
Youth in Medicine, Building Our Tomorrow
Albert Einstein College of Medicine
February 10, 2013
Register at:
http://region9conference-2012.eventbrite.com/
As I exited the train station Friday morning to set foot in Boston for the first time, I saw Boston as unique blend of the relaxed, country-like environment of Maryland and the fast-paced, hustle-bustle of New York City. Check-in at the Sheraton Boston Hotel was smooth. Once I settled in, I prepared to attend the first event of the conference at the Massachusetts General Hospital Paul S. Russell, MD Museum of Medical History and Innovation. The event included a networking reception and the Multicultural Affairs Office Annual Faculty Development Award Program.

I had the pleasure of networking with a plethora of accomplished pre-med and medical students, residents, and physicians, including Dr. Valerie Stone, a fellow Rensselaer Polytechnic Institute alum and the first African-American full professor in the Harvard Medical School Department of Medicine.

I also had the pleasure of meeting Dr. Peter Slavin, President of Massachusetts General Hospital (MGH). MGH is currently ranked number one in the nation by U.S. News and World Report.

Day two of the conference started early with a 7:45 am departure from the Sheraton Boston Hotel to the MGH campus. We jumped right into an informative “Career Pathways” and “Getting to and Through Residency” panel discussions featuring physicians and residents respectively. Distinguished Harvard physicians featured included Dr. Valerie Stone and Dr. Winfred Williams, founding director of the MGH Multicultural Affairs Office and co-Chair of the Multicultural Affairs Office Advisory Board. In the Q&A sessions I received further insight into the unique journeys of these exceptional medical professionals of color. The panels were followed by a keynote address on Health Disparities and Cultural Competency by Dr. Joseph Betancourt, Director of MGH Disparities Solution Center. We then left MGH to continue the rest of the day on the campus of Harvard Medical School (HMS).
We began with a tour of the Tosteson Medical Education Center. The tour was followed by an admissions panel featuring the HMS Director of Admissions, Ms. Joanne McEvoy, MA, and HMS students who have served on admissions committees. I received invaluable insight into how to approach my essay for my application.

Following the admissions panel, we proceeded to the second half of the campus tour guided by two HMS students who were nontraditional applicants.

Upon inquiring, I was pleased to discover that one of our tour guides was Devon Taylor, a first-year HMS student who overcame great odds in his life and was invited by Harvard to write a blog on his experience as a first-year medical student. I shared with Devon that I enjoy reading his blog.

Highlights of the tour included the library, which featured exhibits of historical artifacts and paintings. We also passed by the School of Public Health.

After the tour, Dr. Nancy Oriol, Dean of Students, gave an engaging lecture on her unique journey into medicine. She explained that Dr. Cheryl Dorsey, with whom she co-founded the Family Van (Mobile Clinic), was the same physician featured in the PBS NOVA documentary *Doctors’ Diaries*, which chronicles the lives of seven Harvard medical students over twenty years. I am greatly inspired by Dr. Dorsey, who was one of two African-American women physicians featured.

The day concluded with team-building exercises with SNMA medical students followed by a banquet with a keynote address given by Dr. Augustus A. White, III. Among his many accomplishments, Dr. White is the first African-American resident and surgery professor at Yale and the first black Department Head at Harvard’s teaching hospitals.

The SNMA NLI was an engaging, informative, inspiring experience. Words cannot fully express my gratitude to my sponsors for making my dream of attending a reality.
Announcing the 2013 Annual Medical Education Conference
March 27-31, 2013
Louisville, Kentucky

AMEC REGISTRATION IS NOW OPEN!

For almost fifty years, SNMA has been the leading organization in promoting increased enrollment and retention of medical students. SNMA’s Annual Medical Education Conference (AMEC) has evolved to become a springboard for much of the organization’s work, an event in which both students and professionals have gathered with high anticipation to attend a wide range of educational and networking events. The AMEC is held each spring in locations around the country and serves to enhance our members’ career development, provide continuing education, facilitate networking among medical students, bolster the effectiveness of our local community service programs and recognize the achievements of our members. In short, our conference is designed to nurture future leaders in the field of medicine.

The AMEC attracts students from all levels of medical education. It is consistently the largest gathering of underrepresented medical students at any time in any place in the country. The 2013 AMEC will be no exception. Entitled, #SNMAinAction: Stepping Up to the Plate, Swinging for Success, the 2013 AMEC will continue to advance SNMA’s mission to support the educational and professional pursuits of current and future underrepresented medical students, training clinically excellent, culturally competent, and socially conscious physicians. The 2013 AMEC will be held in Louisville, Kentucky, at the award-winning Galt House Hotel, located in the heart of downtown Louisville, by the river.

Go to www.snma.org to register.

About the 2013 Annual Medical Education Conference (AMEC)

Entitled, #SNMAinAction: Stepping Up to the Plate, Swinging for Success, the 2013 AMEC embraces SNMA’s mission to support the educational and professional pursuits of current and future underrepresented minority medical students, training clinically excellent, culturally competent, and socially conscious physicians. Our goal in the 2013 conference will be to both highlight what we do best as an organization and to empower our attendees with the tools needed to continue performing the activities which positively impact students and communities across the country! With workshops focused on academic success, professional development, community empowerment, and research, attendees will be inspired and motivated to become pioneering physicians of tomorrow, translating what they have learned to impact health disparities and diversify the face of medicine. To that end, we know that this year’s national conference will provide a wealth of resources and knowledge that will further the mission of SNMA, and inspire you, one of our nation’s future physicians.

We heartily welcome your participation with SNMA in Louisville. The AMEC conference program will include all of these traditional annual events, plus some other special features:

- House of Delegates sessions and election of national officers
- A dynamic exhibit hall for peer and professional networking
- Insightful and provocative workshops with inspirational speakers
- 4th Year and Beyond Educational Track, designed for senior medical students and residents
- Physician-Researcher Initiative (PRI) Educational Track, highlighting careers in academic medicine and research, and tips on becoming excellent physicians
- Annual Dr. Wilbert C. Jordan Research Forum, displaying the clinical and basic science research conducted by our members
- Pre-medical Forum (PMF) and Recruitment Fair, designed just for our pre-medical members
- Installation Ceremony for the 2013-2014 SNMA National President
- Board of Directors Banquet and Ball, where we will celebrate the hard work and achievements of SNMA members nationwide
- A Community Service event, designed to serve the local community
- The SNMA Commencement and Pinning Ceremony, held to recognize and applaud our emerging physicians
- Pre-Medical Advisor Educational Track, with workshops designed for school administrators, with tips on how to prepare students for a career in medicine.
Master Your Stress
by Valerie Harris

Stress is Killing You

44% of Americans feel more stressed than they did 5 years ago.

1 in 5 Americans suffer from extreme stress.

60% increase in productivity every 20 years since 1987.

Work stress causes 1 in 4 strokes.

Stress is the basic cause of 80% of all human illness and disease.

3 out of 4 doctors' visits are for stress-related ailments.

Stress Increases:

The risk of heart disease
40%

The risk of heart attack
25%

The risk of stroke
50%

40% of stressed people overeat or eat unhealthy foods.

44% lose sleep every night.

“Extreme” stress events (e.g., divorce, job loss) reduce grey matter in regions tied to emotion and physiological functioning which can lead to future psychological problems.

Stress-related ailments cost the nation $300 billion every year in medical bills and lost productivity.

$300 billion more than what obesity costs Americans.

Vacations are crucial for managing stress. So where is yours?

24% of U.S. employees work 6+ extra hours per week without pay.

That's an average loss of at least $2,262 per year.

Enough for a family of 5 to take a 5-day trip to Disneyland.

U.S. (Average):

10 work days + 5 national holidays

France:

7 weeks

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http://news.bbc.co.uk/2/hi/health/12325717.stm
http://www.businessinsider.com/americans-are-overworked-20125
http://www.nationmaster.com/graph/airvac_img_vac_tim_and_the_world_leg_re
http://www.time.com/time/world/legislation-requiresbwhs
http://www.sclittick.com/2012/09/12/american-employee-work-week...
http://www.businessinsider.com/the-10-most-stressful-jobs-in-america-20125

This work is licensed under a Creative Commons License.
Cameron Cowell is a returned Peace Corps Volunteer, documentary filmmaker, and President of Social Investment Inc., a not-for-profit corporation dedicated to the art and production of socially-significant documentary films.

During Cameron’s work and travels in Central Latin America, he was overcome by the suffering and loss of life brought about by the lack of basic healthcare services and supplies. While journalists explore the poverty, politics, and wars that lead to this state, the struggle of millions is swept under a global rug. Cameron and the Social Investment staff are committed to rolling back this rug.

Breathing, a documentary film concerning the state of global health care by Cameron Cowell

Social Investment is now working on a comprehensive documentary film series, Breathing. Breathing concerns the state of global healthcare in six third world/low-income countries: Haiti, Nicaragua, El Salvador, Ecuador, Senegal, and Ethiopia.

Breathing will illustrate how the international healthcare community is striving to solve the global burden of disease, the deficiency of health care workers in third world and low-income countries, and the lack of healthcare research. We will take five major global health issues and look at how the international healthcare organizations are passing on the needed knowledge and skills to successfully build healthcare programs within the global areas of need.

1- Adolescent health care and nutrition: One billion children now live in poverty. Of these billion, 1.3 million of these children will die annually with 64% of these deaths caused by infectious diseases. Nutritional disorders in children are also on the rise. This problem is caused by an insufficient consumption of needed nutrients. These nutritional disorders can be devastating to children by interfering with their growth and development; these disorders cause countless health problems such as infection and chronic diseases.

2- Woman’s Health Care: Every day in third world and low-income countries, 1,000 women die due to complications with pregnancy and childbirth. These complications include severe bleeding after childbirth, infections, hypertensive disorders, and unsafe abortions. A third world woman’s chance of dying from a pregnancy-related illness is 36 times greater than her counterpart in a developed country.

Two-thirds of heart disease deaths in woman worldwide occur in third world and low income countries.

Globally, the second most common cancer in woman is cervical cancer. There are 250,000 deaths a year from this disease, with 80% of these deaths occurring in third world and low-income countries. The main cause of cervical cancer is the sexually-transmitted human papillomavirus. New vaccines are available to help prevent this potentially cancerous virus, and cervical screenings can detect potential infections. However, in third world and low-income countries, these measures are unavailable or non-existent.

The film series will focus on the international healthcare community, their individual staff members, the countries they work in, and the individuals receiving assistance. By drawing on the human side of the global healthcare story, the documentary will convey a profound in-depth view of the historical and political structure of the specific countries in need, the culture of the population being served, and the inner working and philosophy of the healthcare organizations themselves.

