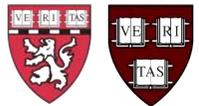




Kidney Disease Screening and Awareness Program (KDSAP): Addressing an Underserved Need



Ang Li¹, Eric Shieh¹, Sion Lee¹, Xun Zhou¹, Jessica Cheng¹, Elizabeth Shen¹, Paula Daniliuc¹, Grace Hong¹, Gene Yoo¹, Albert Yeh², Jingshing Wu³, Sam S. Yang⁴, Jennie Kuo⁵, Tzong-Shi Lu⁵, and Li-Li Hsiao⁵
¹Harvard University, Cambridge, MA; ²Harvard Medical School, Boston, MA; ³University of Chicago Pritzker School of Medicine, Chicago, Illinois; ⁴Brookline High School, Brookline, MA; ⁵Renal Division, Brigham and Women's Hospital, Harvard Medical School, Boston, MA

Abstract

The Kidney Disease Screening and Awareness Program (KDSAP) is a collaborative outreach program initiated in the fall of 2007 by undergraduates at Harvard College dedicated to educate and screen local communities about risk factors for chronic kidney disease (CKD).

The program draws upon 3 key resources: sponsorship from the Brigham and Women's Hospital (BWH) Asian Renal Clinic, staff and equipment from the National Kidney Foundation Kidney Early Evaluation Program, and students from Harvard Medical School, 3 colleges, and several local high schools. Outreach events are sponsored by the BWH Asian Renal Clinic and publicized in local Boston communities 3-4 months in advance. All student volunteers attend a two hour training session by NKF, which provides the screening forms and on-site equipments. A nephrologist at BWH, Dr. Li-Li Hsiao, leads on-site presentations about the risk factors and prevention strategies for CKD.

During the past year, over 300 community members have been educated and screened at 5 different locations in Massachusetts, including Framingham, Lowell, Belmont, Newton, and Lexington. Resources have included over 60 student volunteers, 20 NKF staff members, and 5 faculty/employees from BWH. In order to provide more culturally-oriented care, members of KDSAP have translated the standardized NKF screening form into Mandarin Chinese. Because of the impact and effectiveness of the program, Boston's Chinatown community is partnering with BWH and KDSAP to establish a permanent and free screening station for its underserved population.

Chronic kidney disease is under-diagnosed and remains poorly understood throughout the community. KDSAP strives to address this important healthcare need through screening and education, efforts which have so far been well-received. Our goal is to establish an effective and sustainable model for community outreach through efficient use of available resources. We hope that many such programs can be expanded throughout other communities as well to address this important need.



KDSAP volunteer measures patient's waist at Brigham and Women's screening event. March 2009 Boston, MA



Dr. Li-Li Hsiao lectures on kidney disease awareness at Lexington Chinese School screening event. November 2008 Lexington, MA



KDSAP volunteers administer urine analysis at Chinese Bible Church of Greater Lowell screening event. April 2008 Lowell, MA.



Harvard Medical School volunteer measures blood pressure of a community member at Lexington Chinese School screening event. November 2008 Lexington, MA



KDSAP member records body weight of a senior citizen at Framingham Senior Apartment screening event. December 2007 Framingham, MA



KDSAP volunteer translates medical history questionnaire to community member at Framingham Senior Apartment screening event. December 2007 Framingham, MA



KDSAP members check over physical measurements at Framingham Senior Apartment screening event. December 2007 Framingham, MA



KEEP staff trains volunteers on how to use the urine analysis machines at Framingham Senior Apartment screening event. December 2007 Framingham, MA



Community members and volunteers enjoy delicious home recipes at podluck after screening at Framingham Senior Apartment screening event. December 2007 Framingham, MA

Initiation of KDSAP

High incidence of end-stage renal disease especially in Asian populations.

Harvard students are passionate for community volunteering, clinical experience and health education.

Under-served need for kidney disease awareness and screening in the Asian populations at Boston area.

Students learn about kidney health disparity from Dr. Li-Li Hsiao, dedicated nephrologist at Brigham and Women's Hospital.

Kidney Disease Screening and Awareness Program was founded by Jingshing Wu⁰⁸ and attracted many like-minded students to volunteer at screenings and brainstorm on ideas to raise kidney disease awareness in the community. We became an official student group at Harvard in March of 2008.



Figure 1. Flyer publicizing for our first KDSAP meeting of the year. We distributed these at the Freshmen Activity's Fair in early September, 2008.

Partnerships

Asian Renal Clinic (ARC)

ARC at Brigham and Women's Hospital. All medical staff speak Mandarin, Taiwanese, and Cantonese to better cater to minority populations.

NKF-KEEP

KEEP provides medical equipments and trained staff at community screenings.

Brookline High School (BHS)

BHS has a KDSAP chapter that encourages student volunteers to participate in our programs. These screenings provide students with meaningful experiences to fulfill community service requirement.

Asian American Health Association (AAHA)

AAHA at the Harvard Medical School and KDSAP have a big-sib-little-sib mentorship program.

Educational Materials



Figure 2. Sample slides from our PowerPoints in English, Chinese and Spanish. We give these presentations to community members at both on-campus ESL classes and community venues to raise kidney disease awareness.



