



The Linda Joy Pollin
Cardiovascular Wellness Center for Women
at Hadassah Medical Organization

Update Report for September 2016

Prepared by
Dr. Donna Zfat-Zwas and Prof. Chaim Lotan

Introduction

We are very pleased to update you on the progress of the Linda Joy Pollin Cardiovascular Wellness Center for Women at Hadassah. We have established ourselves as a premier address for issues of women's heart health in Israel, with increasing media exposure and promotion of our core messages. We continue to advocate for women's health in the Knesset and have been invited to lecture to government workers including the Ministry of Communication. Many of our community outreach projects are now at the stage of data analysis, and we are very proud that we have eight presentations at the European Public Health Conference in Vienna in November. We are very excited about our development of a web-based tool, designed to enable women to ascertain that they are receiving the screening and treatment that they deserve in order to maintain their health. Our multi-disciplinary clinic continues to expand, and we are planning to offer health coaching as an adjunct tool in order to assist our patients in overcoming their personal obstacles and meeting their goals.

In this report we would like to share some of the Pollin Center's major events and accomplishments over the past 6 months.

I. LEADERSHIP

A) The Advisory Board

The advisory board met on June 7, 2016, and we were pleased to welcome Ellen Hershkin, the new president of HW-ZOA, as the new co-chairman of the Pollin Center Advisory Board, together with Mrs. Pollin.

The topics discussed included a thorough consideration of the clinic model and how to promote and evaluate the efficacy of the intervention, the exploration of the possibility of

joint activities with the health plans, and additional avenues of programming that will promote our mission. A major topic of discussion was also the sustainability of the program, and how to generate funding from the health plans, research grants, and possibly industry.

Both old and new board members participated in the spirited discussion, and we are grateful that the members of our Board bring with them insight and vision that will guide us as we face the next level of challenges facing the Pollin Center. We thank them for their insights into all our efforts, from cutting edge work in health promotion and preventive medicine, to expansion of digital media and the adaptation of technology.



Attendees from left to right: Dr. Diana Flescher, Dr. Bishara Bisharat, Ms. Sally Oren, Ms. Ellen Hershkin, Dr. Donna Zwas, Dr. Milka Donchin, Dr. Osnat Keidar, Ms. Shoshana Goldfinger. Attended but not in photograph: Prof. Ram Weiss, Prof. Chaim Lotan. Regrets: Mr. Allan Stoll, Ms. Dalia Itzik, Ms. Naomi Harris Rosenblatt, Amb. Zalman Shoval.

We are very thankful to Advisory Board Member Dr. Milka Donchin, who has agreed to spend one day a week with us to guide our activities in health promotion. As a prominent leader in Israel in this field, her willingness to spend time in our office has been a great

contribution. Through her vast array of contacts in the world of public health, she has opened many doors for us.

B) Staffing

We are pleased to welcome two new staff members:

Tanya Reinfeld Nurse Manager of The Clinic

Tanya is originally from South Africa, but moved to Israel when she was very young. She graduated from the Shaarei-Zedek Nursing School, Jerusalem, and obtained a BsN from Machon Tal. After several years working in a hospital environment, she moved to work in outpatient community clinics, first in the high risk obstetrics and more recently in adult diabetic education. For the past several years she has managed the Jerusalem Region Diabetes Clinic for the Meuhedet Health Plan.



Tanya is passionate about trying to understand and help people move forward in their life with a healthy lifestyle. She will soon complete a coaching course and will be able to use those tools to help our patients achieve their goals.

Devora Sorotzkın- Marketing and Communications



Devora has extensive experience in managing organizational and marketing systems, including the development of content and utilization of digital media. Devora majored in Communication and Social Sciences at the Open University, and is a software engineer, and a certified mediator. During her career, Devora has perfected the skill of motivating and jumpstarting people and processes in both the

business and the voluntary sectors, and is excited to apply these skills to health promotion. She is an alumna of the prestigious “Movilot” program for empowering women in business, and a Mandel Foundation Fellow. She is a mother of four, and lives in Telz-Stone.

- We would like to wish **Dr. Osnat Keidar** much success in her new adventure in Switzerland, where her husband is the new Israeli ambassador. We hope that we can continue to benefit from her experience and wisdom even from afar.
- Congratulations to **Iva Littman** her receipt of a sponsored place at the prestigious training program sponsored by the European Union Cooperation of Science and Technology. The topic of the program is People Friendly Cities in a Data Rich World. We hope she comes back with new techniques to assist us in our data analyses and program implementation.
- Congratulations to **Iva Littman** and **Mayada Karjawally** on the formal award of their Masters in Public Health.



From left to right:
Mayada, Osnat and Iva at the
graduation ceremony

Interns and Students:

We have created a partnership with the Machon Tal Women's Institute for Nursing, Technology & Management in Jerusalem. This partnership will provide graduate students with opportunities to work in the Haredi community in both research and community program capacity.

We are also a well-known site for research and public health interns globally. Over the past 6 months, we have provided supervision and experience to 6 interns from the United States

with public health, nutrition, and psychology backgrounds. The interns participate in diverse activities within the center, including research, writing and field work.

Working Towards Bridging the Gender Gap in Cardiovascular Health: Israel



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BACKGROUND

Women's Cardiovascular Health

Worldwide

- Cardiovascular diseases (CVDs) are the #1 cause of death annually
- The majority of CVDs are preventable by addressing behavioral risk factors
- Mortality rates are decreasing, but there is a gender disparity (Fig. 1)

Israel

- CHDs are the second highest cause of death
- CHD mortality rate is decreasing faster in males than females (Fig. 2)
- Females who have a more male-typical progression of heart disease are more likely to be diagnosed and treated.




Cardiovascular Wellness Center for Women



PROJECT GOALS

Women's Heart Health Reference Website

- Bring awareness to health professionals about gender-specific cardiovascular health needs
- Gather information for health-professional-targeted section of existing website
 - Evaluate similar condition-specific reference websites
 - Synthesize
 - Interview women's health professionals about medical reference usage

East Jerusalem School Intervention

- Target risk factors for CHD such as nutrition, obesity, and exercise
- Use creative solutions to combat lack of resources
- Evaluate the outcomes of the school-year long intervention

WEBSITE RESEARCH

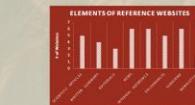
Reference Website Research

Methods

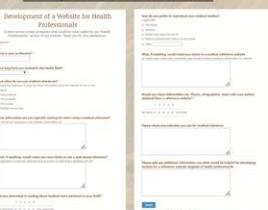
- Identify websites based on the following criteria
 - Focus on a specific disease or medical topic
 - Must serve as an internal reference for medical professionals
- Create a table identifying common elements (Fig. 3)
 - Information: articles, editorials, news, internal reference
 - Contact: Newsletters, membership, deliverables
 - Health professionals were surveyed to access their medical reference use

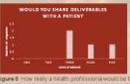
Results

- An in-depth review of 8 websites was conducted
- Websites fell into two categories: Government or Institutional
- Government websites were more recognizable and commonly used by medical professionals.
- Institutional websites relied on news and membership to retain attendance



Survey of Health Professionals





AWARENESS & FUNDING

Awareness Articles



Background

- Compose engaging articles about various heart health topics
- Articles are disseminated via newsletter to various populations
- Unique and relevant topics are intended to interest women in their own cardiovascular health and wellness

Article Topics

- Can Wine Help Your Heart?
- How Dental Health is tied to Heart Disease
- What is Yent! Syndrome?
- Why You Should Get a Stress Test
- Ibuprofen and the Heart

Grant Search

- Identify organizations that supply funding in relevant areas: Women's Cardiovascular, Jewish populations, Arabic populations, Israel health initiatives
- Synthesize information for simplified future applications

CONCLUSIONS

Reference Website Research Project

Conclusions

- Many health professionals use reference websites daily (Fig. 4) and share that information with patients (Fig. 5)
- There is a knowledge and practice deficiency surrounding women's cardiovascular health
- There is need for a reference for health professionals focusing on women's cardiovascular health
- Implementation of the website could help to spread awareness and lower the gender gap

Challenges

- Physician reported barriers to using the website:
 - Lack of access to a computer or device
 - Limited time to research/review new information
- Attracting and retaining website users

Future Directions

- More extensive evaluation of health professionals' needs and expectations for a medical reference
- Development of concrete and website design
- Spread awareness about women's cardiovascular health on a more international scale



Insights Gained

- The vast majority of CHD related deaths are preventable
- Raising awareness in the medical community will lead to better diagnosis and treatment of women
- Implementing a reference resource for health professionals focusing specifically on these issues, is a tangible step toward decreasing disparity.
- By bringing awareness to the existence of the gender gap and addresses the risk factors, women can live longer and healthier lives.
- Collaborative efforts to increase health for all women in Israel can help to bridge the gap between the diverse populations.