The film’s narrative intends to illustrate the inside story on how global healthcare organizations and their staff deliver services, interact with clientele, and solve the frightful plight of global health care.
3- **HIV/AIDS**: Since the beginning of this epidemic, more than 60 million people have been infected with the HIV virus and approximately 30 million people have died. In 2010, there were an estimated 34 million people living with HIV, 2.7 million new infections, and 1.8 million AIDS-related deaths. It is the African region that is most infected, where 1.9 million people acquired the disease in 2010.

4- **Tropical Diseases**: Neglected tropical diseases cause one billion people to suffer, weakening third world and low-income countries. In these countries, disease such as buruli ulcer, sleeping sickness, lymphatic filariasis, schistosomiasis, soil-transmitted helminthiasis, trachoma, cholera, and meningococcal meningitis all exist due to weak healthcare systems. Every year, more than 400 million individuals living in the “Meningitis Belt” from Senegal to Ethiopia contract bacterial meningitis.

5- **Chronic Disease**: Heart disease, stroke, cancer, chronic respiratory disease, and diabetes are the leading causes of death in the world. Third world and low-income countries are disproportionately affected and account for 40% of all chronic disease mortalities. The death rate is predicted to soon reach 50%.

We will take these five global health issues and look at how the international healthcare community is passing on the needed knowledge and skills to successfully build healthcare programs within the global areas of need.

As compassionate humanitarians and concerned global citizens, we all should take an interest in the state of global health. We live in an increasingly connected world where disease now moves as freely as people and consumer products.

As basic healthcare services decrease and incidents of disease in the third and low-income world increase, international poverty and instability intensifies. In turn, this poverty and instability has a profound political and economic consequence within our country and worldwide.

Social Investment and its documentary film *Breathing* will seek to lend a helping hand to the understanding and development of high-quality global health care. With the ability to sustain worldwide high-quality health care, we can improve the human condition, help alleviate international civil strife, and promote worldwide economic stability.
HIV. Somehow, it seems that three letters can come together and create so much fear and stigma in our society. Two women with HIV status have used their stories to make an impact to destigmatize the status and educate the youth. With Florida being home the highest new cases of HIV in the United States, and AIDS becoming the world’s most fatal infectious disease, youth and people of the Hispanic and African diasporsas are disproportionately affected. On top of all that, women are quickly becoming at higher risks of infection due their male counterparts. This is sadly the same narrative of two brave HIV+ Florida women who are educating people on HIV and sexual health. Maria Mejia, a week after just turning 18, found out she was HIV+ through an HIV testing requirement of new recruits prior to working at Job Corps in Kentucky; she contracted the virus from her first boyfriend. Kamaria Laffrey found out her HIV+ status after the birth of her daughter when her physician found antibodies in her daughter’s blood; she too received the virus from a male partner. These two women, separated by culture and sexual orientation, are united due to three commonalities. They contracted HIV through a male partner, they openly use their stories to impact and educate others, and above all that, they are women.

Anyone can speak on an issue, but it takes valor and strength to stand up on an issue, especially when it is not popular. Currently, 1 in 110 people worldwide are infected by HIV. Though this is staggering, one has to wonder, “who is affected by this disease?” We all are affected by HIV. We all should have the common interest in creating an atmosphere that demystify and debunk myths of HIV.

At the age of 16 in 1989, Maria Mejia contracted HIV from her first boyfriend. She didn’t have sexual relations after that for about five years. Mejia, due to her shock of contracting the virus in a fragile time when HIV was considered a death sentence, decided to go home to Colombia to be with her mother where she would wait to die.

However, with her mother’s positivity and the use of healthy naturopathic medicine and herbs, she was able to sustain health for almost 10 years. She decided to not take HIV medication because of the side effects of azidothymidine, the drug of choice during the 1980s. From her experience, she decided to be open about her positive status and educate the youth around the world as an international social media activist to remove the stigma of being HIV+. To reach more people across the world and create a more optimistic community for those infected by the virus, she decided to use social media as an outlet to create a safe haven for supporting people affected by the same experiences. As a motivational speaker for Miami-Dade County Public Schools and through her campaigns at local prisons, she hopes that her story can let others know that HIV is real and that it can affect anyone, regardless of their sexual orientation, income level, or education.

Kamaria Laffrey has been HIV+ for at least 10 years. As a new college student at Florida A&M University in 2001, she wanted to experience college life to its fullest. On top of rigorously studying for classes, she did what most college students do when they are not in class or studying: party. One night can change someone’s life: she contracted HIV from a one-night stand.
Laffrey decided to tell her HIV story. It allowed her to live beyond her circumstances. Through her struggles with the virus, she decided to partake in community outreach initiatives to educate central Florida about HIV. She learned about the “Respect Yourself, Check Yourself, Protect Yourself Movement” of Broward County in south Florida. Its founder, Donovan Thomas, uses media and the community to start the conversation about HIV/AIDS. From seeing a slow motion black and white video production with the messages “I HAVE HIV” and “IF ONLY IT WAS JUST THAT EASY TO TELL. GET TESTED,” Laffrey became interested in the organization.

“The leadership opportunities and changing the conversation of people living with HIV/AIDS made me want to be involved,” Laffrey states. With Laffrey’s HIV status, at a time when the images of people dying made it seem that death was in her windowpane, she felt she was going to die. This quickly made her think about one thing: “what about my daughter?” Laffrey could not come to terms about her HIV + status. However, realizing that she could not keep her secret hidden from her family, she decided to first educate herself about HIV and then confess it in her family. She knew it would all be okay.

Mejia’s HIV status was helped by her mother’s faith in a higher power. Mejia was raised as a conservative Catholic. She came to terms with her virus by allowing her positive status to become a chapter in a life’s novel that can be used to help others prevent the same situation from happening to them. This played a large role in Mejia’s health. It gave her hope beyond the narrative to believe that her life was not dictated by one circumstance and that through nutrition, she will soon be okay. Mejia’s HIV status is actually not the key reason of discrimination to her by others; her status as a same-sex loving individual who is committed to her significant other is what stigmatizes her. In comparison of stigma in the early 1980s to the present, Mejia feels that the stigma is similar but different. The HIV stigma has lessened: people openly disclose their HIV+ status and people are more comfortable choosing to seek treatment. On the flipside, we see a different type of stigma in that “it doesn’t happen in my back yard” and that since “it’s no big deal due to the fact that it’s not our problem.” Criminalization of being HIV+ helps feed the stigma. With a division of “them” and “us,” people are still being discriminated due to their HIV+ status.

It is necessary that all communities become involved in the conversation of HIV/AIDS, regardless if one is directly infected or affected. According to Laffrey, “it’s a human problem. It’s not a demographic-of-where-you-live problem.” However, with minorities disproportionately affected with the virus, and women quickly becoming a high-risk group, it seems that the narrative is based on demographics. Laffrey feels we must go back to the basics and reevaluate programs and initiatives to make sure they are running effectively and reaching out to those who are at the brunt of the stigma. In a time that the media shows Earvin “Magic” Johnson as a representative of someone with HIV, it blurs the reality of the issue. Many have a lifetime of medication and medical complications. With “a world without HIV/AIDS and a world with a cure,” Laffrey hopes that her negative woes can contribute to a positive outlook for a future HIV generation.

“We have witnessed many issues affecting our communities. The difference with HIV is that we have to deal with the stigma of the virus and its spread by sexual contact. We cannot keep silent and expect grand change to happen to eradicate the disease from our communities. We have to fight like we have never done before.”
Amber Robins

University of Rochester School of Medicine and Dentistry MD Candidate

Young minority WIC/Medicaid eligible pregnant or non-pregnant English-speaking mothers in the Rochester community will utilize a pilot breastfeeding and infant nutrition intervention deployed through a private social media online network.

Prior to participants’ access to the website, a pre-test survey will be given to assess breastfeeding knowledge. Later, the knowledge will be compared to a post-test survey that will be given after the social media network intervention. On the social media website, literature will be provided to the young mothers concerning breastfeeding, infant nutrition, and women’s health. They will also be able to submit personal videos and photographs illustrating their experience as young pregnant or non-pregnant mothers. These videos and photographs will be screened as they are posted on the social media website. Young mothers will have access to chat rooms with other young mothers in the study. In addition, they will have access to practicing physicians and social workers at the University of Rochester School of Medicine and Dentistry and other Rochester community programs.

Amber Robins is a 24-year-old medical student at the University of Rochester School of Medicine and Dentistry located in Rochester, NY. She attended Xavier University of Louisiana where she graduated Magna Cum Laude as a Biology major and Chemistry minor and was elected Miss Xavier University of Louisiana 2009-2010. In medical school, Amber was elected Curriculum Committee member, University of Rochester’s SNMA Public Relations Chair 2010-2011, and OB/GYN Interest Group leader. She also currently holds the position of Medical Student Representative for ACOG District II. Amber has been active in various research projects that include studies involving gynecologic cancers, adolescent mothers, and minority medical students. She was recently awarded a position in the Medical Education Pathway at the University of Rochester in which she will participate in teaching medical students through lectures and small group sessions. In addition to her work in medical school, Amber is the founder of a community step team where she is the choreographer and was also an English teacher in Rabat, Morocco, over the summer between her first and second year of medical school. Amber is a writer for The Journal for Minority Medical Students in her own column entitled “Diary of a Medical Student”. Throughout her journey, Amber’s goal is to continue motivating others to achieve their own personal successes. She is constantly reminded that dreams do come true with faith in God and hard work.
Rosie Kilgore

University of North Carolina School of Medicine in Chapel Hill MD Candidate

Rosie Kilgore is in her second year at the UNC School of Medicine in Chapel Hill, NC. As a first generation Liberian American, her sister, aunt, and grandmother emigrated from Liberia during the civil war when she was three years old. She witnessed disadvantages first-hand as her grandmother, being beyond retirement age, was forced to rely on government assistance. Her grandmother was also diagnosed with diabetes shortly after arriving in the U.S.

Partly due to her grandmother’s illness, Rosie became interested in becoming a doctor from a very young age. However, she did not become officially interested in combating health disparities until entering college at Duke University. It was there that she took an education course entitled, “Children, Schools, and Society.” One of the topics explored in the course was the black/white achievement gap. Health factors such as hunger and the lack of dental care, as well as differences in socioeconomic status and institutional racism were listed as significant contributors to this gap. This and other portions of the course peaked her interest in the social determinants of health.

While Rosie had a strong interest in becoming a primary care pediatrician, just before taking the course she became passionate about pursuing a fellowship in child abuse pediatrics. Although she had not experienced abuse or neglect as a child, through various avenues she came to understand that child abuse and neglect is a significant public health problem: minorities are disproportionately represented in the child welfare system.