Figure 3. Our educational brochure on chronic kidney disease and how to maintain kidney health. It also contains contact information and operation hours of the free Asian Renal Clinic at Brigham and Women's Hospital.

Health Screening Stations



Station 1: Registration

Station 2: Questionnaire

Station 3: BP, Height, Weight, Waist



Station 4: Urinary Analysis



Station 5: Blood Test



Station 6: Paperwork Review



Station 7: Physician Interview

Quotes from Volunteers

"Working at the urine-analysis table, I was initially uncomfortable handling the urine samples. Once I learned about the wealth of information that we could collect from the simple urine test, however, I became amazed by the value of such tests. Handling the urine samples and working the machines became exciting. My greatest pleasure, however, was communicating with the residents who sought the medical services. I greatly appreciated the opportunity to connect with them, despite the language barrier, and was glad that we were able to provide such help and support in an accommodating and comfortable environment."

"When I first started volunteering at the blood pressure station, I was nervous that I'd read someone's blood pressure incorrectly. However, KDSAP does a great job of training its volunteers and adequately preparing them for their tasks. From the electronic sphygmomanometers to the expertise of experienced volunteers and medical students, there's always something for me to rely on when I'm unsure of myself."



"I think KDSAP is unlike a lot of other undergraduate volunteer experiences because it lets students engage in hands-on volunteering that has a direct effect on the community. The smiles and words of gratitude from screening participants lets me know that I'm making a difference."

"KDSAP is my favorite service group at Harvard because it really reaches out to the community. I remember one time when I was helping Mr. X at the wrap-up station finalizing paperwork, he started talking to me in a Chinese dialect that I recognized! It turned out that we were from the same city in China. It was a very heart warming moment for both of us. Beside gaining the hands-on clinical experience, I had made real connections with people."

"KDSAP has offered me the unique opportunity to become involved in a community and to make a difference in a very tangible and visible way. It has changed my perspective on medicine and has allowed me to discover the beauty of the interaction with patients who have such interesting background and life stories to share. The screenings have been personally fulfilling and enlightening!"

"I help take medical history at the registration station and often receive questions from community members regarding their health. Some would ask me about their medical conditions and I so wish I could do more than mere paperwork for them. Physician volunteers at the last station could eventually help these patients. We, as student volunteers, all need to be reminded that we are already doing our best, though we wish to do so much more. This feeling of inadequacy becomes a constant motivation for us to pursue medical careers in hopes of better serving the community in the future."

"During screenings, there is always the tension between spending quality time with one individual patient and treating as many people as we can. It's easy to rush the process of recording a patient's history when there is a long line of patients waiting. However, I think it is vital to find the proper balance since this tension always exists in the medical world."

"Since I don't speak Chinese, it was hard to communicate with many of the people. So, I sought fellow members for their help in translating their words. I realized that the people were not frustrated with the lack of communication between us; rather, they appreciated the fact that we were doing what we could to help them."

Challenges and Solutions

Funding: For the mobile screenings, we receive supplies and staff support from NKF-KEEP. We are applying for grants from Harvard University, Harvard Medical School, as well as private funding sources to support our education outreach programs and the permanent screening station in Boston Chinatown.

Follow-up with screening participants: There is currently a lack of follow-ups with participants after screenings. We wish to recruit more volunteers to enable long-term relationship with and personal attention to our community members.

Feedback from community: There is a lack of program evaluation. We wish to collect feedback from the communities we serve to target program improvement on their needs.

Barrier of cultural beliefs: Asian populations tend to self-diagnose and self-treat diseases. It is a challenge to break down the practice of using herbal medicines without physician consultation and to encourage routine medical check-ups.

Future Directions

Immediate goals:

2009's Grand opening of a permanent and free monthly screening station
 This permanent screening site will be in Chinese Consolidated Benevolent Association of New England, located in Boston Chinatown. This project is in collaboration with AAHA at Harvard Medical School and ARC at Brigham and Women's Hospital. We will also collaborate with NKF-KEEP twice a year at this site.

Long-term goals:

Establish more community screening stations across the country, making our services available to other minority groups
 KDSAP has seen significant growth in the past year and has created a notable impact in Boston's local communities. From participants' comments at screening and health education events, we learned that our volunteering efforts are much appreciated and contribute to raising the awareness of chronic kidney disease. Encouragement from participants motivates us to reach out to other communities.

Expand our volunteering programs nation wide, establishing more KDSAP chapters
 Based on the level of enthusiasm from the Harvard student body (KDSAP has 90 active members), Tufts University (10 volunteers), Brookline High School (20 active members), and Harvard Medical School (30 active members), we have reason to believe that a similar fervor for community volunteerism, responsiveness to health disparities, and interest in chronic kidney disease exist in other campuses.

ARC website: <http://asianrenalclinic.bwh.harvard.edu/> ; KDSAP website: <http://www.hcs.harvard.edu/~harvardkdsap/>

Contacts: Ang Li angli@fas.harvard.edu ; Dr. Li-Li Hsiao llhsiao@partners.org

Acknowledgement: Funding supports by *Genzyme* and *SDSC Global Foundation*