ACKNOWLEDGMENTS

This project/field experience was funded with support from the MISH Fellowship sponsored by University of Miami, Department of Public Health Sciences and The Kuvim Foundation. Special thanks to Braun School of Public Health and Linda Joy Pollin Cardiovascular Wellness Center.

FIELD WORK

East Jerusalem School Intervention

- Visit intervention schools for program evaluation
 - Girls' elementary school
- Measure selected class's height and weight
- Administer eating/exercising habits survey



Poster presented by intern Amanda Randall summarizing her experience at the Pollin Center

We also have students working with on their theses, including a nursing student working on a project exploring the signs and symptoms of heart disease as described by women in Hebrew, and students working with us on projects in digital media and the comparison of self-reported physical activity to measured activity.



The Pollin Pedometer

II. OUTREACH

A) Community Outreach

1) East Jerusalem Arab Community Intervention

A. School Based Intervention Program to Promote Healthy Eating and Physical Activity



This academic year (2015-2016) we started our highly successful school-based health promotion program in 2 new private schools, with a third school in the same school system serving as a control, as the school administration was not able to continue the program after we collected the baseline data.

The program's activities included 700 students and their mothers, and 80 teachers. As in previous years, each principal designated a teacher as the program coordinator who took responsibility to implement and run the health program in her school. Each school formulated a school health steering committee that consisted of three teachers, three mothers, four schoolchildren and the owner of the canteen, which met once every 4-6 weeks. Teachers' capacity building was done through training in the 2 schools by professionals in the fields of nutrition, physical education and health promotion. These 30 hours of training were also counted toward the teachers' "in-service" training. Schools decorated the hallways and play yards' walls with paintings of fruit and vegetables and games such as snakes and ladders, tic tac



toe, and hopscotch to promote physical activity during breaks. Inside each of the classrooms a healthy corner was established. Checklists were implemented in each classroom to track schoolchildren's breakfast, drinking milk, and bringing healthy lunches. School canteens were given a transition period until the end of December to change their food products. At the beginning of January, the schools started selling healthier food products such as fresh juices, whole grains, and low fat popcorn. Special thanks to Dr. Maha Nubani and Mayada Karjawally, who were able to keep the schools program on schedule despite the very tense security situation.



End of the year health celebration at the Issawiyeh Element. School.

Maha is in red in the back center.

The Ministry of Education belatedly approved our request to enter three additional schools, and we have been able to gather baseline data in these schools, and will begin the programming this Fall. One of the schools teaches children with special needs, and we are working on adapting our programming. Unfortunately, our plans to return to the 12 schools who have already



completed the program were adversely affected by the extremely challenging security situation, as reaching many of these schools requires travel through checkpoints. We are optimistic that next year we will be able to implement the programs that we designed for the mothers of children in the younger grades, who did not have children in the school when the nutrition and physical activity classes were given, and we plan to implement our health literacy programming (see below) for the mothers who have already been through the nutrition and physical activity classes.

B) The Pollin East Jerusalem Community-Based Health Promotion Program

The increased incidence of diabetes in the Arab community, as well as the 60% higher rate of cardiovascular mortality in Arab women led us to the development of an intensive community-based program, focused on cardiovascular wellness and diabetes prevention. The workshop was based on the American Diabetes Prevention Program, but underwent extensive cultural adaptation and expansion, so as to include empowerment, leadership development and community activism. Each 3 hour session contained a didactic component from either a physician, nutritionist, mental health professional or specialist in physical activity, a half hour physical activity session, and a session led by a social worker targeted at empowerment, leadership development and community action. 38 women participated



in the program; we were surprised that there were no drop-outs, and the attendance was extremely high at each session.



As part of the program, the women organized an educational day for women in the neighborhood. This was an empowering process for them, as the program organizers “refused” to help them. They designed the program, invited the speakers, and implemented the event. They invited a local physician to speak, arranged for nutritionist and physical activity sessions, and self-catered the event with healthy food choices.

The women have further organized into three working groups, one focused on lectures to be offered in the schools for local mothers, another group which will organize lectures to be given in homes, and a third to focus on physical activity. This will help each woman maintain her own progress, and will enable her to transmit her knowledge to others. We will continue to work with these women, and guide them as they seek to promote health in their families and their neighborhood.

In September, data will be collected including body mass index, blood pressure, cholesterol levels, and hemoglobin a1c, which reflects the glucose levels in the blood over the previous 3 months, for comparison to baseline, and they will be followed again in 6 months.



Once the data from this program is analyzed, we will seek to further improve and expand the program. One of the challenges that we have encountered is the difficulty finding high quality health professionals, necessitating us to bring in the group leader from Um El Fahm, 130 kilometers away.

C) Project 3: The Pollin Empowerment Project- Arabic Edition

We have translated and adapted our 3 part series targeted at health literacy, and begun to pilot it in the Arab community, using community centers as the meeting places. The program consists of a session on heart disease in women, a “know your numbers” session that instructs the women on how to interpret numbers such as blood pressure and laboratory results, and a session working on



techniques to maximize their effectiveness in the setting of a visit to the doctor. We met with an unexpected challenge when we realized that a significant percentage of the women in one neighborhood were illiterate, and teaching them to read laboratory results was simply not appropriate. We are now reassessing the content of this program, and may need to design two tracks for women of different educational levels.



The Know You Numbers Slide Program

D) Heart Health Awareness

In partnership with the City of Jerusalem, we organized a International Women's Day Heart Health Event for 400 women from East Jerusalem (Issawiyeah , the Mount of Olives, Silwan, and Ras-El Amud). We welcomed the women with the posters and flyers about cardiovascular health, and informed them of our activities in East Jerusalem. Rasha Gheith,



a physiotherapist from Hadassah Mount Scopus gave the women tips on stretching and healthy physical activities with therabands that we provided. Our nutritionist Einas Khalilieh gave healthy eating tips and emphasized eating fruits and vegetables, and Chef Madeha Kawasmi made a special guest appearance and demonstrated how to make healthy salads.



Publication of Our Work on Health Promotion in East Jerusalem

In addition to Maha's recently published article on the baseline data of her intervention program, she is now preparing two manuscripts on her intervention. In the last few months she has presented parts of the work described above demonstrating improvements in health behaviors at the following professional venues:

- Oral presentation at the Annual Conference of the Healthy Cities Network at Baqa Al-Garbieh, Israel.
- Poster presentation at EUROPREVENT, the annual conference of the European Association for Cardiovascular Prevention and Rehabilitation at Nice, France.

2) Ultra Orthodox Jewish Community Intervention

The Pollin Center's programming in the Ultra-Orthodox Jewish Community continues to pioneer interventions in this insular community. Interventions providing information, skills, and opportunities for increased health behaviors in this population are limited, as access to and acceptance in this tightly knit, cloistered population is difficult to obtain. The current projects aim to implement a systemic, sustainable health promotion initiative in the Haredi communities so as to significantly impact the health of younger and older women –for generations to come.