Before Rosie was accepted into UNC School of Medicine, she learned of a health disparities certificate in the School of Public Health. She began taking coursework towards the certificate in her first semester of medical school. Through her public health courses and discussions with various professors and physicians, she realized that in order to adequately address health disparities in America, there needed to be a focus on primary, secondary, and tertiary prevention in both child and adult populations. Consequently, she developed an interest in medicine-pediatrics.

Over the course of the year, Rosie came to learn of the complex relationship between individual life events, family, neighborhood, culture, and the health outcomes that are heavily shaped by these factors. She is very excited to be able to combine her interests in child abuse and neglect, health disparities, and medicine-pediatrics with her research, which focuses on the modifying role of SES, race, and gender on health outcomes of young adults with adverse childhood experiences.

Outside of academics, Rosie is an active participant in SNMA, serving as the MAPS co-liaison and mentor for MAPS students. She is also a guardian ad litem, a court-appointed advocate for a child in foster care. She is also an active member of her local church, and enjoys singing, dancing, and painting. Rosie is also glad to say that she will be returning to Liberia for the first time in December 2012, participating in a global health elective at the University of Liberia College of Medicine.
Millicent Chizua Okereke

University of Rochester School of Medicine MD Candidate

My research project focuses on evaluating the correlations of motivational factors within several behavioral survey instruments among inner-city adolescents in Rochester, New York. These instruments are motivation questionnaires on eating healthy and physical activity. Many of these instruments and measures have never been used in disadvantaged, urban adolescents. Obesity is an important issue, especially as we prepare the next generation to live to their fullest potential. If significant steps can be made to understand the reasoning and motivation behind why adolescents sometimes fail to engage in behaviors beneficial to their health, then measures and interventions can be created that are more in line with their thinking.

In the future, I aspire to work in a low-income inner-city practice that serves those who have limited access to healthcare. I plan to go into the field of pediatrics and eventually a fellowship in adolescent medicine. I grew up in a low-income community in Brooklyn and know the hardships families and children have to go through to get decent medical services and care. I hope to be a community leader and serve adolescents that have to deal with being forced to grow up and be an adult by responsibilities put on them by their home environment and economic needs. I have always wanted to become a motivational speaker for inner-city youth to help motivate them to strive for greatness despite their present situations and to be conscious of the decisions they make and the impact it has on their future. This project will help connect my past and continued efforts as a teacher and mentor and direct my future vision and path into becoming a pediatrician.

After graduating from Duke University, I joined Teach for America with a drive to greatly influence the community that I grew up in Brooklyn New York. I taught 9th and 10th grade global history in Brooklyn during my two-year commitment before entering the University of Rochester School of Medicine. It was one of the most rewarding experiences of my life, but it raised many unsettling issues that I saw pertinent to adolescents in urban communities. During my teenage years, I noticed many of my neighborhood friends and classmates adopting unhealthy behaviors. From eating at the fried chicken stores that lined almost every other street corner to finding no motivation to play outside or fear of gang violence, adolescents in my community became overweight. But I had come to realize that some of them had no awareness that they were overweight or obese, and did not have the motivation or drive to prevent these changes from occurring.

Adolescent obesity continues to be a stark, growing epidemic in many inner-city communities today. I personally know the harsh psychological and emotional health consequences of obesity during this crucial time of personal and physical growth. I saw it in my high school students as they dealt with the realities of obesity in their everyday lives. My students that were overweight are just a few of our adolescents that have a trajectory in their weight, because obese adolescents usually become obese adults. I hope to make some changes in the lives of adolescents on a downward path. I have a strong desire to work with populations that need help making changes in their everyday lives, starting with their mindset of obesity. Measures need to be taken to address the impact of childhood obesity so that our children will have opportunities to live longer and healthier lives.
A small boy sees and touches a brain for the first time at an outreach event in San Francisco

Dawn Maxey
Drospirenone/ethinyl estradiol oral contraceptive pill as a treatment for acne vulgaris.

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Abstract
Acne vulgaris is a common dermatological condition in both adolescents and adults. It is a disease classified by its severity and lesion type. Inflammatory mediators, comedo formation, alteration in sebum production, and sebaceous follicle micromedones are four processes implicated in acne formation. Approximately 15 percent of women of reproductive age suffer from acne vulgaris. This population of women sometimes uses oral contraceptives, which is also effective in acne treatments. Of the various oral contraceptive formulations, drospirenone/ethinyl estradiol was shown to be more effective in the treatment of mild to moderate acne vulgaris. Drospirenone/ethinyl estradiol should be among the first oral contraceptive pills (OCPs) considered when evaluating treatment in women with mild to moderate acne.

Introduction
Acne vulgaris is arguably the most well-known dermatological condition. While it is more common in adolescents, acne vulgaris is still a significant concern in adults, causing physical and psychological manifestations in all age groups. Oral contraceptive pills (OCPs), primarily used for birth control in women, have been shown to be effective in the treatment of acne vulgaris. Studies have shown that oral contraceptives reduce inflammatory and non-inflammatory lesion count, decrease acne severity, and improve patients’ self-assessment of acne in all trials compared to the placebo. Of the various oral contraceptive formulations, drospirenone/ethinyl estradiol was shown to be more effective in the treatment of acne vulgaris than various other birth control formulations. Acne vulgaris affects 1% of men and 5% of women, therefore, drospirenone/ethinyl estradiol OCPs represent an effective way to treat mild to moderate acne, especially in women seeking contraception.

Acne vulgaris

Pathophysiology
Four processes have been identified in acne formation. (1) Inflammatory mediators released into the skin stimulate the pilosebaceous vasculature. The involvement of CD4+ lymphocytes, matrix metalloproteinases, leukotriene B4, and macrophages point to an immune-mediated inflammatory process; follicular hyperkeratinization follows. (2) Comedo formation occurs through defective terminal keratinocyte differentiation, which may be exacerbated by androgens and changes in sebum lipids. Squalene also stimulates keratinocyte proliferation. (3) Increased and/or altered sebum production mediated by androgen control occurs through sebaceous glands, which are influenced by corticotrophin-releasing hormone, Vitamin D, and insulin-like growth factor 1. (4) Microcomedones in sebaceous follicles allow Propionibacterium acnes to thrive. The anaerobic, lipid-rich environment is important because lipogenesis is directly augmented by P. acnes. Thus, facial follicle colonization by P. acnes occurs closely after sebum production, pointing to the sebaceous gland as a critical medium in acne production.

Classification of acne vulgaris
Acne vulgaris is classified based on severity and type of lesion. Severity: mild, moderate, or severe. Type of lesion: comedone/papule, pustule, nodule, or scar. Comedonal acne is open/closed comedones with little or no inflammation; comedonal acne responds to keratolytic agents. Papules and pustules point to inflammatory acne, which may also include comedones. Topical agents may be insufficient in treating this type of inflammatory acne; systemic antibiotics are usually indicated. Nodular acne is often treated with isotretinoin due to the presence of comedones, inflammatory lesions, and deeper nodules and cysts. Comedonal and/or inflammatory acne may also be effectively treated with drospirenone/ethinyl estradiol.

Drospirenone/ethinyl estradiol oral contraceptive pill
The primary indication for the drospirenone/ethinyl estradiol oral contraceptive pill, also known by the brand name Yaz® or by the generic Gianvi®, is to prevent ovulation in the female, therefore preventing pregnancy. The drospirenone/ethinyl estradiol OCP has also been FDA-approved to treat premenstrual dysmorphic disorder; its anti-mineralocorticoid properties are thought to counteract the bloating and water retention produced by estrogen. The drospirenone/ethinyl estradiol OCP, along with all other OCPs, can be effective in acne treatment by preventing the effects of androgens on sebaceous glands and follicular keratinocytes. The drospirenone/ethinyl estradiol pill exerts its action by suppressing pituitary gonadotropin secretion, which reduces ovarian androgen production. Recent studies demonstrate that androgen receptors can be found in the basal layer of sebaceous glands of the skin; skin and sebaceous glands contain the biochemical substrates for androgen production and metabolism. The antiandrogenic effect of drospirenone/ethinyl estradiol on sebaceous glands increase hepatic production of sex hormone binding globulin, resulting in a reduced level of bioavailable testosterone. Such an antiandrogenic effect is an important mechanism of action because increased testosterone in females has been shown to lead to the development of acne vulgaris.

Pharmacology
Drospirenone is a synthetic progestin with the molecular weight of 366.5 and the molecular formula of C20H18O3N. Ethinyl estradiol is a synthetic estrogen with the molecular weight of 296.4 and the molecular formula of C18H20O2. Drospirenone, an analog of spiranolactone, is a synthetic progesterin that combines antimineralocorticoid and antiandrogenic properties with progestin activity. Drospirenone is a fourth-generation progestin with similar pharmacology to progesterone. The antimineralocorticoid properties of drospirenone is eight times those of spironolactone. Notable side effects of drospirenone/ethinyl estradiol are hyperkalemia, renal insufficiency, hepatic dysfunction, and adrenal insufficiency. Women using ACE inhibitors, angiotensin II receptor antagonists, K-sparing diuretics (such as spironolactone), and NSAIDs must be especially careful when considering drospirenone/ethinyl estradiol. The oral availability of drospirenone is 76%, its serum half life 31 hours, and peak plasma levels occur in 1-2 hours. The serum half life of ethinyl estradiol is 24 hours. Up to 97% of drospirenone is loosely bound to serum albumin.

Drospirenone/ethinyl estradiol as a treatment for acne vulgaris
As a treatment option for acne, drospirenone/ethinyl estradiol can treat mild, moderate, and severe acne as a form of monotherapy or as an adjunct to other systemic or topical therapies.

In two double-blind, randomized, placebo-controlled multicenter trials using drospirenone/ethinyl estradiol, results confirmed that the OCP was more effective than the placebo in the reduction of moderate acne. The study also demonstrated the benefit of drospirenone in treating moderate acne due to its longer half-life, increased antiandrogenic effects, and decreased androgen synthesis in comparison to other OCPs. In another study, OCPs containing either drospirenone/ethinyl estradiol are hyperkalemia, renal insufficiency, hepatic dysfunction, and adrenal insufficiency. Women using ACE inhibitors, angiotensin II receptor antagonists, K-sparing diuretics (such as spironolactone), and NSAIDs must be especially careful when considering drospirenone/ethinyl estradiol. The oral availability of drospirenone is 76%, its serum half life 31 hours, and peak plasma levels occur in 1-2 hours. The serum half life of ethinyl estradiol is 24 hours. Up to 97% of drospirenone is loosely bound to serum albumin.

