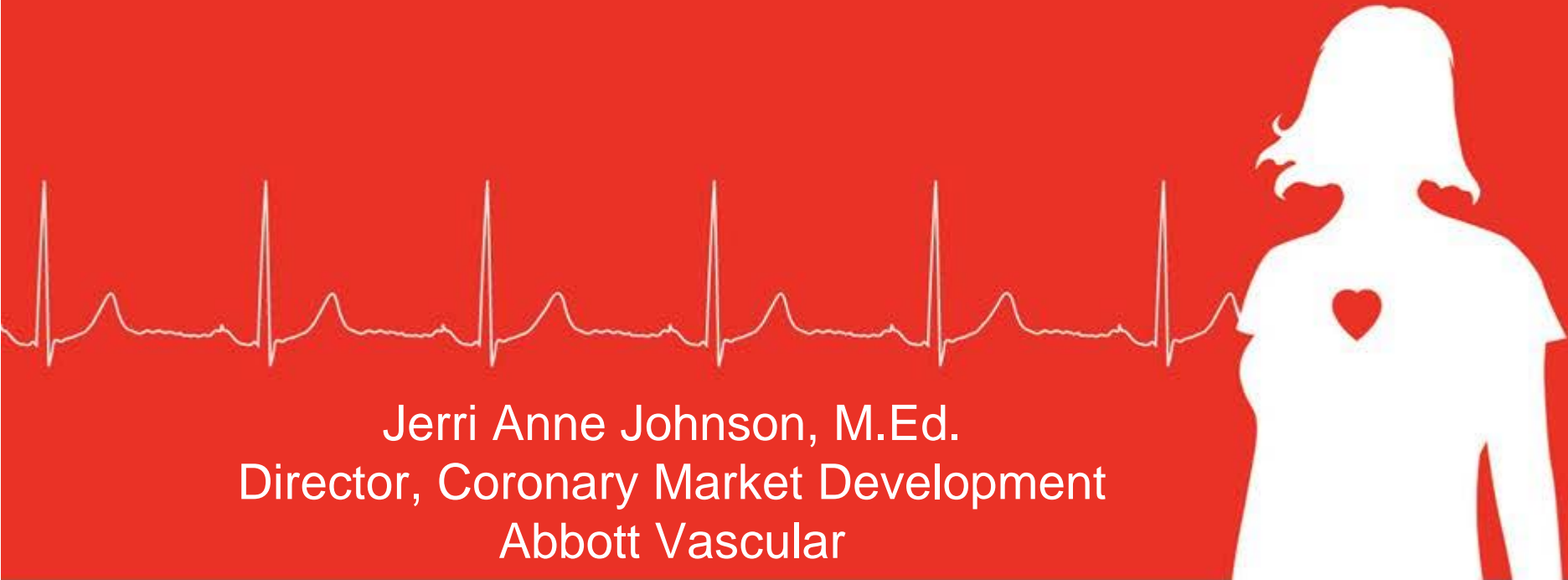


A Novel Approach to Screening Women for Cardiovascular Disease – A Case Study on The OB/GYN Connection



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Barriers and What We Already Know

Low Awareness of Action Steps

- When asked what they would do if they thought they were having signs of a heart attack, 53% of women reported they would call 9-1-1. 79% said they would call if someone ELSE was having symptoms of a heart attack

Low Awareness of Risk

- African American and Hispanic women were significantly less aware of CVD risk than white women

