Welcome to the December issue of The Connection, the newsletter of the University of Minnesota Medical School’s Program in Health Disparities Research.

As you may know, this year marks the fifth anniversary of our program. Since our beginning in 2006, we have grown to nearly 200 members, and together have made significant steps towards our vision of reducing and ultimately eliminating health disparities. To highlight this special milestone, we recently published a special 5-year anniversary report that highlights some of our accomplishments over the years. Please visit us on the homepage of our website to view and download this document.

A few weeks ago, PHDR members marked our anniversary by volunteering some time and energy at the local organization, Feed My Starving Children, which packs and distributes boxes of meals to hungry children around the world. As a result of our visit and collaboration with other volunteers, we packed 147 boxes holding 31,752 meals – enough food to feed 87 children for one entire year. To all who were able to attend that day – thank you!

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We are pleased to announce a new, community-based initiative called Clipper Clinic. Clipper Clinic was created with the primary goal of taking quality health care to the community in a comfortable and trusted environment. The first Clipper Clinic was held in late September at Wilson’s Image Barbers in North Minneapolis. Guests were treated to free preventive health services including blood pressure and glucose measurements, cholesterol screenings, HIV/AIDS screenings and nutritional counseling.

Clipper Clinic is sponsored by the University of Minnesota Medical School’s Program in Health Disparities Research, Southside Health Services, UCare and the Hue-MAN Partnership Project: Healthy Men, Healthy Families, and Healthy Communities. Additional support was provided at the first event by Fremont Clinic, NorthPoint Health and Wellness Center and Medica.

Clipper Clinic will be held periodically in partnership with either a local barbershop or beauty salon, and the services always will be free of charge to all guests. To learn more about future events, please visit us online to sign up for our news listserv.
Moving Forward
by Megan Precht, University of Wisconsin La Crosse

Partnering for Health Promotion

The Hue-Man Partnership Project is a collaboration of Minneapolis non-profits that aims to address health issues and disparities for men of color in different Minnesota communities. The project seeks to close the gaps that men of all ages in these communities face in obtaining much needed medical services. The project provides outreach to men while providing them with the resources needed to make informed decisions as it relates to their health.

A free kick-off event was held in August at Sabathani Community Center in South Minneapolis. Multiple sponsors and vendors provided the estimated 400 event participants with free healthy snacks, first aid kits, and access to a variety of health-related literature and resources. Singers J. Most and Ray Covington performed live music at the event, and free stepper dance instructions and demonstrations were offered. Open to both men and women, the Q-Mobile Health Unit also was on site providing free blood pressure checks and resources related to prostate, breast and cervical cancers. UCare, one of the project’s main sponsors, is currently analyzing the 200 surveys that were collected and will be sharing the results with the community within the next few weeks. (continued on page 3)

The Bigger Picture

Sustaining Weight Regulation, Part III
by Michael Golden, M.P.H., Medical School

In addition to total caloric value, the macronutrient profile of meals play a significant role in weight regulation, body composition and disease risk. Emerging evidence from epidemiological and biochemical studies suggest that high dietary intake of simple carbohydrates, including sugar-sweetened beverages (SSBs) is an important causative factor in the development of the metabolic syndrome. Additionally, different forms of carbohydrates exhibit unique metabolic properties.

In the June 2011 American Journal of Clinical Nutrition, Aerberli et al. report their findings from the first study to show adverse effects of low to moderate consumption of fructose-, glucose-, and sucrose-containing beverages on LDL (low-density lipoprotein) size and other parameters of lipid and glucose metabolism, as well as inflammatory responses in healthy young men. In this prospective, randomized, controlled crossover trial, six different interventions (SSBs containing different sugars in different concentrations) were tested over a three-week period with 29 subjects. Beginning with the lower doses of 40 grams per day from the SSBs, adverse effects were observed in regard to LDL particle size and distribution, waist-to-hip-ratio, fasting glucose and inflammatory markers. The team reported that while there were differential effects caused by the different sugars, they all seem to be detrimental to some extent.

Stanhope and colleagues conducted a 10-week trial with 32 overweight and obese individuals and demonstrated that plasma lipid and lipoprotein concentrations increased markedly during fructose-sweetened beverage consumption and were unchanged in subjects consuming glucose-sweetened beverages. Although both groups (fructose and glucose) experienced similar weight gain during the intervention, only the participants consuming fructose developed intra-abdominal fat gain and insulin resistance. Additionally, fasting plasma glucose and insulin levels increased and insulin sensitivity decreased in subjects consuming fructose-sweetened beverages, but the same was not true for those consuming glucose. This work is novel in its well-controlled comparison of two forms of carbohydrates within an energy-balanced diet.

The largest increment in energy intake over the past few decades has been due to carbohydrate consumption and this macronutrient is the predominant source of energy in beverages experiencing the most marked rate of growth. Therefore, DiMeglio and Mattes sought to directly test the effects of liquid versus solid carbohydrate loads on diet and body weight. Their work found that when healthy men and women were given a carbohydrate load of 450 calories per day as SSB for four weeks, they gained significantly more weight than when the same carbohydrate load was given in a solid form. These results indicate that liquid carbohydrates promote positive energy balance, whereas a comparable solid carbohydrate elicits precise dietary compensation.
The body of literature documenting the effects of SSBs and other simple carbohydrates is not without inconsistencies. Some studies have shown either mixed results or null findings. However, the overall results, taken together, provide clear and consistent evidence that individuals do not compensate for the added energy they consume in soft drinks by reducing their intake of other foods, resulting in increased total energy intakes. For example, in one meta-analysis, 10 out of 12 cross-sectional studies and all five longitudinal studies identified for the review reported significant positive associations between soft drink consumption and total energy intake.11

The results from these studies and other similar projects are important because of the documented global increase in sugar consumption. In the U.S., the largest source of added dietary sugars is from soft drinks, accounting for 47 percent of total added sugars in the diet. Further, some reports12-16 suggest that sugar intake from beverages approaches or exceeds 15 percent of energy in adolescents and adults up to 40 years of age, with some indicating at least 16 percent of the studied populations were consuming over 25 percent of daily energy requirements from SSBs.