Drospirenone/ethinyl estradiol as a treatment for acne vulgaris
As a treatment option for acne, drospirenone/ethinyl estradiol can treat mild, moderate, and severe acne as a form of monotherapy or as an adjunct to other systemic or topical thera-
Drospirenone has been shown to be effective in the treatment of acne,1 and in a randomized open-label trial comparing nomegestrol acetate and 17β-oestradiol to drospirenone/ethinyl estradiol, nomegestrol acetate and 17β-oestradiol improved acne by 48.4% while drospirenone/ethinyl estradiol improved acne by 61.4%.2 In placebo-controlled trials that went through six cycles of pills, drospirenone/ethinyl estradiol showed significant improvements of 40% for non-inflammatory lesions, 40% improvement in inflammatory lesions, and 44% improvement for all lesions in total, compared to a placebo improvement of 28%.

Conclusion

The drospirenone/ethinyl estradiol oral contraceptive pill, also known by the brand name Yaz® or by the generic Gianvi®, offers a convenient way to treat mild to moderate acne in women who desire birth control. Drospirenone/ethinyl estradiol has an increased antiandrogenic effect compared to other OCPs. Several studies have demonstrated that this increased antiandrogenic potential results in a reduction of mild to moderate acne in women who take drospirenone/ethinyl estradiol for a minimum of six months. The effective treatment of mild to moderate acne has also been shown to be increased in drospirenone/ethinyl estradiol compared to other OCP formulations. Thus, drospirenone/ethinyl estradiol should be among the first OCPs considered when evaluating treatment in women with mild to moderate acne. When used as monotherapy or combined with a topical or systemic acne medication, the drospirenone/ethinyl estradiol represents a valuable means of reducing acne in females. Reduction of acne lesions with the drospirenone/ethinyl estradiol OCP offers a means of decreasing the physical and psychological sequelae of acne lesions in women.

References


Sensitization and prevalence of asthma and allergy in infants and young children six months to five years of age

Toni-Kaye McDougall, Nova Southeastern University

Abstract

The purpose of this paper is to consider and analyze all risk factors involved in the increasing rates of asthma and allergy in children six months to five years of age. For the purpose of this study, factors including genetics, food allergy, and atop dermatitis will be considered. Observations will be done with the intent of isolating a common trend. Once target areas have been identified, clinical trials can be utilized to manipulate these areas with hopes of finding a solution to the growing epidemic.

Introduction

The prevalence of asthma and other immunologic diseases have significantly increased in the United States over the last 40 years. It is estimated that the demand for allergists will increase 35% by the year 2020. Asthma and allergy combined affect 40 to 50 million people within the U.S. population including millions of children. Incident rates of asthma alone have tripled over the past 25 years. Asthma affects 22 million Americans including 9 million children and deaths that result from asthma exceed 5,000 annually. It is reported that a total of 13 million school days are missed per year due to asthma. More than 70% of asthma victims also suffer from other allergic diseases including atopic dermatitis and rhinitis. Eczema is the most common form of atopic dermatitis affecting children. The prevalence of eczema has also increased from 3% in the 1960’s to more than 10% today.

Background

One of the most important organs of the respiratory system is the lung. The lungs accomplish two tasks: ventilation and diffusion. Ventilation is the movement of air in and out of the lungs. Diffusion plays a role in the exchange across the alveoli, and supplying the blood with oxygen. Because the lungs are so important they utilize many mechanisms to protect themselves, one being bronchospasm. Bronchospasms are extreme defense reactions that can lead to death.

When the lungs become irritated, bronchospasms occur in order to reduce exposure to the irritant being breathed in. Bronchospasms are characterized by the tightening of the muscles surrounding the airway, which results in passage narrowing and ultimately disruption of pulmonary function. People who suffer from asthma and allergy are chronically hypersensitive to irritants and are therefore more susceptible to bronchospasm. Because the same irritants that cause asthmatic reactions may also trigger allergic reactions, it is not unusual for both conditions to be present in an individual. When a person suffers from asthma induced by allergy, they are said to have allergic asthma. Asthma is diagnosed by the presence of the following symptoms in young children: wheezing, chest tightness, frequent coughing, especially after physical activity, recurring bronchitis, prolonged colds, trouble speaking due to restricted breathing, and breathing that is faster or louder than normal. In infants, observable symptoms include slow feeding, gasping for air and shortness of breath during feeding.

Atopic dermatitis is a chronic skin condition associated with asthma and allergy. It is usually observed early in childhood and is said to be an early manifestation of allergy. Eczema may appear only when the skin has been exposed to an irritant and may disappear upon removal of the irritant. Eczema, like allergy and asthma is a result of the overproduction of antibodies in response to harmless foreign particles or changes in the weather. Because of this, eczema is an early indicator of abnormality in the immune system.

Generally children who experience eczema at some point go on to develop asthma or allergy later on in their lives.

The body’s immune system reacts to foods with much similarity to its defense pathway involving allergens. Foods that commonly initiate allergic reactions in children include: milk, peanuts, eggs, dairy products, fish, wheat, soy, tree nuts and shellfish.
The body reacts to these foods by contracting smooth muscles and causing difficulty in breathing as well as red, itchy or swollen skin. As with any type of allergic reaction, food allergy poses the risk of anaphylaxis; a complete-body allergic response that can lead to cardiac arrest, respiratory arrest and even death.

Pathogenesis

B lymphocytes, an important component of the immune system, are responsible for the production of antibodies. Immunoglobulin E (IgE) is an antibody found in the lungs, skin and mucous membranes of the stroke model. Nine week old male C57BL6 mice underwent transient common carotid artery occlusion with an aneurysm clip before being placed in hypoxic conditions (8% O2) at 37°C for 20 minutes. After hypoxia, the aneurysm clip was removed 30 minutes later. Although it is present in all individuals, IgE concentrations tend to be extremely high in people who suffer from allergic reactions. For this reason, testing the blood for IgE count is an effective method for determining allergy sensitivity. Increase in IgE levels result in adverse effects that characterize the symptoms of allergic reactions.

Discussion

Research has shown that demographics are very influential in the occurrence of allergic and asthmatic reactions; however, genetics have been found to play an even larger role. An isolated inbred population study was conducted to simultaneously compare both genetic and environmental contributory effects. Observations were conducted over a nine-month period and compared a single inbred population that divided into two groups and migrated to two different environments for over fifty years. One group lived in the mountains and the other group lived in the desert. Although a trend revealed higher rates of asthma and allergy in the mountains, statistical data showed that both allergy and asthma were more influenced by genetics than by environment. (Table A, Table B).

Furthermore, an observational study consisting of 344 families in Arizona also confirmed the importance of transmission genetics in the development of asthma and allergy. In families where neither parent had asthma, 6% of children had the disease, and in families where both parents where asthmatic, 60% of the children had asthma.

Likewise, studies have shown genetic correlation in the case of childhood food allergy. When neither parent suffered from food allergy, the child only had a 0-15% chance, when one parent suffered from it, the child had a 30-40% chance, and when both parents suffered from the condition the child was 75% more likely to share the trait.

Infants with atopic dermatitis (A.D.) were observed in order to detect developing rates of food allergy in genetically predisposed children. As previously stated, A.D. is an early indication of immunological impairment and generally leads to the development of allergy. For this study, infants with A.D. were divided into three groups: breast-fed, mix-fed, and formula-fed. The mix-fed group was fed both breast milk and formula milk. The results indicated that children who were breast-fed were more likely to develop food allergy than those who were not. (Table A, Table B).

The effects of maternal origin are believed to play an important role in atopic dermatitis (A.D.) and other atopic conditions, and furthermore, infantile AD was more closely related to maternal than paternal disease status. Allergic inflammation is typically characterized by altered production of mediators such as cytokines and immunoglobulins, and it has been shown that the allergy history of the mother influences breast milk composition. (p.335)

Other supportive research reports that children with mothers who suffer from allergy are more likely to develop the condition than children with fathers who suffer from it. These statistics provide the basis of the in-utero sensitization theory. This theory claims that pregnant women who suffer from allergy or asthma may pass the trait on to their developing child by exposing the fetus to high levels of antibodies.

Treatment

Further research is necessary to determine the significance of in-utero sensitization in the pathogenesis of allergy. Perhaps through strict dieting and lifestyle changes children could be less susceptible to their mother’s overactive immune response and continue to develop normal immunological defense mechanisms during fetal development. Gene therapy is another alternative that may be used combat the disorder.

Though there is no cure currently available for asthma, it is commonly controllable through use of drugs and treatments. Control of environmental exposure and awareness of changes in weather and air quality is important in preventing attacks. Medications have been successful in reducing symptoms of allergy and asthma. Immunotherapy, also known as allergen desensitization, is also an effective method of treatment. It slowly exposes the patient to specific allergens through a series of shots. The dosages increase over time, eventually diminishing allergen hypersensitivity.

Summary

Understanding the factors that contribute to the prevalence of asthma and allergy in infants and young children is the first step in devising a treatment plan to manage and stabilize the rapidly growing rates of these disorders. When considering environmental and genetic factors, one critical question remains unanswered: can pediatric asthma be controlled through strict monitoring of the mother’s diet and environmental allergen exposure during pregnancy? Though at this time there is not enough research available to formulate a solution, a management plan can be devised to manage symptoms and prevent attacks. Because of the many medications and treatments available to infants and children with asthma and allergy, they are not forced to live a confined life.

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Immune cells travel to the infarct after stroke and exert a temporary exacerbate the cell death. The secretion of chemokines and cytokines helps sustain continued influx of immune cells to the site of injury. Injected stem cells can alleviate stroke by promoting axonal sprouting and dendritic plasticity in the proximity of the infarct. Stem cells can differentiate into various cell types, including neurons, astrocytes, and oligodendrocytes. This process is referred to as neurogenesis and is critical for the repair of damaged brain tissue.

**INTRODUCTION**

Current treatment for stroke and its shortcomings:

Stroke is the third leading cause of death and affects over 700,000 individuals in the United States per year. Since the tissues of the brain require constant blood and oxygen flow, the lack of oxygen and glucose caused by stroke leads to cell damage and death.

The only FDA approved treatment and the most widely utilized method to treat this disorder is called tissue plasminogen activator, or tPA. However, this mode of therapy must be administered to a stroke victim within 3 to 4.5 hours after ischemic attack and cannot prevent future cell death, but cannot reverse prior cell death in the brain. This time constraint is the major reason why tPA is only effective for approximately 15% of the stroke population. Takeuchi et al. and Li et al., who indicate that tPA is nearly ineffective in elderly patients as a result of the narrow timeframe for treatment, discuss the negative effects of this limited timeframe.

Alternative methods for treating ischemic stroke:

- Intravascular transplantation of neural stem cells (NSCs) is a promising therapeutic possibility for stroke patients. Stem cells can differentiate into various cell types, including neural cells. Several studies have demonstrated that engraftment of NSCs is associated with substantial functional recovery in rodent models of hypoxic-ischemia. In the case of stroke, stem cells can replace the function of dead cells by promoting axonal sprouting and dendritic plasticity in the proximity of the infarct.