A) School-Based Initiative

Data have been entered for the outcome measures of all three of the Jerusalem high schools, and the initial findings demonstrate:

- **increased consumption of whole grains**
- **increased consumption of fruit and vegetables**
- **increased physical activity**
- **increased blood pressure testing**
- **increased teacher-driven school-based health promotion.**
- **a significant reduction in transfat consumption**

In the three Haredi high schools that participated in this pilot we found that it is necessary to educate staff in health behaviors before initiating a health promotion program for the students.

Jerusalem Haredi School Health Promotion Training

Due to the overwhelming demand for the health training programs that we provided for the teachers in the three intervention high schools, we were asked to recreate the training program for teachers from other schools that were not involved in the program. 65 Haredi school teachers from various schools throughout Jerusalem registered for this 14-session course by various professionals including a nutritionist, psychologist, health-focused chef, physical activity teacher, and a Ministry of Education health promotion specialist. Teachers also participated in an 8-week walking program with pedometers provided by the Pollin Program.



The Gur Hasidic Girls' High School of Bnei Brak

We also completed a health promotion training program for 30 teachers in the Gur Girls' High School of Bnei Brak. This project included 10 sessions by various professionals (nutritionist, psychologist, health-focused chef, physical activity teacher, Ministry of Education health promotion specialist). Additionally, 90 teachers participated in a 12-week school-wide walking program with pedometers.



Since program completion, teachers have integrated health promotion and health-related content in various aspects of their teaching. Teachers report providing positive encouragement to their students on the topics of drinking water rather than sweet drinks, and eating fruits and vegetables. They also emphasized their own healthy food choices. The teachers reported healthy recipe swapping, increased physical activity, and discussion of health topics in the staff rooms. They have also incorporated health topics directly into their classes; one teacher designed new materials for her English class based completely on health topics.

On follow up questionnaires, teachers reported consuming 35% less sweetened drinks ($p<.05$) and an XX% increase in the number of teachers engaging the recommended 150 minutes a week of moderate physical activity ($p<.05$). The 8 week pedometer program indicated an 18% or 1,688 step increase in teachers' average number of steps per week. Teachers also reported an increase in their health promotion in the classroom ($p<.05$).



B) Belz Hasidic Community Intervention Program

I. Belz Community Health Promotion Project

Our multi-dimensional health promotion project in the Belz community is in its second year. Over the past 6 months, we have implemented a second pedometer program with 100 women, maintained 15 low-cost community-based exercise groups and provided additional health newsletters. Findings indicate that 65% of women increased their steps through the pedometer program.

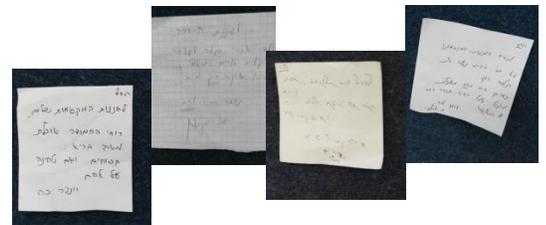
Our **mid-program evaluation** with 66 (86%) of the Belz community women's group leaders indicated that our program has impacted hundreds of Belz women. 72% of group leaders distribute our health newsletters, reaching 521 women. 91% of the women reported using the newsletter content in their personal lives and 68% integrate the content in their community groups. Additionally, half of the community leaders reported seeing significant change in their community women's health behaviors, as a result of the program. Based on the feedback from this evaluation, we are currently designing new programs for the coming year, including men's education, English workshops, and programs targeting seniors.

II. Belz Schools' Health Promotion Project

Our health promotion program is well underway in the Belz nursery, elementary, high school, and post-high school institutions. Starting with the teachers themselves, our 12-week walking program with pedometers has been completed by approximately 250 school staff members. Teachers increased their steps by 17% (on average, 1,607 steps/day).



The nursery school staff received Ministry of Education training (that we sponsored so that it was not “officially” from the Ministry of Health,) and health promotion materials. The elementary school has incorporated additional health topics into the curriculum. Additionally, our staff met with the national Belz high school curriculum director, and we received full approval for inclusion of health into all classes throughout the country. This is a **groundbreaking achievement** in this community.



Parent notes to the nursery school teachers.
"Mindy is very careful about her health. She drinks water instead of soda, eats apples and tehina"

FEEDBACK:

Nursery School

A number of mothers in the Belz community have called their daughters' nursery school teachers to thank them. They stated that before this year, their children would refuse all fruits and vegetables. Now that the teachers started encouraging healthy eating in school (as a direct result of our teachers' training), they eat fruits and vegetables all the time – even on the weekends!

High School

The high school girls are very excited about walking with their pedometers. A few girls have asked for additional pedometers for their family members and one parent even stated that her whole family walks more in order to help their teenager "get in her steps".

In July, we implemented a **Belz High School Health Ambassadors Training** with Belz 9th grade girls. This 3 day project provided 108 girls with health knowledge (healthy nutrition, exercise, stress management skills), motivation, leadership skills, and guidance in designing school-based health promotion initiatives. The girls designed 18 school-based health promotion games and projects over the course of the program, created 9 health promotion posters for their school, and composed 9 health promotion jingles in Yiddish.





Belz high school girls participating in our program and displaying projects they prepared through the program.

Post-program evaluation of the students indicted that as direct result of the training:

- 70-75% gained knowledge in nutrition, physical activity, and stress management
- 71% now intend to increase their physical activity
- 78% now intend to increase their walking
- 74% now intend to increase their fruit consumption
- 63% now intend to increase their vegetables consumption
- 74% now intend to drink water instead of sweetened drinks
- 60% now intend to bring a balanced morning meal to school



The school administration provided the assistance and support for the program's success, while committing to continued health promotion through the coming year. This unique leadership program is the first of its kind in the Haredi world, providing a model for potential future programs in Haredi schools internationally.

FEEDBACK

"Thank you so much for the amazing, interesting program - it gave me so much! In particular, I really learned a lot about how to cope with stress. "

"I enjoyed it very, very much and I am now working on improving my health. Even my mother was happy to hear about this program!"

"I gained so much from these three beautiful, amazing days!! New ideas, knowledge, how to change, and more. Thank you for the program, the lectures, and the activities. "

Ripple Effects

Our school programs are creating significant ripple effects throughout the Ultra-Orthodox world, both in Israel and the United States.

Schools in Israel

In January, we were invited to present our work in the Ultra-Orthodox schools to a group of Ultra-Orthodox principals as part of their "Schools in the Community" event. The principals were very impressed with the success of our school programs, motivating one principal to initiate her own health promotion program. She initiated partnership with the municipality and created a "Healthy Living Center" in her school for one week, where all of the Ultra-Orthodox girls' schools in her community were invited to a hands-on, informal learning experience in healthy living. 900 nursery and elementary school students participated in the project. It included a healthy breakfast buffet, healthy lifestyle presentation, exercise room, health messages arts and crafts, food pyramid exhibition, healthy mishloach manot workshop, healthy snack presentation, and assorted health -related games.

C) Health Promotion Project with the City of Elad

We have begun to work intensively with the Municipality of Elad, a primarily Haredi city in central Israel with over 40,000 residents. We have started the health promotion program for their 200 municipality workers. Focus groups were conducted with key staff members of Elad's municipality, identifying their needs and preferences to inform intervention design. Focus group participants reported that:

- Their workplace operates at an extremely high stress level.
- Workers are exposed to second hand smoke in the building daily.
- Workers do not have time take proper lunch breaks.
- The physical work environment is less than favorable: windowless workspaces, dirty restrooms.
- Many workers have neck and back pain from working at the computer all day.
- Workers are interested in healthier food at staff meetings.

Based on these outcomes, we built an online survey that was distributed by email to all municipality workers. We are in the process of data collection, which has unfortunately met with some resistance. Preliminary analysis of completed questionnaires indicate that:

- 75% of workers complained of being exposed to second hand smoke
- 50% of workers do not have enough time to exercise
- 56% of workers are interested in healthier food being offered in work meetings

D) Heart Health Awareness

As the Haredi community is not exposed to radio, television or internet, it is necessary to use alternate means of communication in the Ultra-Orthodox community. In order to reach large numbers of women outside Jerusalem, The Pollin Center initiated a major event in Bnei Brak, the informal “capital” of Haredi Jewry in Israel, in partnership with the mayor, the Bnei Brak Municipality, local hospitals, health funds, and community organizations.