High Barriers to Prevention

- Family/caretaking responsibilities
- Confusion about symptoms/presentation

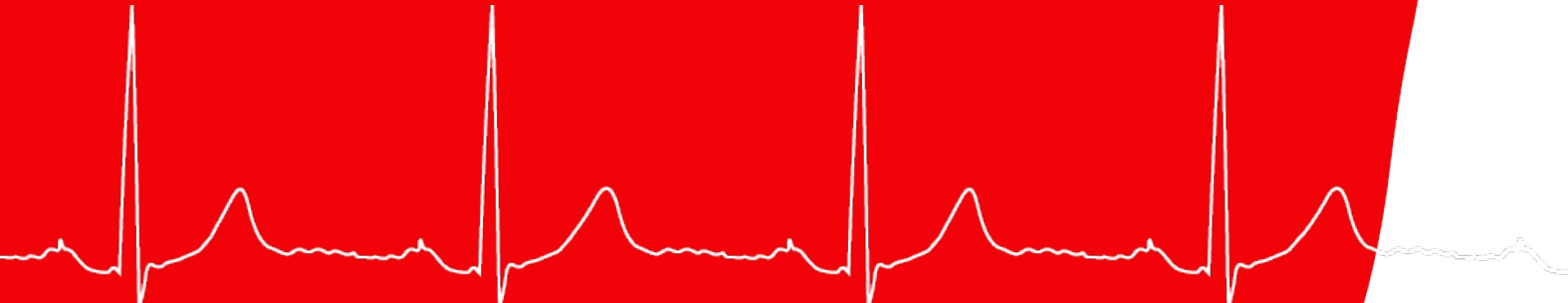
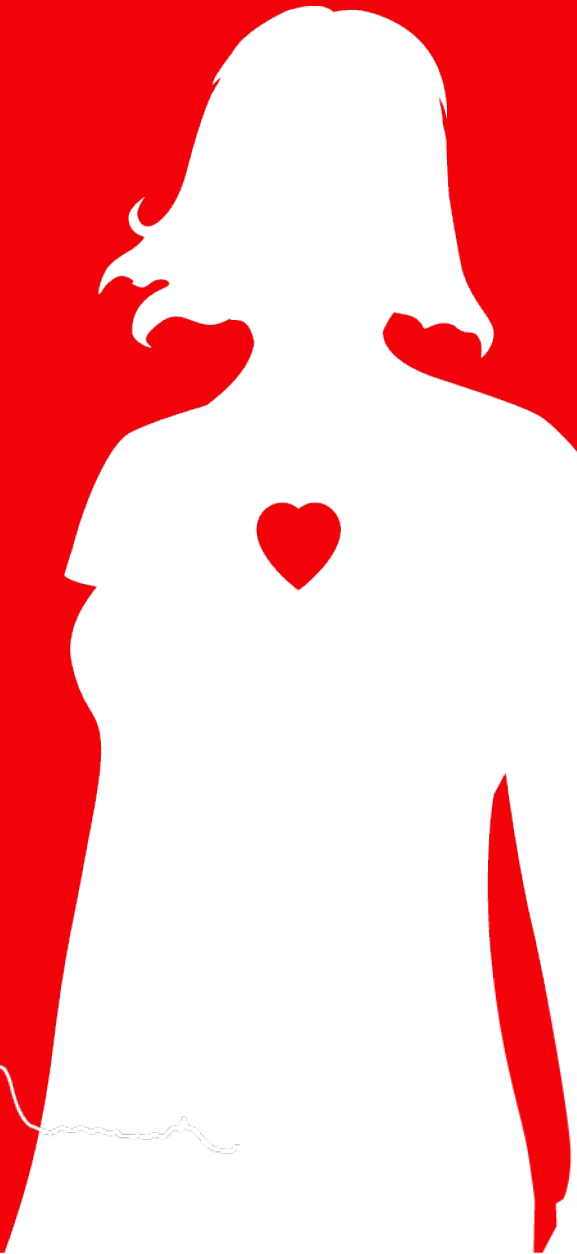
Mosca. *Circ Cardiovasc Qual Outcomes* 2010;3;120-127.

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Abbott Vascular/SCAI OB/GYN Pilot



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WHY OB/GYN?