- The immune system during stroke and its limiting effects on stem cell therapy:

  Studies have revealed that cells of the immune system travel to the site of brain injury during stroke. Immune cells, including macrophages, neutrophils, and T cells, are recruited to the site of damage and release pro-inflammatory molecules such as cytokines and chemokines. Mice that lack T and B cells have been shown to have smaller infarcts after stroke compared to mice that had these immune cells.

Colocalization of immune cells and stem cells:

- During stroke, white blood cells of the immune system have been shown to travel to the site of injury through diapedesis. A molecule called CCL2, which is a chemoattractant for many cells of the immune system including macrophages and lymphocytes, is upregulated near the site of injury 3 days post stroke, and infusion of CCL2 into the brain parenchyma results in the migration of subventricular zone (SVZ) neural progenitors to the site of injury. The knockout of CCL2 shown to attract cells that express chemokine receptors, resulted in a large decrease in cells migrating from the SVZ to the ischemic penumbra. This project aims to demonstrate this colocalization by analyzing whether CCL2 is upregulated after HI and whether there exists an in vitro dose-dependent response in migration of the neural stem cells to CCL2.

**MATERIALS AND METHODS**

1. Cell Culture

   A murine multipotent neural stem cell line derived from the external germinal layer of the mouse cerebellum (C7.2) was used. The cells were transduced with a viral construct containing GFP and renilla luciferase.

2. Hypoxia–Ischemia Model

   Brain ischemia was induced using a hypoxic–ischemia stroke model. Nine week old male C57BL6 mice underwent temporary left common carotid artery occlusion with an aneurysm clip before being placed in hypoxic conditions (8% O₂) at 37°C for 20 minutes. After hypoxia, the aneurysm clip was removed 30 minutes later.

3. Cell Transplantation

   The common carotid artery was re-exposed, and a single cell suspension of cells was delivered into the internal carotid artery 24 hours after ischemia via injection in 5 microliters of saline.

4. Cell Quantification and Fluorescent Imaging and Cell Receptor Expression Analysis

   GFP+ cells were quantified in the penumbra regions of the ipsilateral cortex. BLI was used to examine the mice after injection with D-luciferin. Cell receptor expression analysis for CCL2 was then performed.

5. Immunohistochemistry and Electron Microscopy

   The animals were transcardially perfused with PBS followed by 4% paraformaldehyde (PFA). After removal, the brains were fixed and sectioned at 30 micrometers using a cryostat-microtome. GFP+ transplanted neural stem cells were quantified in the ischemic penumbra.

6. Statistical Analysis

   Quantitative data were expressed as mean ± Standard Error of Measurement (SEM). P<0.05 was considered statistically significant.

**RESULTS**

- Luciferase transduced stem cells successfully migrate to the injured brain in highest quantity and exhibit highest luminescence 3 days after hypoxia-ischemia (HI).

  Previous work has measured the BLI signal 6 hours, 4 days, and 7 days after neural stem cell transplantation. BLI at 6 hours after NSC transplantation revealed a statistically significant difference between the 3 day transplantation group and the 6 hour, 24 hour, 7 day, and 14 day groups (p<0.05). BLI at 4 days after NSC transplantation also exhibited this trend. BLI 7 days after NSC transplantation resulted in an average photon flux in the 3 day transplantation group that was higher than all the other groups (p<0.0001) (Figure 1). A mean of approximately 800 GFP+ transplanted neural stem cells/mm³ were present in the ipsilateral hemisphere of the 3-day transplantation group (Figure 2). Compared to all other groups, this 3-day transplantation group demonstrated the most GFP+ cells.

- Immune system chemokine CCL2 is upregulated up until 3 days after hypoxia-ischemia.

  Brain homogenates from HI animals were assayed for the expression of CCL2, a chemokine associated with the immune system, at 6 hours, 24 hours, 3 days, 7 days, and 14 days after HI. Robust expression of CCL2 mRNA was observed in the brain homogenates of animals given hypoxic-ischemic insults without neural stem cell transplantation, and the expression of the chemokine CCL2 was highly upregulated and persisted through 24 hours and 3 days after hypoxia-ischemia as compared to the control group of brain homogenates given hypoxic-ischemic insults without transplantation (Figure 3).
DISCUSSION

It has been shown that an increase in the number of neural stem cells homing to the brain has been correlated with improved positive behavioral outcome following stroke. The inflammatory response that occurs after ischemic attack is important for the recruitment of immune cells to the site of brain injury. Therefore, understanding the mechanisms behind the colocalization of both immune cells and neural stem cells to the brain after stroke may enhance the behavioral outcome and therapeutic effects of stem cell based treatments.

GFP+ transplanted cell confirmed that the cultured stem cells successfully migrated to the penumbra, allowing for analysis of the extent to which immune cells colocalize with these stem cells when traveling to the site of ischemic attack. CCL2 expression was also significantly upregulated up through 3 days after hypoxic-ischemia, and numerous studies on CCL2 expression in mice models of stroke corroborate this finding. When visualizing the luciferase transduced stem cells, the greatest bioluminescent signal occurred within the neural stem cells were transplanted at 3 days after hypoxic-ischemia. Since CCL2 expression and neural stem cell photon flux both peak 3 days after HI, it is likely that various immune system chemokines, including CCL2, may interact with the neural stem cells when migrating to the site of brain injury. Taken together, this suggests that at around 3 days after HI, chemoattractive molecules are optimal for recruiting neural stem cells to the ischemic lesion via colocalization.

CONCLUSIONS

In order to confirm the migration of the neural stem cells to the injured brain after transplantation into the mice, bioluminescent imaging and photon flux data were used to demonstrate that luciferase transduced stem cells migrate to the penumbra at 3 days after HI in the greatest cell engraftment. Next, it was determined that the chemokine CCL2 is highly upregulated until 3 days post hypoxic-ischemia, and these data coupled together suggest that immune system chemoattractive molecules such as CCL2 likely regulate the mechanisms important for neural stem cell extravasation and migration through colocalization with stem cells. Further studies characterizing the role of growth factors in mediating immune cell and stem cell colocalization to the site of ischemic attack are necessary to increase the potential of intravascular cell-based therapies for stroke.

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The White Coat Ceremony is the symbolic introduction into the medical profession. It was created to instill solidarity, humanism, and compassion among medical students. Since its inception almost two decades ago, the event has been well received and is now practiced at most medical institutions. The components of the ceremony include a cloaking, pinning and recital of the Hippocratic Oath by first-year medical students. For many, it is the highlight of their inaugural year of medical school.

The inspiration behind The Cloaking was drawn from my own white coat ceremony experience at Georgetown University School of Medicine. I recall feeling mixed emotions of pride, humility, and a hint of anxiety. I attempted to recapture that moment by depicting a medical student putting on their white coat for the first time. In the painting, the student is cloaked by the dean and standing next to a physician. The student gazes into the audience with a serious expression contemplating his first real steps into the profession. The dean and faculty member also display modest smiles because this is a joyous yet solemn occasion.

When designing my paintings, my choice of palette and subjects are intentional as I am trying to convey a message to the viewer. For this piece I chose robust colors and confident figures to reflect positivity, strength, and diversity in the medical field. It is my belief that this mirrors the public’s perception of healthcare providers; for them, they are the last guardians of human vitality. This should be a key consideration as we begin to grapple with the way in which medical services are administered in this country.
Seniors, Medicare, and the Affordable Care Act
by Greg Hitchcock

Selig Corman, 75, is a licensed pharmacist in New York State practicing his profession for fifty years; he has been paying into Medicare since he was 27, when the government health insurance program was first created under President Lyndon Johnson’s Great Society legislation in 1965.

Today, nearly 50 million seniors and the disabled rely on Medicare for their health care every day.

When he was younger, Corman may not have needed health coverage, but in his senior years, he finds he needs more health care, having to take seven different medications for high blood pressure, diabetes, and a kidney disorder among other ailments.

“The older you get, your medical needs change which requires more medical attention,” he said.

Corman does admit that although some people require more medications, others like Corman’s mother, need none at all.

“My mother will be 101 this month; she takes no medications, just a vitamin supplement to please me,” Corman said.

When the Affordable Care Act was passed by Congress and signed into law by President Barack Obama, one of the intentions of the legislation is to reduce Medicare Part D’s catastrophic gap, or the so-called donut hole, until it closes completely by 2020 offering medication coverage for seniors and the disabled for a low copayment for as long as needed.

The U.S. Department of Health and Human Services confirmed in an August 2012 news release that since the law was enacted, seniors and people with disabilities have saved $3.9 billion on prescription drugs as the Affordable Care Act began closing the “donut hole” coverage gap.

According to the White House, these savings include a one-time $250 rebate check to seniors who fell into the prescription drug coverage gap known as the “donut hole” in 2010, and a 50 percent discount on brand-name drugs worth a total of $2.1 billion, or an average of $604 per person in 2011.

Through the first two months of 2012, 70,000 seniors and people with disabilities have already received $65 million in savings in the donut hole.

Corman said he takes a bunch of medications in the morning and a bunch in the afternoon, and to cut costs, most of the drugs he takes are generic and less expensive.

And according to a White House source on the federal legislation under the Affordable Care Act, many people with Medicare did receive a significant savings with a 50 percent discount on covered brand name drugs and 14 percent coverage of generic drugs in the donut hole.

Corman said there were holes in the original Medicare Part D insurance. Although allowing a lot of people to get medicine for a small dollar amount, it was hobbled together in the middle of the night when President George W. Bush signed it into law in 2003.

“I don’t think it was put together right,” he said. “We have had 6 years of Medicare Part D. Before that, there were no prescription plans under Medicare for recipients. So, they either paid out of pocket or some other insurance program was picking up some of the cost.”

Another way recipients on Medicare Part D have cut expenses is by cutting corners, Corman said.

“I have friends that when they hit the gap [donut hole], it was a strain on them, so they would cut corners by taking their prescriptions once a day instead of the recommended daily amount of three times,” he explained.

“I’d go into the pharmacy and I’d have my medications refilled for $300 per month. Under the Affordable Care Act, I can now get five different prescriptions for a $44 copayment,” Corman said. “Many people cannot afford $300 a month, but they could afford $44.”

While many people and states remain resistant to the new health care act, some labeling it Obamacare, Corman said the skepticism is mainly political involving how to fund the legislation, and not the good intention of the act itself.

“This country is one of the few without a health plan for everyone,” he said. “It is almost criminal to cast people aside.”

Corman said there are long range negative consequences for not strengthening Medicare Part D, including having more people in nursing homes and hospitals for chronic conditions which proves quite expensive.

Nevertheless, under the Affordable Care Act, fewer people will be paying out of pocket, their quality of life will improve, and seniors living a healthier life will volunteer more.

“My parents retired to Florida, but they’d go into the local schools and volunteer to help students. This benefited them and also benefited the students,” Corman said.