500 women between ages 19 and 85 attended the event held in honor of International Women's Day. The program included an opening address by the mayor, Dr. Donna Zfat's presentation on heart disease prevention, a medical lecture from a physician from the local hospital on women's health, a healthy cooking demonstration by a well-known chef, as well as healthy lifestyle encouragement by both a world renowned rabbi and a female religious leader.



Dr. Donna Zfat presenting to the audience on CVD prevention



Rabbi Sharasky, Dean of Beit Hamoreh.



Hanoch Zeibert, Mayor of Bnei Brak



All participants received our newly published Ultra-Orthodox women's heart health handbook, "A Healthy Woman: The Foundation of a Healthy Home," which included practical guidance on healthy nutrition, exercise, stress management, passive smoking, visiting the doctor, and healthy recipes. Not a single booklet was left after the event.



FEEDBACK ON "A Healthy Woman: The Foundation of a Healthy Home"

In our follow up with participants, women reported:

"The handbook had a lot of great nutrition information and I have been very careful about my eating ever since"

"I was always interested in health but after getting [the handbook], it increased my awareness and motivation to renew my commitment to healthy living"

"I was so excited by the handbook that I called my mother and read her sections over the phone"

Publication of Our Work on Health Promotion in the Ultra-Orthodox Community

We have presented parts of the work described above at the following professional venues:

- Poster presentation at the Annual Conference of the 2016 Israel Heart Society in Tel Aviv, Israel.
- Poster presentations at EUROPREVENT, the annual conference of the European Association for Cardiovascular Prevention and Rehabilitation in Nice, France.



Our Director of Haredi Projects, Dr. Elisheva Leiter, pictured with her two conference posters and standing with Minister of Health Rabbi Yakov Litzman

National Haredi Women's Health Initiatives:

Our center is participating in the National Haredi Women's Health Forum, which is currently initiating a nationwide study on Haredi women's health status and health behaviors. A review article of all research in Israel on Haredi women's health is under preparation.

3) West Jerusalem Interventions

A) Pisgat Zeev Community Intervention

Our intensive training program for volunteer community leaders was completed in March, and we celebrated at a special event hosted by the graduates. 18 women completed the program. The ceremony was attended by Yael Entebbe, vice-mayor of Jerusalem attended on behalf the mayor, as did the local representative on the City Council and the District Manager for the City of Jerusalem.



Graduates of the Pisgat Zeev leadership training program

The graduates described the transformative experience of the leadership group. Pisgat Zeev is a large, ethnically diverse and socio-economically challenged neighborhood, and is

reputed to lack any sense of community pride. This event was striking in that the participants repeatedly expressed a commitment to creating a new perception of this neighborhood as a leader in health promotion and healthy living. The presented the “outcomes: of the program: three volunteer led initiatives to promote health in the community.

The initiatives include:

- Walking groups
 - Walking groups for older woman, and for young mothers, at least twice a week and in different parts of the neighborhood
 - Health Club- monthly meetings after the walk, with a healthy breakfast and a lecture.



A small group leader points out the walking group routes

- Nutrition:
 - Partnering with local supermarkets in order to lower the price of healthy food
 - Initiating a local farmers market with fresh produce. Due to start in September.
- Community health programs for women:
 - Women's evening once a month that includes a health related lecture, healthy refreshments, and physical activity or dancing.
 - Neighborhood mass dancing a couple of time a year, around the holidays



The graduates meet once per week to work on their community initiatives and continue to be supervised and facilitated by our representative, Keren Greenberg. We assist with methods and connections when they meet obstacles.



Their first post-program event was a Health Fair in March, as a kick-off event. They partnered with two of the health plans, who distributed health materials and screened for hypertension and diabetes. The women recruited members to their programs, and one of the highlights was Israeli dancing led by an instructor, to

recruit people to the dancing initiative of the community leaders. More than 100 women signed up to participate from different neighborhoods, and there are now active email and cellphone lists to run these groups.



There are now two walking groups on Sundays and Wednesdays, and women from throughout the neighborhood gather once per month at the beginning of the Jewish month (Rosh Hodesh) for a health-related lecture and physical activity.

We are very excited about the nutrition sustainability initiative that these wonderful women have developed. They are planning to initiate a farmers market and have recruited local small groceries to put up stands and sell healthy products at low prices. We hope that



this will gather momentum and lead to further sustainability projects within the neighborhood.

Community Center Initiative for People Living with Disabilities

We have continued our partnership with the Center for Independent Living, and this year we have emphasized a the shift in responsibility and ownership of the program to the members of the CIL, in order to maintain the sustainability of the program. With guidance, the participants were able to lead physical activity and nutrition sessions on their own, despite some initial reluctance. Our physiotherapist worked to build the confidence of the leaders, who are understandably concerned about injury. Our nutritionist met with them weekly, one week with a lecture and the second the week with a hands-on demonstration related to the previous week's lecture.

The participants continue to commit to coming once per week and are required to choose a new health goal every week and to report whether or not they achieved the goal of the preceding week.

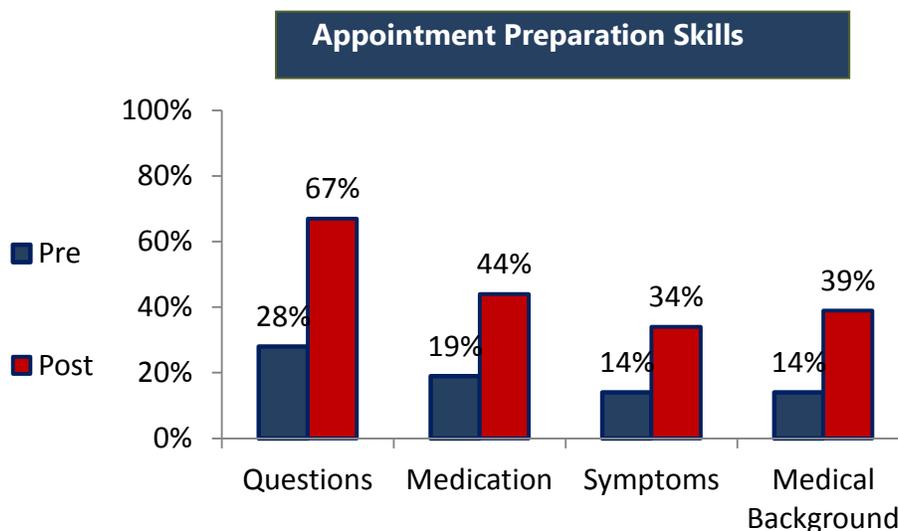
In order to further promote the independence of the program, we are now creating a manual guide for nutrition and adapted physical activity exercises, to be used in peer led exercise groups. We are also producing adapted physical activity videos, which the participants can show and follow, without the need for an instructor. Next year we will continue nutritionist and physiotherapist sessions to increase the level of knowledge and skills, and gradually the community will be responsible for three peer led sessions three weeks of the month.

B) Pollin Empowerment Program

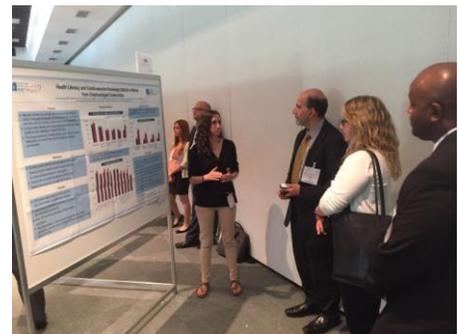
We have so far given our health literacy workshop, which we call the Pollin Empowerment Program, to 14 women's support groups, reaching approximately 300 women. The women learn about heart disease and receive our materials to help them remember the gender-

specific heart attack symptoms. Using role play, they learn how to make the most out of their doctor's visit, ask the right questions and make sure they get all the information they need. In the last session, the women bring their own blood test results and learn how to read and understand them, as well as how to control important measures, such as cholesterol, glucose, and blood pressure.