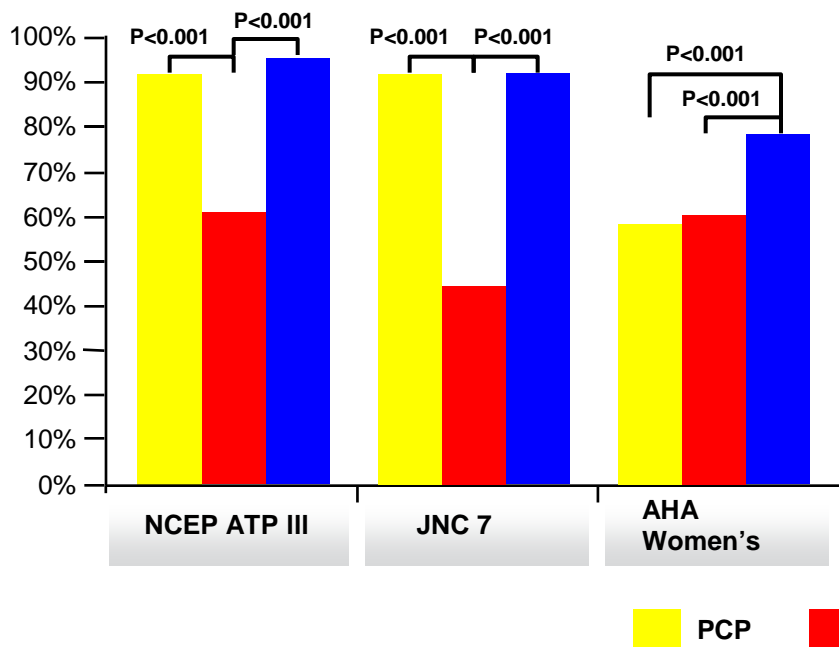
- More and more women are choosing to use their OB/GYN as their PCP.
- OB/GYNs deliver excellent preventive care and are doing a lot of screening already.
 - Pap smear- cervical CA screening
 - Mammograms- breast CA screening
 - Screening for HPV, chlamydia, colo-rectal cancer
- OB/GYNs instill tremendous loyalty and trust in their patients.
- Heart disease is the #1 killer of women – let's build a bridge or partnership with the cardiology and OB/GYN community to offer optimal management of this major health care issue.
- Tremendous success of Pink Ribbon Awareness Campaign.
- Success of breast cancer model – JUST REFER!

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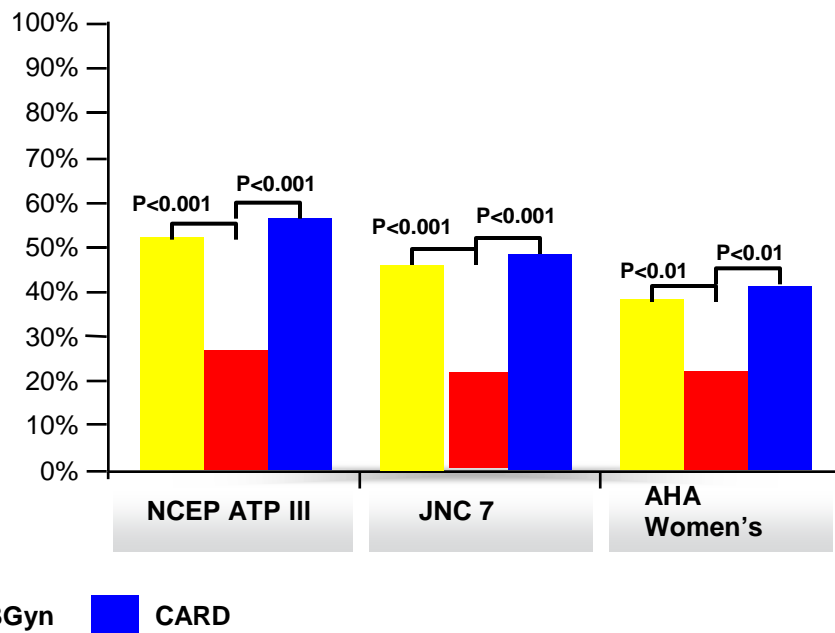
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Physician Perception of Women's CV Risk: Guideline Awareness

PCPs and Cardiologists—higher level of guideline awareness than OB/GYNs



Incorporation of Guidelines into practice by physicians aware of guidelines



A misperception of lower cardiovascular risk status for women remains among physicians and correlates with suboptimal application of preventive interventions

Source: Mosca, L., et al. (2005). Circulation;111:499-510

Pilot Conception

- Idea was conceived with Dr. Roxana Mehran and Abbott Vascular in 2009.
- There was an unmet need for a screening tool that went beyond Framingham or Reynolds to include questions about the growing body of evidence linking pregnancy complications and CVD.
- Architects of the tool consisted of leaders from SCAI-WIN, Abbott, and ACOG.
- Pilot was IRB exempt .
- No remuneration provided to participating sites but patient and physician tools were made available to all sites.