The health of minority women in the new era of healthcare reform
by Walter Wilson, Jr.

Chairperson of SNMA Health Policy and Legislative Affairs Committee
The health of minority women in the new era of healthcare reform

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NEW YORK – Women of color stand to benefit from the Affordable Care Act (ACA). This article will explore the health status of minority women across the nation and identify how the ACA can potentially relieve the health inequities that exist.

The role of women in society, and more specifically within the family unit, makes the issue of eliminating health disparities among this population important for the country as a whole. Healthcare is a central element of women’s lives, shaping their ability to care for themselves and their families, to be productive members of their communities, contribute to the workforce, and to build a base of economic security. Women are currently more likely to report health problems. Low income women, who are often of minority groups, must choose to delay addressing their own healthcare needs due to the cost of healthcare, as well as other reasons such as transportation problems, not being able to get time off from work, and lack of childcare.

Women of color fare worse than white women across a broad range of health and health-related measures in almost every state. Compared to their white, higher-income counterparts, women of color across this nation are more likely to report health problems. Lower-income women, who are often of minority groups, must choose to delay addressing their own healthcare needs due to the cost of healthcare, as well as other reasons such as transportation problems, not being able to get time off from work, and lack of childcare.

Some of the largest gaps are in the rates of new AIDS cases, late or no prenatal care, no insurance coverage, and a lack of a high school diploma. Black women in particular have an extremely high rate of new AIDS cases. Latina women tend to lack insurance, do not have a personal doctor/healthcare provider, and delayed or went without health care because of cost. Furthermore, many are immigrants who do not qualify for publicly funded insurance programs such as Medicaid and are further hindered by language barriers that make navigating the healthcare system a major challenge. The health experiences of women of color, as compared to white women, are very diverse from state to state, and there is growing literature that social determinants play a role in this trend. Economic and educational disparities exist between white women and most women of color as poverty rates for Black, Hispanic, and American Indian and Alaska native women are 2.5 to 3.0 times higher than those for white women. The median income among these groups was roughly half that of white women.

More importantly, it is about what specific healthcare services will be covered. The “essential health benefits” that qualified plans in the individual, small group, and state exchange markets, must include, as specified by federal law, are maternity and newborn care, which includes the coverage of prenatal visits, “well woman” visits, domestic violence screening, breast-feeding supports such as breast pump rentals for lactating women, HPV testing, and screenings for STI’s and gestational diabetes. Those who are newly qualified for Medicaid will have coverage of pregnancy-related care up to at least 60 days post-partum. Medicaid is responsible for the coverage of 41% of all births nationwide. The continuity of care will be preserved for women of color who are also low-income new mothers as they will be able to maintain coverage during the prenatal period, the postpartum period, and beyond. Family planning services are also covered by the ACA for Medicaid enrollees. In addition to direct healthcare services, the ACA will provide $75 million per year for the State Personal Responsibility Education Program which is designed to provide evidence-based sex education to reduce teen pregnancy rates and the incidence of sexually-transmitted infections. Older women of color will also experience better healthcare coverage under the ACA with Medicare beneficiaries no longer having to pay any cost-sharing for preventive services such as mammograms, Pap smears, and bone density screenings. They will also be eligible to receive personalized health plans as well as an annual comprehensive risk assessment.

Establishing health equity for women of color is crucial for their sake, and for society as a whole, as women play a central role in sustaining the well-being of the family unit and the community. The SNMA Health Policy & Legislative Affairs Committee will be releasing an Official Policy Statement on the health of women of color by March 2013.
Healthcare reform has been a constant discussion. The Affordable Care and Patient Protection Act passed in 2010 as an effort to change the healthcare system. What do we know about the ACA? According to a sampling of medical students in Minnesota, a clear majority support the ACA. However, some were ill-informed as to what it was, and how it would work. Medical students need to be well versed in the ACA because they are the next generation of doctors to be affected by the ACA. They also need to understand how implementation of the ACA affects at least two segments of underserved populations: minorities and women.

Implementation of the ACA will make way for: health insurance market reform, an individual mandate requiring everyone to have health insurance or face a tax penalty, employer mandate to provide insurance, access to health insurance regardless of preexisting conditions, federal subsidies for the poor, and expanded access to Medicaid.

According to the Agency for Healthcare Research and Quality, a disparity is a difference in treatment provided to members of different racial or ethnic groups that are not justified by underlying (mental) health conditions or preferences. Disparities may be due to differences in access to care, differences in the quality of healthcare. Studies show that ethnic minorities have a disproportionate share of the population’s disease burden.

For example, blacks make up 12.5 percent of the United States population, yet have higher rates of Human Immunodeficiency Virus and Acquired Immunodeficiency Syndrome infection, infant mortality, heart disease, diabetes, and mortality from both prostate and breast cancer than whites. One third of Hispanics and more than 20 percent of blacks lack insurance in the United States. According to a study conducted by Shun Zhang and colleagues, in the Maternal Child Health Journal, among Medicaid-insured women, African American women are more likely to undergo Cesarean section, and experience pre-term birth or stillbirth, thus incurring higher Medicaid costs.

Implementation of the ACA will expand Medicaid insurance to reach over 30 million people who do not have insurance. This expansion may help minorities who fall into the near-poor category. The ACA also allocates one billion dollars for comparative effectiveness research to identify gaps between existing medical research and the needs of medical practice, and from there determine when modification is needed and when treatments can be rendered in standard form. This allows healthcare providers to know what treatments work best for a given population. Finally, the ACA allows for expansion of the nation’s primary care workforce, which includes family medicine, pediatrics, geriatrics, internal medicine, nurse practitioners, and physician assistants. This expansion is made possible by allocating $168 million to increase training of PAs and NPs, and investing eleven billion dollars to comprehensively lactation support.

The committee agreed on eight services to be protected under the ACA for women and girls aged 10-16:

- Gestational diabetes mellitus screening between 24 and 28 weeks of gestation, or first prenatal visit for higher risk females
- Human papilloma virus testing
- Annual counseling on sexually transmitted infections for sexually active females
- Annual HIV infection counseling and screening for sexually active females
- Coverage of FDA-approved contraception, sterilization procedures, and patient education and counseling for females with reproductive capacity
- Comprehensive lactation support
- Interpersonal and domestic violence screening and counseling
- At least one preventative care visit annually, including preconception and prenatal care for those interested in having children

Implementation of these provisions will positively impact the health of women and families. For example, support for breastfeeding in the workplace allows children to have the benefits of breastfeeding, which show a positive correlation with children’s cognitive development and health as adults and allows higher productivity and lower absenteeism at work.

As tomorrow’s physicians learn more about the ACA, they will be in a position to help influence patient care, including our underserved populations.

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The United States spends far more on health care than other countries do—17.6 percent of its gross domestic product compared with an average of 9 percent in other economically advanced societies. Health indicators, such as morbidity rates and infant mortality rates, show that despite the high healthcare expenditure, the United States’ health outcomes do not measure up to that of other industrialized societies. The Patient Protection and Affordable Care Act of 2010 (PPACA) is the first major health reform since the implementation of Medicaid and Medicare during the Lyndon Johnson administration. Coupled with the Education Reconciliation Act, the PPACA has initiated the process of health reform in the United States with the ultimate objective of improving health statistics and health care delivery.

**CHRONIC ILLNESS**

Since the early 1900s, society has experienced an epidemiologic transition from infectious to chronic diseases. These illnesses now represent a major contributor to the high cost of health care in the US. Chronic diseases—such as heart disease, stroke, cancer, diabetes, and arthritis—are among the most common, costly, and preventable of all health problems in the U.S.

While diseases such as influenza and cholera were previously the norm, there has been an overall decrease in the prevalence of infectious disease, and an increase in the morbidity and mortality rates of chronic illness such as cancer or heart disease. Current health statistics from the Centers for Disease Control and Prevention (CDC) show that 7 out of 10 Americans die from chronic illnesses each year—making chronic diseases the leading causes of death in our country.

**MEDICAL INSURANCE AND CHRONIC ILLNESSES**

Lack of medical insurance has a negative impact on a person’s health. According to the Census Bureau’s Current Population Survey (CPS) for 2011, approximately 16% of the total population was uninsured. Studies have shown that those who are uninsured generally neglect preventative care and only seek medical care when symptoms persist and illnesses begin affecting their everyday lives. This care generally is sought in hospital ambulatory care facilities. The acute nature of these facilities, unfortunately, is ineffective in treating chronic illnesses and creates a costly, revolving cycle of admittance, discharge, and re-admittance for these patients.

**BIOMEDICAL OR POPULATION MODEL**

A large and growing body of medical literature presents detailed discussions of etiology, symptomatology, treatments, and regimens. This outpouring of information, however, generally ignores a basic aspect of chronic illness—how to deal with such ailments in terms that are social, not simply medical. Our acute-care health care system exemplifies this biomedical model approach to illness and presents a number of problems to those suffering from chronic conditions. This system model is characterized by treating sudden, short-term conditions, which is not ideal for those with a chronic condition.

In contrast to the biomedical model, which fails to explore the “whys” of health, the population health model identifies a number of social, physical, and environmental determinants of health. These include diet, physical activity, housing, socioeconomic status, and health-related behaviors. Major risk factors for chronic illnesses are largely preventable; making the best recourse for improving the associated statistics a shift from the current biomedical model of addressing illness after it has occurred to taking preventative measures. This shift would need to occur on a macro level in order to be effective and the behavior modification program outlined in the PPACA just may be the necessary first step in this nationwide shift.

**AFFORDABLE CARE ACT**

In 2010, President Obama signed into law the Patient Protection and Affordable Care Act (PPACA), a comprehensive health care plan that would ensure all US citizens had access to affordable healthcare, encourage public health and preventative care, as well as reduce the total US health expenditure.

Section 4108 under the PPACA’s Title IV outlines an incentive program that would be offered to Medicaid recipients in exchange for the participation in a chronic illness prevention program. The US Treasury will give a $100 million grant to be divided among the states to implement this test program. In order to receive their incentive, the individual must achieve one of the following: (a) ceasing use of tobacco products, (b) controlling or reducing their weight, (c) lowering their cholesterol, (d) lowering their blood pressure, or avoiding the onset of diabetes; or, in the case of a diabetic, (f) improving the management of that condition. All of these behavior modifications have been proven effective in improving health outcomes. By implementing this incentive program, federal health policy is for the first time promoting a population health model to address the national health crisis.