The data collected 3 months after the seminar have been very encouraging! We found that the percentage of women that reported not preparing for doctors' visits decreased from 45% to 17%. More women reported preparing for doctor's visits with lists of: questions (28% to 67%), medications (19% to 44%), symptoms (14% to 34%), and medical background (14% to 39%). Post intervention, more women recognized heart attack symptoms and more were able to identify heart attack symptoms and risk factors.



We have presented our findings at the Israeli Heart Association conference in Tel Aviv, and at the European Heart Association's annual conference, EuroPrevent, in Nice, France. This program attracted much attention and interest. We are scheduled to lecture about our health literacy program at the upcoming European Public Health Conference in Vienna, this coming November.



C) Gilo Neighborhood Project

The Linda Joy Pollin Center has adopted the neighborhood projects in Gilo, previously supported by the Women's Health Program at Hadassah. We continued to work with an existing group of 80 women in Gilo who meet once per month for educational lectures on health. So far we have given three lectures to this group of women on the topics of safety, medications and their combination among senior citizens, given by our pharmacist, Mayada Karjawally, and a lecture on women's cardiac health by Dr. Osnat Keidar.



At the same time, we are working to take this project to another level, and we would like to work with these women so as to channel their training and activism into active health promotion interventions in their neighborhood. We are very pleased that we have succeeded in coordinating a coalition with the Gilo Community Center, the City of Jerusalem's Municipal Senior Citizen Department, and the Lev Ohev (Loving Heart) volunteer organization to undertake further training of 25 women who were trained for health leadership in the past, by providing a refresher course with training in leadership and activism. This coalition has enabled hiring a coordinator for the community center to manage this project, who will start her position in September 2016.

D) Pat Neighborhood Community Project

The Pat Neighborhood is a poorer and more diverse neighborhood, and we have opted to work in a community center with few resources and a very economically-challenged population. Given the complexity, we have initiated a formal needs assessment in this neighborhood, with the assistance of the Sarit Danieli, recipient of the Linda Joy Pollin Memorial Grant for Women's Heart Health Research at the Braun School of Public Health, who is working with us as part of her thesis research. She initiated her work with focus groups in different population groups, and she is now piloting a questionnaire that will be administered to all visitors to this community center in November 2016.

In this neighborhood, as well, we have opted for the leadership training model, wherein women are trained both in health topics, and in leadership and community organization.



Our **Opening Event** took place in June, 2016, at the Fanny Kaplan Community Center. Approximately 60 women attended this event. It was gratifying to see representation of women from of all ages and demographic backgrounds. Dr Keidar delivered a lecture on women's heart health was and a physical activity session was led by a local physical activity specialist. Mrs. Lizie Sagi, the Community Program Leader from the community center, presented the Health Leadership Program, and participants were invited to sign up for the Leadership course.

We see this location as a launching pad into the adjacent neighborhoods, where there is a tremendous amount of need for health promotion and healthy community interventions.



E) Hadassah Hospital Employee Intervention

We have continued to offer subsidized courses in nutrition and relaxation at the Ein Kerem campus and we have now expanded to the Mt. Scopus campus. We have now taken on 2 significant projects targeting employees, both on the Mount Scopus Campus.

1) Mount Scopus is a Smoke Free Hospital Initiative.

We have spearheaded a collaborative project between the Mount Scopus Hospital Administration, the Workers Council, the Mount Scopus Dentistry Clinic, the Department of Pulmonology and the Braun School of Public Health, targeted at creating a truly smoke-free environment at the Mount Scopus Hospital. Multiple departments within the hospital have joined the effort, including the top levels of the administration, Security, Nutrition and Physical Therapy. A steering committee has been established, led by Dr. Itzchak Tayeb from the Dental Clinic at Mount Scopus. Committee



members include representatives from multiple departments within the hospital, the Braun of Public Health and Ms. Iva Littman from the Pollin center.



Dr Osnat Lev-Zion, Medical Director of Hadassah Mt. Scopus signs the declaration. To the right is Efrat Vingart-Amaryl, Director of Nursing

We kicked off the initiative with a **Smoke Free Hospital Event** – and a Declaration, which was signed by Dr. Osnat Lev-Zion the Medical Director of the hospital, and other key hospital personnel including the Chief Administrator, the Director of Nursing and the Head of the Workers' Council. Dr. Lev- Zion emphasized the Hospital's commitment to a Smoke Free policy and to supporting employees who choose to quit smoking. Dr. Osnat Keidar spoke about active and passive smoking

as a health risk factor. Dr. Hagai Levine from the School of Public Health gave a fascinating lecture on "The Air, the Environment and the Association Between Them".



We have also built a course syllabus for quitting smoking, together with Ms. Osnat Kisilevski, a trained smoking cessation instructor. We have developed an evaluation

tool/questionnaire for the course, to be administered pre and post, and a follow up program so that those who quit continue to receive support once the course is over. The first course will begin in November, 2016, and the hospital has agreed that half the course will occur on hospital time.

II) **Intensive Intervention on the Obstetrics and Gynecology Wards:**

Based on the “Healthy Workplace” model of the World Health Organization, we have established a collaboration with the departments of Obstetrics and Gynecology to pilot a program to transform Mount Scopus into a prototypical healthy workplace. After completion of interviews with key informants and geographic surveys to assess workplace culture, stress levels, access to nutritious food, and physical plant, five committees were established, three for the nurses of each of the three departments, one for physicians, and one for administrators and support staff.

The conclusions from 6 steering committees were presented to the Head of the Ward, Prof. Drorit Hochner. Concerns raised include:

- Difficulty sustaining a healthy and balanced diet, which was linked to shift work and dietary culture of the different departments.
- Interest in formulating a framework that will enhance the atmosphere and improve the functioning of the department
- Interest in a diverse program that appeals to different types of employees and encourages all of them to participate.



Iva Littman participated in a broad steering session to discuss the groups' findings, and further steps to forward this program. The evaluation tool (questionnaire) that was built by Iva was presented to the steering committee, whose comments were discussed and implemented in the questionnaire. The questionnaire will be administered to all members of the department over the next month.

III. MEDIA

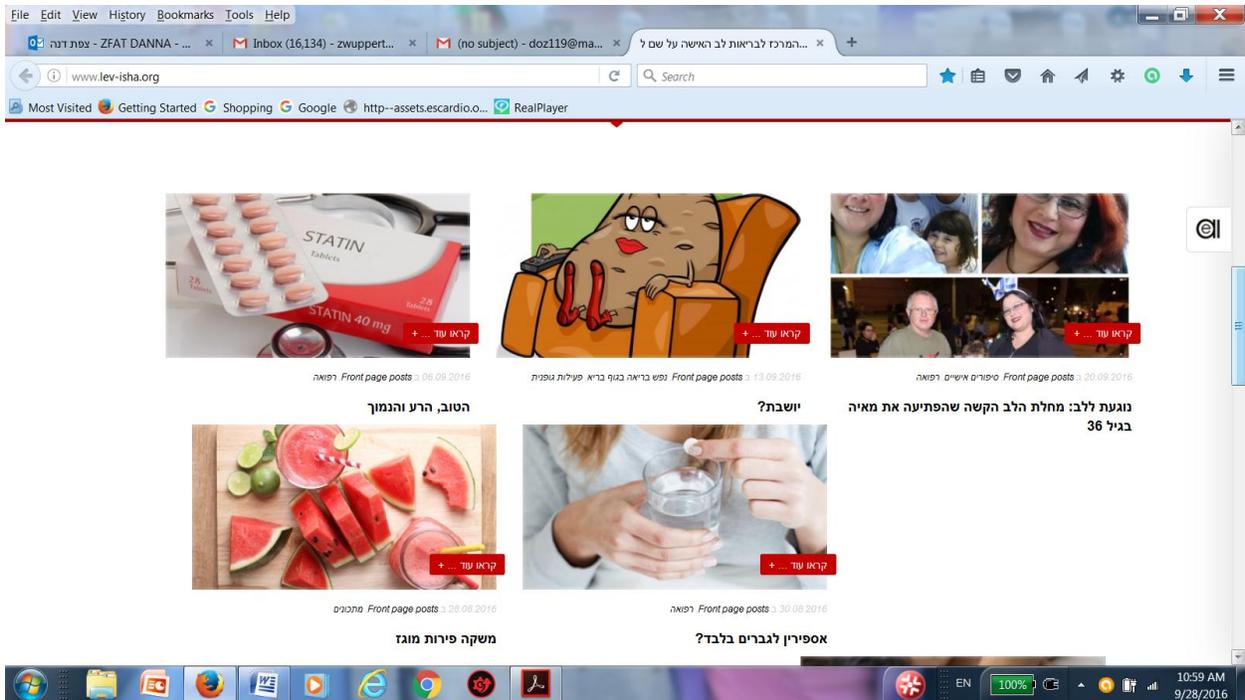
We continue to maximize our exposure in digital and traditional media, and we are very proud of the quality and diversity of the materials on our website (www.lev-isha.org.il) and Facebook page (<https://www.facebook.com/WomenHealthyHeart/>). Our media exposure continues to increase, and we have recently engaged a new highly regarded public relations company (Rimon Cohen Shenkman , who are well known for running the campaign for Gilad Schalit) to assist us in going to the next level.