We began this series by discussing the overall status of physical activity efforts on weight regulation – and it is timely to briefly revisit the topic. Given that fat-free mass (FFM) represents a key determinate of the magnitude of resting metabolic rate, its importance cannot be overstated. The decline in FFM and subsequent metabolic adaptation as a consequence of undernourishment is frequently observed and well documented. Furthermore, it is generally accepted that in normal aging, changes in body composition occur that result in a shift towards decreased muscle mass and increased fat mass, thereby exacerbating the original problem in respect to musculature and extreme energy restriction. Our search for an effective solution to the obesity epidemic must include the foremost objectives of reducing body fat while preserving, and in some cases developing, FFM. Additionally, general physical activity recommendations may not always translate into practices best suited for FFM development.

Obesity continues to be a major threat on many levels, and current projections predict much more to come with significantly higher costs to address its related diseases. This current epidemic warrants an active role by the public health community to improve our current prevention strategies and treatment methods by pushing past the status quo. The stakes are far too high to settle for anything less. <<<

Please visit us online for references at:
www.healthdisparities.umn.edu/newsletter/refs/swr

The event’s keynote speaker was Minnesota Spokesman-Recorder Staff Writer Charles Hallman. Hallman gave a message focused on connecting event participants with the facts related to the health of African American men in the United States. Hallman’s research has shown that African American men rank highest on the health disparities chart while having the lowest life expectancy and highest death rate in the United States. Hallman also addressed the question of why these men are facing such a crisis and noted that African American men are too often led to believe that discussing issues related to health and mental or emotional pain is a threat to their manhood. Hallman’s message was received with a standing ovation.

The Hue-Man Partnership will continue at future events, including partnering in the Program in Health Disparities Research Clipper Clinic. In these events, the Q-Mobile Health Unit will be going to the barbershops to provide barbers, their clients and other community members with BMI (body mass index) screenings, cholesterol screenings, health related literature and listings for local health resources.
Director’s Report continued

On December 9th, our Distinguished Visiting Scholar Series on Health Disparities Research continues with our special guest Sergio Aguilar-Gaxiola, M.D., Ph.D. Dr. Aguilar-Gaxiola is professor of internal medicine and director of the University of California Davis Center for Reducing Health Disparities. This event begins at noon in 2-530 Moos Tower. This lecture also will be broadcast on the Internet. Please visit us online for more details.

Much has changed in Minnesota over the last few years. We have witnessed and survived an economic crisis, and we know that many are still struggling to recover from those circumstances today. Our pilot grant program is now in its fifth cycle and to date we have funded 21 projects conducted by community and academic research teams. Together we have grown through numerous initiatives and collaborations – and we look forward to what the next five years will bring. <<<

Fairly Healthy

Saving the Safety Net

by Rachel Hardeman, M.P.H., School of Public Health and Eduardo Miguel Medina, Medical School, School of Public Health

Communities that experience health disparities are disproportionately served by a system of clinics, hospitals and providers known as the safety net. The safety net helps meet the health care needs of patients and communities that are underserved by our health care system. The safety net also employs a disproportionate number of providers who are underrepresented within the physician workforce.

In “Health Reform Holds Both Risks and Rewards for Safety-Net Providers and Racially and Ethnically Diverse Patients” published in *Health Affairs*, the authors explore how proposed health care reforms may help or hurt the safety net.

The Affordable Care Act (ACA) of 2010 contains the following provisions which would improve health disparities: 1) decreasing the number of uninsured through expansion of publicly funded insurance programs and insurance exchanges, 2) financing safety net institutions to improve infrastructure and provide care, 3) making the physician workforce more representative of the diversity within the United States population, and 4) promoting innovations in delivery and payment to better coordinate care and meet patient needs.

However, the ACA may also usher in several reforms that place the safety net at risk. First, approximately 23 million people will remain without health insurance, and this population will predominantly be served by the safety net. This demand exceeds any provisional funding that would offset the cost of caring for this population. Second, with the increase in insured patients, the private market will compete with the safety net for patients. Private health insurers typically have financial resources that put the safety net at a disadvantage and therefore limit their potential revenue. Finally, a root cause contributing to health disparities remains the reliance on an employment-based, for-profit insurance model that leaves segments of our population at increased risk for lack of care or substandard care.

Health care reform has the potential to make our system more equitable by increasing access to insurance and supporting primary care. Unfortunately as it stands, the Affordable Care Act does not dislodge the for-profit insurance industry that continues to be a major driver of disparate health outcomes. While the safety net has valiantly sought to provide care in a system that devalues large segments of our population, the question must be asked, why do we need a safety net in the first place? Until we can make fundamental changes to our system that guarantee equal access to high quality health care, we must protect the elements of our system that serve the underserved. <<<

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