**CONCLUSION**

Regardless of ethnic backgrounds, chronic illnesses greatly impact us all and the current method of containment has proved futile. Society will have to continue to adjust for chronic illnesses if current trends continue. Taking a preemptive approach to health versus the current combative approach will require a change in health policy on the part of our government and nationwide implementation. The passage of the Patient Protection and Affordable Care Act could very well be the answer, but it is certainly a much needed catalyst for shifting to a preventative approach to chronic illnesses. We, as a country, may be torn on the role of government in regulating healthcare, but one thing we must all agree on is that we cannot afford to continue seeing a rise in health-care costs associated with chronic illnesses.
Being born and raised in Miami, FL has shaped my inclination to understand and assist a wide array of cultures. I have a hard time identifying myself to just one cultural group. My father is from Brazil and my mother is a first generation American, but all of her extended family was from Colombia or Panama. If I go back further in my genealogy, there is Italian and German. My mother always told me that you learn most in life from people who are raised differently from you. I have always made it a point to get to know my community, and when I relocated to Boston, MA it was my goal to continue this venture. Upon meeting with the chief of emergency medicine, he confirmed my impression that Cambridge, MA also has a unique diversity. Brazilians, Ethiopians, Haitians and Central/South Americans were some of the backgrounds I met. Fortunately, my Spanish and Portuguese came in handy while working with these doctors. I knew the hospital was culturally diverse and this was one of the main reasons I was drawn to it. At the hospital, I often get to speak Spanish and Portuguese with patients, which is enjoyable and rewarding.

One of my most memorable moments working in the ER was with Dr. Isaiah in pediatrics where an interpreter was present. I distinctly remember when a 10-year-old girl came in complaining about horrible stomach pain. The girl was complaining about right-sided pain as she kept her knees bent. The mother added that recently, two of her cousins had appendicitis. The resident, Dr. Isaiah, was the pediatric specialist so he began asking questions and assessing. Immediately, my ears perked up and I began watching as he assisted the patient. She explained that the pain had started earlier in the morning. Her eating habits and bathroom habits had not changed. When she straightened out her knees, she was in terrible pain. Later, I learned this was indicative of possible appendicitis. Dr. Isaiah followed up with Dr. Thomas, the attending, with his assessment and where to proceed. Dr. Thomas led us back to the room to do his own assessment of the young girl. Dr. Thomas instantly asked the girl if she was comfortable. He also asked her if she could put her knees down because she was sitting on the bed with her knees to her stomach. She shook her head and said no. At this point Dr. Thomas wanted to check her blood and run various tests, tests for which I was already learning the acronyms for. A CBC—a complete blood count. A CHEM 7 measures the basic electrolytes in blood: sodium, chloride, potassium, carbon dioxide, blood urea nitrogen, creatinine, and glucose.

As we left the room, Dr. Thomas turned to me and said, “I think this may be early stages of appendicitis but more tests need to be done. In cases like these, you need to rule out other diseases and watch the patient for changes typical of the diagnosis.” Dr. Thomas said her knees being bent is something he commonly sees with appendicitis. Dr. Thomas also noticed that she felt a bit warm so he thought it would be a good idea to get her temperature. When the numbers came back, her white blood cell count and temperature were elevated. The interpreter had already left and neither Dr. Thomas nor Dr. Isaiah were proficient in Spanish. They turned to me in unison and said they were going to have me interpret. I was excited and did not want to miss this opportunity. I conveyed to the mother how the doctors believed that she needed to go to Massachusetts General Hospital for more testing to rule out appendicitis, as the disease was in its early stages. The mother had concerns for her insurance and the ambulance costs. Unfortunately, this is not uncommon, as a lot of the patients that come to the hospital have no insurance, and many are socioeconomically disadvantaged or even homeless. The mother and her family needed help, and I could not believe that in some cases, people are turned away.

I spent a lot of time in Panama as a child with hardly any electricity and a simple living environment. My parents were both poor when I was born. They were 20 years old and life was tough in a one-bedroom apartment. I know what it is like to eat spaghetti and ketchup many nights and hear my parents argue about how they would pay the bills. I was not allowed to get hurt as a kid because they refused to go to the hospital due to its expenses. This is a problem in health care that must be addressed. With an increasing diversity and potentially soaring healthcare rates, I see my time in the ER as an opportunity to take action, continue my studies, and help as many people as possible.
AMEC 2012 inspires new medical student newspaper

by Ajay Major
Albany Medical College MD Candidate

by Aleena Paul
Albany Medical College MD Candidate

In Training

Suitcases in hand and eyes puffy from the long plane trip from Schenectady, NY, we stood awestruck at the front archway of AMEC 2012. Months of meticulous planning and credit requests too numerous to count, we could scarcely believe that we were finally in Atlanta.

We were new to the world of SNMA. MAPS members for the entirety of our undergraduate years, AMEC 2012 was our first exposure to SNMA national leadership and the enormous network of medical students and physicians that support SNMA. At long last, it was time for us to see what SNMA could offer its members.

Excel sheets in hand—yes, we had made our own personalized schedules—we went to our first talk: “What Students Don’t Know: A Look into Academic Careers.”

To say that our first AMEC workshop was eye-opening is a gross understatement. The discussions about faltering diversity in academic medicine, the discourse on how to successfully lead as physician-researchers, the debate among the panelists on how to best address health disparities were the conversations we yearned for as fledgling medical students.

We were truly among friends and colleagues at AMEC. Surrounded by great minds, we were welcomed into the SNMA community with open arms and were invited to share in the collective knowledge of its members, bolstered by its long history and its enormous diversity of thought.

Exhausted after a long day of new experiences and new friends, we slept well that first night.

The next morning—and two strong cups of coffee later—we walked into the most anticipated talk of our AMEC 2012 experience: “Lights, Camera, Action: Career in Medical Journalism.” Ardent members of the Concordiensis, our undergraduate newspaper, we had always talked about reviving the student newspaper at Albany Medical College, our home institution. Journalism was an integral part of our undergraduate education, and we were eager to make it a part of our future careers in medicine as well.

The workshop opened with Dr. Tyese Gaines, a physician-journalist and practicing emergency physician who had pursued a master’s in journalism midway through her medical education. Currently the health editor for theGrio.com, a video-centric news site for the African-American community, Dr. Ty spoke about the importance of physician-journalists in advocating for patients and communicating health information to the lay public.

She advised us as future physician-journalists to get started early in our medical education by reading and, of course, by writing as much as we could. 

Dr. Ty is an inspiration, a pioneer for medical journalists, and a proud member of SNMA.

After the workshop, we approached Dr. Ty and asked for her advice on starting up our institution’s newspaper. Our minds fraught with the smallest details, from the number of writers to the structure to the voice, we babbled our concerns. After hearing our concerns, Dr. Ty was frank: maybe we should look towards serving a larger audience. We left the session excited, but confused. What did Dr. Ty mean?

As we walked into the national business meeting later that evening, ceiling tall and dais high with SNMA leadership from all across the country, it was clear what Dr. Ty had meant. SNMA is a national organization, a network of members committed to diversity in the profession of medicine. Intrinsic in SNMA’s mission is a spirit of collaboration, the notion that by coming together, we can reach all corners of the world to affect change and make a difference.

In that moment, we realized the power of a national perspective on physician-journalism. Why stop with only one institution when we could reach 100 institutions across the United States through networks like SNMA?

In that moment, inspired by the entrepreneurship of Dr. Ty and the vision of SNMA, in-Training, the online newspaper for medical students, was born.

At AMEC 2012, we discovered that our journey as physician-journalists would take shape through collaboration with our peers. We envisioned in-Training as an organization focused on empowering students in their formative years of medical education to express themselves through the written and spoken word. By offering a forum for the collective medical student body to openly discuss the issues of diversity and ethics and humanism, in-Training captures the essence of the medical student voice and allows future physicians to express themselves in the public sphere.

Two months after AMEC 2012, in-Training went online, and just six months later, we have an editorial board of seven and have published over 70 articles from medical students and budding physician-journalists from across the country. We eagerly await continued contributions from our peers across the country and beyond.

We wish to thank SNMA leadership and AMEC 2012 for exposing us to mentors in the medical profession and giving us insight into our contributions to the future of medicine.

We hope to return the favor by joining the growing network of SNMA members and by inspiring our peers to enter physicianhood as journalists and patient advocates.
Introduction

Gastric cancer is one of the most common cancers worldwide with 989,000 new cases per year and 738,000 deaths per year. It also accounts for 8% of all new cancers in the United States and is the 2nd most common cause of death due to cancer at 10.4%. Interestingly enough, most patients present when the disease is incurable. Gastric cancer is not routinely screened for in the US but is routinely screened in countries such as Japan, Venezuela and Chile where there is a high incidence. Risk factors in the United States include being of the male gender, non-white ethnicity and older in age. However, there is an increasing incidence in the amount of people between the ages of 25 to 39 who are inflicted with this disease, which will be proven in the following case presentation.

Report of Case

A pleasant 33 year old Japanese female, mother of 2 presented to the emergency room with a one year history of unrelenting heartburn and abdominal pain. When the symptoms first started, her Primary Care Physician prescribed Ranitidine, which provided relief and partial resolution of symptoms. Six months later, the symptoms returned and Nexium was prescribed. Nexium did not alleviate or relieve the symptoms in anyway and nocturnal nausea and vomiting began to occur three to four times per week and nothing was found on Ultrasound of the abdomen. At that time, an Endoscopy of the abdomen revealed narrowing of the antrum of the stomach and the scope was unable to be passed all the way down the stomach due to a stricture.

The patient described the pain as a constant, burning pain that was alleviated or aggrivated with or without food. She stated that the pain never radiated and was not related to position. The patient also admitted to losing 10-15 unplanned pounds in the last year. She was admitted for gastric outlet obstruction and acute blood loss anemia.

Past medical history was significant for reflux in 2004. Past surgical history was significant for 2 C-sections. Family History was significant for lung cancer and hypertension in her mother. A history on her Father was unable to be obtained. Social history was unremarkable for alcohol use, smoking or illicit drug use. She had no known drug allergies and her only medication is Nexium.

Review of Systems was positive for weight loss, mid-epigastric abdominal pain, nausea and vomiting. The patient denied fatigue, diarrhea, constipation, blood in stools or change in the color of stools.

On Physical exam, the patient was afebrile and normotensive with all other vital signs stable. She was awake, alert and oriented and HEENT exam was within normal limits. CN II-XII were intact and cardiovascular exam showed regular rate and rhythm, no murmurs or gallops along with 2+/4 dorsalis pedis and radial pulses bilaterally. Lungs were clear to auscultation bilaterally with no crackles, wheezes or rales. Abdomen was soft, non-distended with positive bowel sounds but tenderness to palpation in the medi-epigastric region. Skin was warm and dry and full range of motion was displayed on musculoskeletal exam.