Here are some of the highlights:

A) The Website

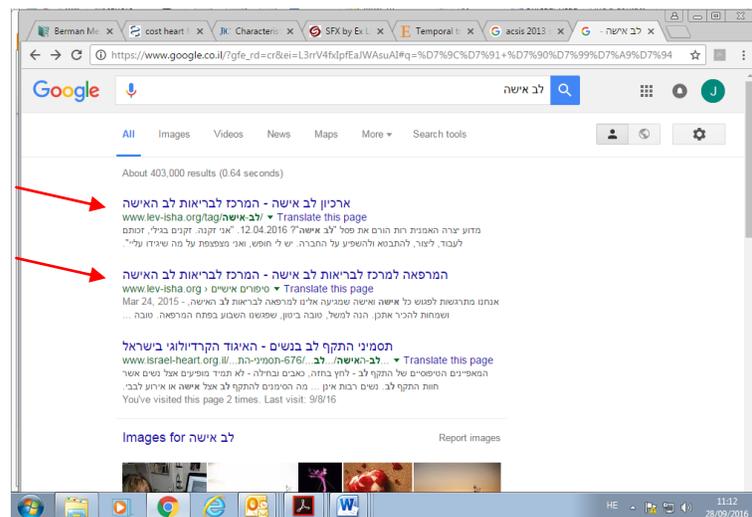
Google analytics shows a continue rise in our website activities, with thousands of visits to our site, and a significantly above average visit time, which demonstrates that are readers are interested in our content.

We continue to add at least 4 new in-depth articles per month, with recent articles on the topics of sedentary lifestyle as a risk factor in and of itself, cholesterol therapy, the role of aspirin in heart disease and stroke for women vs. men, the risk to the heart of low magnesium in desalinated water, and much more. Personal stories continue to be very well received. We link each topic to the specific issues that apply to women, which makes our website unique.



Recent magazine page from the website

We are very satisfied that our efforts with SEO (search engine optimization) have progressed. If you search in Hebrew in Google for “woman heart” or “woman heart health” we appear first or first and second. If you search “women heart health”, we are on the first page. This also reflects the increasing volume of traffic to our website, as Google algorithms take these factors into account.



B) Social Media and Facebook

Our Facebook friend list has reached well over 10,000 likes with average of 11,191 people who see content from our page each week, and an average 21,780 pieces of content viewed each week. Of those users, there are an average of 760 “engaged” users each week—the users who like, respond or share the post. We count more than 400,000 exposures over the past 6 months. One of our recent posts received more than 22,000 exposures, with more than 1100 readers who engaged in some way. Over the past several weeks we have had 3 posts that reached more than 10,000 users.



Facebook data for the month of September. From left to right: video views, engagement and exposure.

The new Facebook algorithms that were recently implemented by Facebook have impacted our distribution (as expected) and we are working to use the new directives and more paid promotion to target the appropriate audiences. As a result of their new algorithms, we are using significantly more video and animation in our posts, which is getting excellent results. We have had more than 250,000 video views!

C) Traditional Media

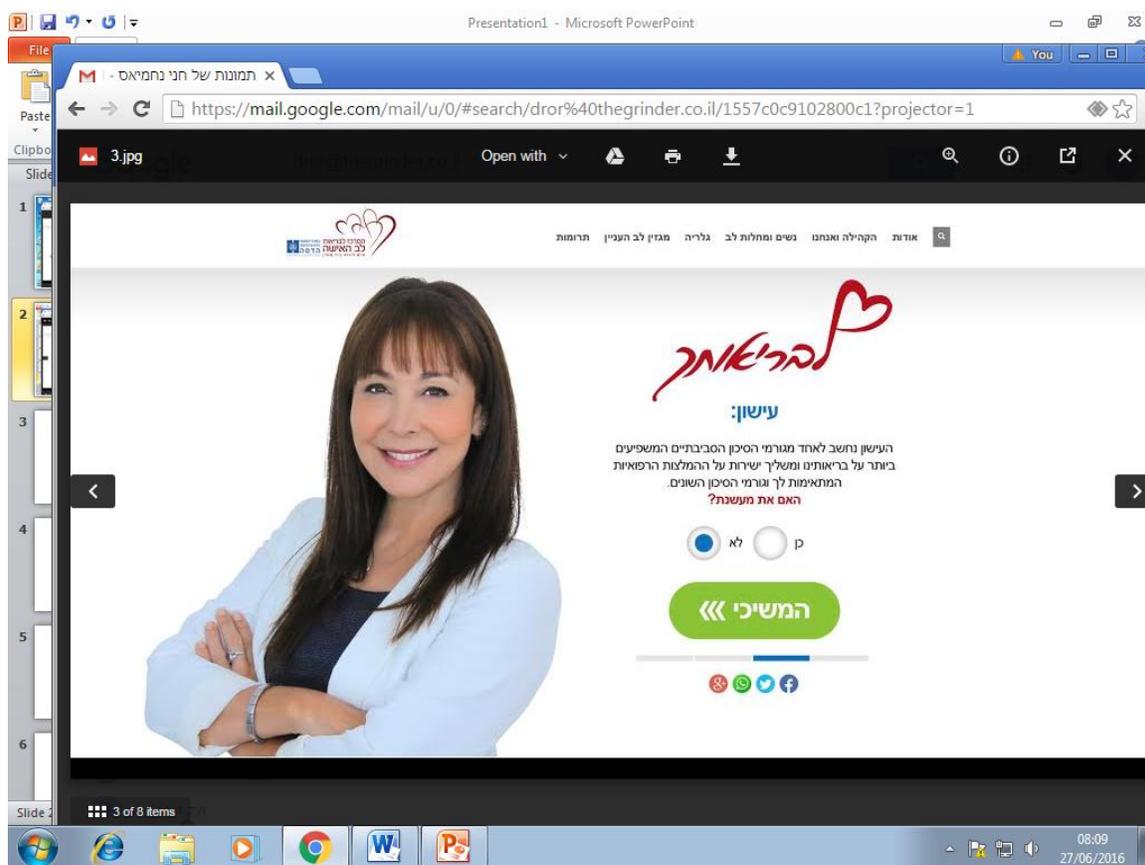
We are very pleased with the exposure in the traditional media that we are getting with the help of our new public relations company. They have excellent media connections, and are able to continuously feed our material to print, radio,



D) E-Health

Our focus groups revealed that women are unaware of the tests, screenings, and medical consultations they should be receiving on a regular basis, thus are unable to effectively monitor and improve their cardiovascular health or to prevent cardiovascular disease. We identified the need for a tool that would provide accessibility to individualized health recommendations for women in all groups from all different sectors.

We then began to design an e-health tool that provides women with profiled tailored information about recommended tests, screening, and medical consultations. This web tool provides women with a gender specific output which describes the frequency of the tests, screenings, vaccines, and medical consultation, in addition to specific physical activity and nutrition recommendations, according to age, BMI, and family history of heart disease.



Screen shot of one of the pages that a woman fills out when using the web-tool

Hani Nachmias, a well recognized personality in Israel, has agreed to be the “face“ of this web-tool. We hope that this tool will be ready for beta-testing in October!

IV. CLINIC

Over the past year, we have continued to see 3 to 6 new women each week, and multiple follow-ups. There are two tracks: in one track we see patients with documented cardiovascular disease or 3 or more risk factors for heart disease, and these patients are evaluated by the nurse, physician, nutritionist, physical therapist and psychologist who then determine a brief series of concrete “SMART” (specific, measurable, achievable, realistic, time-bound) goals. These patients are then followed carefully to assist them in meeting their goals. Other women are seen in the “medical” track, with specific cardiac complaints or issues related to gender medicine. We have seen several fascinating cases including the initiation of estrogen receptor modulators (such as tamoxifen) in women with breast cancer who are at high risk of heart disease, or the management of hormone replacement therapy in patients with heart disease, and of course, the treatment of microvascular angina. Some of the more unusual diagnoses that we have made this year include toxicity from the use of minoxidil spray (Rogaine) for hair loss, (a woman with labile blood pressure that she could not explain,) a blood clot in the lung, genetic disease of the heart leading to decreased heart function, and high levels of homocysteine in the blood. We continue to see a significant degree of psychopathology (depression,



anxiety, stress and family issues,) and it is not uncommon that we suggest that psychological issues be addressed prior to undertaking intensive risk factor modification.

We are happy to report that the clinic database is finally under construction, and we hope to report to you outcomes from this database in the next report.

V. HEALTH CARE PROVIDER EDUCATION

Women's Heart Disease continues to be part of the Hadassah University Medical School Curriculum, with one lecture in the 4th year Introduction to Cardiology course, and lectures for the students rotating through cardiology. We also lecture to the nursing students who rotate through cardiology, and we take a more intensive role in the training of nursing students who are doing a masters in women's health.



We continue to reach out to health care providers throughout the City. 200 Family Medicine doctors attended a lecture on heart disease in women, as part of an update in cardiology organized by Hadassah Cardiology. We are also on the steering committee of

of the national CardioFemme Conference, which organizes a yearly conference dedicated to women and heart disease. We are very proud of the lecturers from Hadassah who made this an extra special event.



Hazel Vahav, RN lectures on the differences between pain in women and men, in patients who suffer from heart failure.

We continue to focus on the heart health awareness of paraprofessionals, including secretaries and medical assistance. We need to intervene at every level of the health care system.



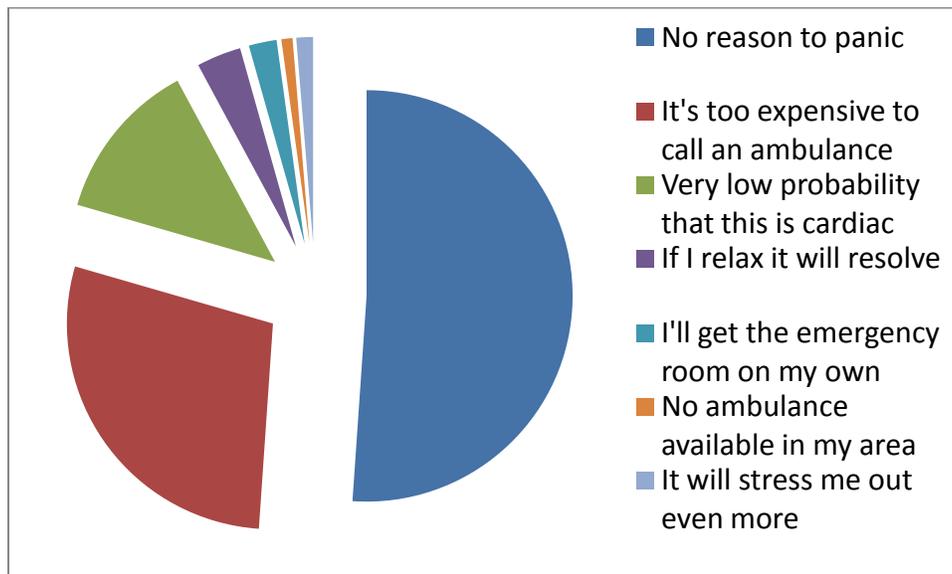
Tanya Reinfeld lectures to medical assistants.

VI. RESEARCH

The research efforts of the Linda Joy Pollin Cardiovascular Wellness Center for Women can be described as “translational,” as we coordinate between research in the area of community health promotion, the development of clinical tools for wellness promotion and risk factor reduction, and basic science projects designed to allow for the development of new avenues of study and the accumulation of pilot data to enable large scale, publicly funded studies.

A) Epidemiology

As is well known, there is a difference between men and women in the amount of time between the initiation of symptoms during a heart attack and when the person seeks help. This year we have been concerned with determining what are the barriers that women face when deciding to seek help in the setting of a heart attack. We recently conducted a survey in which we asked men and women what they would do if they had chest pain and felt very ill, and for those who did not call an ambulance, we then asked them why.



Survey data in women

Other interesting findings from the survey include:

- Women are more likely to call relative/friend for advice - 27.4% vs men (18.6%)
- Ages 50-70 more likely to call relative/friend to take them to ER - 42.6% vs 18-29 (22.3%) and 30-49 (32.2%)
- Ages 50-70 are much less likely to call for doctor appt - 7.8% vs 18-29 (31.8%) and 30-49 (24.8%)
- Ages 50-70 more likely to call for ambulance - 27.9% vs 18-29 (7.6%) and 30-49 (13.1%)
- Haredim somewhat more likely to call relative/friend for advice - 31.3% vs traditional (27.4%) and secular (18.5%)
- Married/coupled are more likely to ask someone to take them to ER - 35.8% vs single (21.2%) and previously married (31.9%)
- Ages 50-70 are more likely to think ambulance takes too much time - 4.3% vs 30-49 (.5%) and 18-29 (0%)
- Previously married people are more likely to feel calling ambulance would stress them out more - 5.4% vs marrieds (.4%) and singles (.9%)
- Low income people are more likely to think ambulance too expensive - 34.0% vs average (32.1%) and high (18.4%)
- New immigrants are more likely to think ambulance too expensive - 46.2% vs vatikim (25.8%)
- High income people are more likely to think pains are unlikely to be heart-related - 19.1% vs average (2.5%) and low (10.0%)

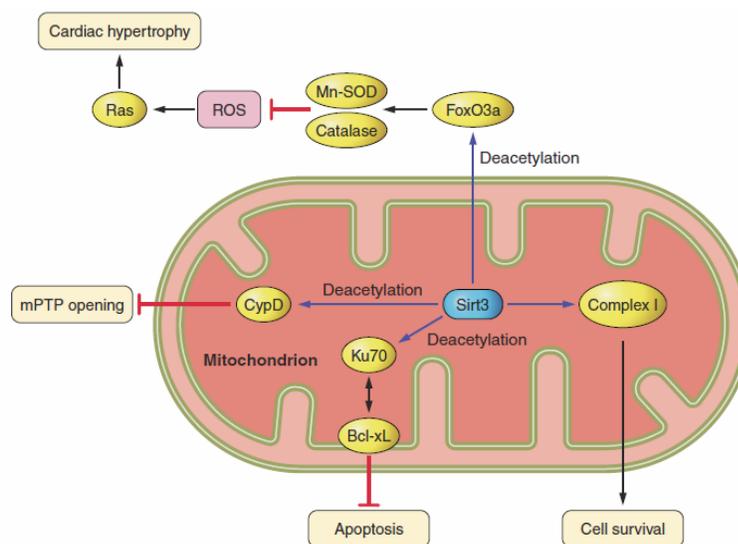
We are now planning a follow up survey to further elucidate the denial mechanisms that women (and men) use when confronting acute cardiac events, and what triggers people to call for help when they need it. This will help us design a social marketing campaign that will be effective in getting women to get to the emergency room in time to save their heart!