The first pre-operative step included CT scans of the chest, abdomen and pelvis. The CT scan of the chest with contrast was negative for metastatic disease and showed no evidence of adenopathy in the supraclavicular and axillary lymph nodes. The CT scan of the abdomen and pelvis with intravenous contrast showed circumferential mural thickening of the gastric antrum without a well-defined focal mass identifies, 6 and 10 mm short axis diameter lymph nodes or soft tissue masses located about the posterior and greater curvature side of the gastric antrum as well as finding suggestive of left liver portal systemic shunting with evidence of vascular formation and/or fistula in the lateral left lobe. After understanding the risks and benefits of doing surgery, the patient agreed to proceed.

On the day of the operation, the patient was placed supine on the table and put under general endotracheal anesthesia. At this time, a large midline incision was made and no metastatic disease was seen. After removing the omentum from the colon and lysing some short gastric vessels, a small mass above the lesser stomach was found. It was in close proximity to the duodenum was non-invasive from the standpoint of the pancreas. The duodenum was transected just proximal to the left gastric arcade, which was about 5 cm from the tumor margin. After being sent to pathology for staining, both the distal and proximal margins were positive for cancer. At this time, a small part of the greater sac of the stomach and the celiac nodes were sent to pathology and both showed negative pathology. Moving on to the duodenum, it was resected from the head of the pancreas and showed positive margins and the decision to do a Whipple procedure was made. After removing the gall bladder, the common bile duct was ligated and transected and anastomosed with the common hepatic duct superiorly. Following the cholecystectomy, the pancreas was transected at the neck. After that, the uncinate process of the pancreas was gently teased off of the portal vein and SMV confluence and eventually dissected free. The next step was the end-to-side pancreatic jejunostomy which was followed by a J-tube placement for nutrition purposes. At this time, the abdomen was closed with 3-0 silk and skin staples. The procedures performed included an exploratory laparotomy, subtotal gastrectomy, pancreaticoduodenectomy (Whipple) and J-tube placement.
Comments
It has been agreed upon in multiple literature sources that surgical resection has been proven to give the best outcome but the problem (as mentioned earlier) is that in the United States, about two-thirds of cancers are already stage III or IV when diagnosed so surgery has more than one purpose. It can either be used to resect a localized lesion with preemption of a cure, actual staging of a tumor or for palliation when it’s too late. An interesting modality that was not used in the case of the patient was staging laparoscopy that is recommended in gastric carcinomas that exceed T staging beyond 1 and when neo-adjuvant chemotherapy is being considered. It can also be used for peritoneal cytology to check for metastasis in the peritoneum. The patient could have possibly avoided having those major surgeries had the staging laparoscopy been performed but one social factor to mention as that she did not have insurance. Another interesting twist in this case is that doing a Whipple Procedure is a very rare occurrence and is only performed when the mass is fixed to the pancreatic head as it was in this case.

There are some very interesting things to take away from this particular case presentation that can be helpful to any physician. First, recognition of risk factors such as ethnicity and age is important in evaluating patients for disease, particularly gastric carcinoma. In this case, the patient was from a country (Japan) that has a high incidence of gastric carcinoma. Not taking this into account and treating her with acid blockers for a year conservatively definitely prolonged the growth of the mass. However, this almost appears to be a catch 22 because she did not have insurance so she was basically only able to pursue conservative methods of treatment when symptoms began. Also, her age of only 33 (within reproductive age) could be a distractor of cancer not even being a possibility but with the incidence of cancer in younger people in her age group increasing, one can never assume that cancer is not an option.

Secondly, knowing the first line diagnostic step is very important. In this particular case, the ultrasound was the cheapest modality that the patient could afford for evaluation of her symptoms but had she had insurance, the first diagnostic step employed should have been the Upper GI Endoscopy. It has been proven to be more sensitive and specific for gastric, esophageal and duodenal lesions than any other modality. The Endoscopic ultrasound is best for evaluation of the depth of primary gastric tumors and can be employed in the T staging of the disease. Lastly, the CT scan is the best modality for metastatic evaluation. In this patient’s case, there were extraneous reasons as to why this patient did not obtain the Upper GI endoscopy but in other cases, this should always be done first.

Lastly, signs and symptoms present differently in every person. In this patient, her predominant symptom was unrelenting mid-epigastric pain, nausea and vomiting. The most common presenting symptoms include weight loss and persistent abdominal pain and she only complained and mentioned in one. Had she been serially weighed at all Physician appointments, there would have been a chance that her unintentional weight loss would have been noticed. Ascites can also be the first indication of peritoneal carcinomatosis, which this patient did not have. Lastly, jaundice or liver failure, which are seen in pre-terminal stages of the disease were not seen in this patient with T3N1MX disease.

Conclusion
When it comes to gastric cancer, early recognition is the single most predictive prognostic factor in determining the treatment modality. The standard of care for invasive gastric carcinoma is a gastrectomy. The location of the mass is dependent on the type of surgical procedure performed (distal location with sub-total gastrectomy and proximal location and/or infiltrative disease with total gastrectomy). It is important to follow up on the patient with full history and physicals at least twice a year for the first five years and then annually thereafter as well as serial imaging for possible recurrence.
Organ transplantation has been practiced in different parts of the world for centuries. In the United States, the United Network for Organ Sharing (UNOS) is a non-profit organization that controls the legal transferring of organs. On their website, UNOS also outlines the importance of their role in educating family members, friends, professionals and the public about the organ transplant process.

However, the focus of this paper will not be on the history or processes of organ transplantation but on the straining relationship that can arise when a patient is mentally ill. I will be using the story of Amelia Rivera, a 3-year-old girl who was born with Wolf-Hirschhorn syndrome. Genetically, this illness is characterized by the deletion of material near the short (p) arm of chromosome 4, or 4p-. Developmentally, Wolf-Hirschhorn patients display slow development, seizures, mental retardation and certain facial attributes. And because of her illness, Amelia needed new kidneys but was denied on the basis of her illness. Her parents sought to grant their daughter the opportunity to receive kidneys because she should be a viable candidate for organ transplant.

As there is for anything that is in high demand, there is a line. In organ transplantation, this is known as a waiting list. One of the questions to highlight is whether there should be certain criteria for someone to be higher on the waiting list versus another person. Would this criteria be fair to others who are also on the waiting list? And can this criteria be entirely fair because some of it can be relative to the particular patient? Also, can someone be denied a transplant because of an illness? Is there a difference between an illness that someone acquires through behavioral patterns or genetics? Can someone be punished and denied a transplant because of their past behaviors or be given a transplant first because of an illness that they could not control? These are questions to consider when it comes to Amelia’s case and other similar cases, where someone has an illness, from behavior or genetics, that affects their chances of getting a transplant.

Amelia’s physicians argued there were different reasons for denying her a transplant. Some of them are as follows:

(a) There is a limited supply of organs: According to the UNOS website, there are currently 90,000 candidates for kidney transplants alone in the United States. A kidney is a rare organ and its high demand means that physicians have to become critical when trying to determine who needs it more than others. In Amelia’s case, I am sure there are people who have been waiting more years for a kidney. To be pushed further down the waiting list because they do not have Wolf-Hirschhorn would be unfair to them. They deserve the right to be given an organ as much as she does. The reason that there are a limited supply of organs is just but it still does not give reason as to why Amelia should be denied an organ transplant. She deserves as much of a better chance at life as others who are also waiting for a new organ, whether she can mentally understand it or not.

(b) Donating the organ would be a waste: This reason is very harsh but understandable. Note that this is not to say that Amelia’s life is a waste because everyone deserves an equal chance at a fruitful, healthy life. However, statistics have shown that kidney transplants are in high demand and there are not enough kidneys available for transplant. The statement is harsh because it assumes Amelia’s life is a waste and that she does not deserve the same chance to the healthiest life she can live. However, it is understandable because it would not seem right to transplant an organ into someone whose body might reject the organ versus another who has a better chance of living longer with the organ. For example, you have two cars. One is very old and you know that it will break down sometime soon versus the other car which will last a long time. Would you put gas in the aged car knowing that it would break down soon and you would waste gas? Or would you decide to put the gas in the newer car knowing that it would last longer? Some will argue that this example still does not explain why Amelia’s transplant should be denied. Some might ask, “what if the newer car gets into an accident and breaks down before the old one was supposed to?” Physicians cannot assume that their predictions are always correct. In this case, physicians point out that Amelia’s illness will cause her to reject the organ; thus, she should not receive one. Amelia’s life should be cherished as much as another patient waiting for a kidney, but if it is clear that she cannot live much longer with the organ, it should be given to someone else.

(c) She would likely develop an infection: This reason further shows the complexity behind her case. It assumes that the transplantation will make Amelia’s illness worse. So in a way, she does not really need the transplant because it would put her body in a worse state. I agree that it is possible. Her parents and many supporters are adamant on allowing their daughter the equal chance on getting a transplant but this reason is very important to consider. Amelia has a right to a healthy body, and to be put in a condition that makes living in her body worse is unfair to her. While this reason is an assumption, it further shows the complexity behind organ transplantation. There are other organ transplant candidates whose body might reject an organ for other reasons. In Amelia’s case, she is not mentally capable of vocalizing her opinion, so the decisions have to be made accordingly. The hospital spokesperson even argued that her illness was a “progressive irreversible brain damage,” not mental retardation, in order to show that her illness was a big hindrance for transplantation. The statement is important because it assumes that the refusal to transplant is for Amelia’s benefit and not because of her illness.

As future health professionals, patients, family of patients, or policy makers, we have to consider the important matters that rise from Amelia’s case. There are many factors that come to play while considering the quality of life of patients, from the potential of a long life to diseases that may burden the progress of a transplant.

It is important to note that the hospital has now reconsidered their decision because of the backlash from the public about their refusal to transplant.
Many Americans can now breathe a sigh of relief. Not obtaining affordable health care will soon be a thing of the past. America is moving forward and bridging the gap between disparities in wealth as well as the quality of life across minority and majority fractions.

But hold your applause. What exactly does Obamacare mean in terms of health care quality? A survey done by The Doctors Company revealed that 60% of physicians believe that President Obama’s health care reform will negatively impact quality health care. Under Obamacare, physicians must tolerate much lower cost of care reimbursements from the government. Forbes magazine reports that “doctors pocket about $20 for each Medicaid patient they see. By contrast, an hour with a privately-insured patient means payment of up to $260.”

A pay-cut for physicians may be a limiting factor in providing quality health care for the greater good, because doctors have bills to pay. The cost of malpractice insurance on average ranges from $28,000-$50,000 a year. Will this paycut drive the doctor out of the house?

Bethany Beck, a 30-year pharmaceutical lawyer, believes “the people who need to use [Medicare or Medicaid] will have far less choices. There will be fewer and fewer health care providers who will agree to be paid below market value from government-sponsored health care programs.”

So who will provide quality care to those in need? Will America truly see a move forward? Can Obamacare bridge the gap in the quality of life across minority and majority counterparts? America will just have to await the outcome of the new health care policy reform. But one thing is for sure. Americans who never had health insurance before will now have something, for better or for worse.