B) Community Health Promotion

Data collection and analysis is in progress in each and every one of our community health promotion projects, and we are anticipating that several papers will (finally) be coming out this year! We submitted several grants this year, and are eager to hear if we will be funded to expand our activities.

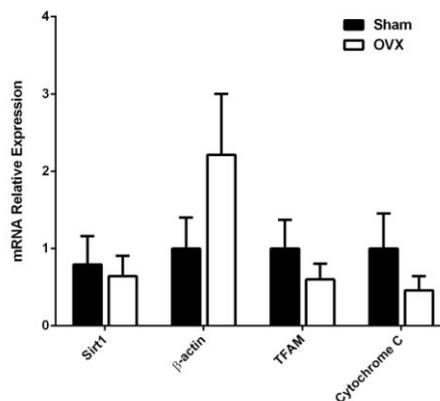
C) Basic and Translational Science

Professor Rivka Pollak and her team have been working with us in the basic science lab on learning more about menopause and the heart. Menopause is a period of accelerated aging and after menopause there is increased cardiovascular morbidity and mortality in women. The sirtuins are family of proteins that are present in almost every organism, and in particular Sirtuins 1, 3, and 6 are key players in the metabolism of aging. They were initially discovered as regulators of cardiac physiology and function, and they play a key role in the heart. Sirtuin activating compounds are currently in clinical trials for the treatment of age-associated conditions. They hypothesized that Sirtuins 1, 3, and 6 play a role in menopause-associated cardiac derangements, and are potential novel targets for drug discovery of therapies for cardiac disease in postmenopausal women.



Using the ovariectomized (OVX) mouse model, an established model to study the effects of menopause on the female heart, they found that the removal of ovaries in female mice leads to a reduction in protein expression of Sirt1, 3, and 6, and a reduction in some of their targets as well. Sirt3 and Sirt6 knock-out mice are characterized by increased thickness of the heart, which is frequently found in post menopausal women, and this hypertrophy is an independent risk factor for cardiovascular morbidity. They are now examining the physiologic implications of these OVX-induced decreases in these sirtuins with regard to cardiac hypertrophy regulation.

Professor Pollak and her team have looked at physiologic significance of the reduction in Sirtuin3 with ovariectomy, by investigating a key target in the development of hypertrophy: acetylated Mn⁺-Superoxide dismutase (SOD), a key factor in detoxification of reactive oxygen species. Indeed, an increase was found in hearts derived from ovariectomized mice, suggesting not just decreased levels but more important, decreased activity of Sirtuin3 in hearts of ovariectomized mice.



They also examined the expression of genes involved in cardiac hypertrophy and mitochondrial function that are relevant for energy generation, such as actin, cytochrome c and TFAM (transcription factor A, mitochondrial.) Indeed, ovariectomy led to increased actin expression and decreased cytochrome C and TFAM expression.

They are now examining the effects of ovariectomy on the activity of these sirtuins by measuring the levels of cell apoptosis, which is cell auto-destruction, and how manipulation of the levels is sirtuin affect. Prof. Pollak will also test if pharmacologic activation of sirtuins reduces apoptosis

in “menopausal” left ventricular myocytes and influences signaling known to participate in cardiac hypertrophy.

VII. EVENTS

The Linda Joy Pollin Cardiovascular Wellness Center for Women was recognized at the Knesset on International Women’s Day!!! Dr Zfat accepted the award that cited the Pollin Center for pioneering of gender medicine and our commitment to bringing about social equality in health. We were in honorable company, with representatives of leading organizations throughout Israel.



The program was led by Gila Gamliel, Minister of Social Equity, seated in the center. (right)

At the event, the staff mingles with MK Isaac Herzog, leader of the opposition. (left)

VIII. PUBLIC POLICY

We continue to work with decision makers and opinion leaders to increase their awareness of heart disease in women. We are in contact with the Ministry of Health, the Health Plans, the Ministry of Education, the National Committee for Women’s Health and the Israel Heart Society to further this agenda.

Dr. Zfat was asked to speak at a special Knesset event on women's health in the reproductive years, where she focused in her address on the opportunity that we have to identify women at risk based on their obstetric history. We have long been aware that pregnancy induced hypertension or diabetes are risk factors for later onset of disease and cardiovascular morbidity and mortality. We now know that if a woman has a premature child, a child with intra-uterine growth retardation, or a child that weighs more than 4 kilogram (8 lbs 13 oz, in those without diabetes) that these too are risk factors for the later development of cardiovascular disease. Dr. Zfat expressed the call to action that both obstetricians and family doctors be made aware of these data, and these women be referred for intensive risk factor reduction.



Dr. Zfat was twice asked to testify at Knesset Committee meetings, on the topic of heart disease in women, and had the opportunity to speak at the meeting held in the presence of the Minister of Health, so as to emphasize the importance of increasing the awareness of heart disease in women. Of note, at that meeting, when the Ministry of Health presented



their findings on health discrepancies between women and men, the ONLY are of discrepancy was in the treatment of women at the time of presentation with a heart attack!

Our nurses Dr. Maha Nubani and Siham Massarwa, and Dr. Milka Dunchin were invited to a special Knesset session on the topic of smoking and women in the Arab sector.

Dr. Zfat has been appointed to chair the sub-committee of the Council for Women's Health that is charged with initiating a campaign to increase the awareness of heart disease in women. The campaign



has been allocated 300,000 NIS to use to start the initiative. The sub-committee has divided into 3 working groups. One is working on the baseline data and outcomes assessment, the second is working on developing the social marketing campaign, and the third group is working on health care provider education. The committee has decided that all materials and resources need to be equally targeted at Hebrew and Arabic speaking women. One of the issues that has arisen as a significant barrier to access to immediate care in the setting of a heart attack is the cost of the ambulance. In Israel, if you call an ambulance and subsequently are not admitted to the hospital, you are then charged the full price of the ambulance, which can be more than \$215.00, and for the ER visit. As you can see from the survey that we reported earlier, this is a significant barrier for both women and men, and as women are more often in the lower economic strata, this is very significant. We are now working and lobbying to have the payment for the ambulance included in the health basket.



The Knesset Committee Meeting on Women's Health in the presence of the Minister of Health. MK Aida Toume-Souleman chaired the meeting. Present are the Minister of Health, and Knesset Members Shuli Muallem and Aliza Lavie

Conclusion

The Pollin Center is now established as a leading force in advancing the cardiovascular health of women in Israel. We play a role in the national arena, and are promoting women's heart health in the Knesset, in national councils, and in partnership with grassroots organizations. We have made measureable changes in communities in the Ultra-Orthodox and Arab communities and in disadvantaged populations. Our cardiovascular awareness activities are now reaching women from every sector of society, with social media posts reaching hundreds of thousands of women, with videos that are shared by our followers, and with media appearances on television and radio and at local events. We see our intensive community-based health promotion activities as agents of profound societal change. When we not only give women information, but we empower them to be community organizers, we create social forces that allow us to transform our obesogenic, sedentary culture into a health promoting culture. We are now looking at the outcomes data in our activities in all sectors, which will allow us to fine tune these programs and make them even more worthwhile.

One major factor that has allowed us to move forward so quickly and so effectively is that we work through partnership. By partnering with municipalities, government agencies, women's organizations, and with the women themselves, we create the synergy that leads to change. We are proud of all the people and organizations that work with us, and our affiliations continue to increase.

We wish all of our partners a year of tremendous happiness, growth, immense accomplishment, and above all, good health!