Screening tool

Heart Disease Screening Tool

Survey Date: / / 2010



The Society for Cardiovascular
Angiography and Interventions



Abbott
Vascular

1. What is your age?

 /

2. Do you smoke?

Yes No, Never No, Quit

3. Is your blood pressure over 120/80?

Yes No Don't Know

* 4. What is your blood pressure?

Self Reported by Patient /

5. Has your cholesterol ever been checked?

Yes No Don't Know

6. Is your cholesterol more than 200 mg/dL?

Yes No Don't Know

* 7. What is your cholesterol?

Self Reported by Patient

8. Is your HDL (good cholesterol) less than 45 mg/dL?

Yes No Don't Know

* 9. What is your good cholesterol?

Self Reported by Patient

10. Are you currently taking medicines for high cholesterol?

Yes No Don't Know

11. Which of these medicines are you currently taking for high cholesterol?

Statin Fibrate Niasin I don't know

Other

12. Has your father/brother had a heart attack, stroke, or other heart problem before age 55?

Yes No Don't Know

13. Has your mother/sister had a heart attack, stroke, or other heart problem before age 65?

Yes No Don't Know

14. Have you ever had your blood sugar checked?

Yes No Don't Know

15. Do you have diabetes OR a fasting blood sugar of 126 mg/dL or higher?

Yes No Don't Know

16. Are you currently taking medicine to control blood sugar?

Yes No Don't Know

17. Is your BMI greater than 25?

Yes No Don't Know

18. Do you get less than 30 minutes of exercise on most days?

Yes No

19. Have you had a heart attack or have you been told that you have angina?

Yes No Don't Know

20. Do you experience any of the following?

Chest, jaw, shoulder or neck discomfort w/ activity Palpitations

Chest, jaw, shoulder or neck discomfort at rest Fatigue

Shortness of breath

Leg Pain w/ walking

Fainting without explanation

Stroke or mini-stroke

21. Are you currently pregnant?

Yes No Don't Know

22. Did you have high blood sugar during your pregnancy (gestational diabetes)?

Yes No Don't Know Not Applicable

23. Did you have high blood pressure during your pregnancy?

Yes No Don't Know Not Applicable

24. Did you have preeclampsia during your pregnancy?

Yes No Don't Know Not Applicable

25. Are you menopausal?

Yes No Don't Know If so, at what age?

26. Was your uterus removed?

Yes No Don't Know If so, at what age?

27. Were your ovaries removed?

Yes No Don't Know

28. Are you on hormone replacement treatment?

Yes No Don't Know If so, for how long in years?

29. Is this your primary care physician/provider?

Yes No

30. If No, do you have a primary care physician/provider?

Yes No

For Completion by Healthcare Professional Only

* Enter the patient's BP, Cholesterol and HDL if Incomplete.

Was referral recommended?

Yes No

If yes, referred to whom?

PCP Cardiologist Endocrinologist NP PA

Other

Referral Date:

 / / 2010

Methods

- Target audience was women age ≥ 40 .
- Sample size determined to be 3000.
- Abbott worked with cardiology champions at institutions that expressed an interest to Abbott in building a more robust CVD program in women.
- Site champions identified willing OB/GYN partners for participation and began the dialogue.
- Abbott provided funding for dinners to bring the two specialties together to determine the threshold of risk requiring a referral.
- 16 sites contributed patient questionnaires.
- Hershey Technologies scanned all forms into a database which was then provided to Dr. Mehran at Mount Sinai for analysis.

Updated Women's Guidelines 2011



“Because of its unique cardiovascular and metabolic stress, pregnancy provides a unique opportunity to estimate a woman’s lifetime risk. For example, preeclampsia may be an early indicator of CVD risk. A recent large meta-analysis found that women with a history of preeclampsia have approximately double the risk for subsequent ischemic heart disease, stroke, and venous thromboembolic events over the 5 to 15 years after pregnancy. In these patients, the physiological “metabolic syndrome of pregnancy” may provoke pregnancy complications. **The latter could be considered a “failed stress test,” possibly unmasking early or preexisting endothelial dysfunction and vascular or metabolic disease.**”

Mosca, *Circulation* 2011;123

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Updated Women's Guidelines 2011



“Therefore, appropriate referral postpartum by the obstetrician to a primary care physician or cardiologist should occur so that in the years after pregnancy, risk factors can be carefully maintained and controlled.”

Mosca, *Circulation* 2011;123

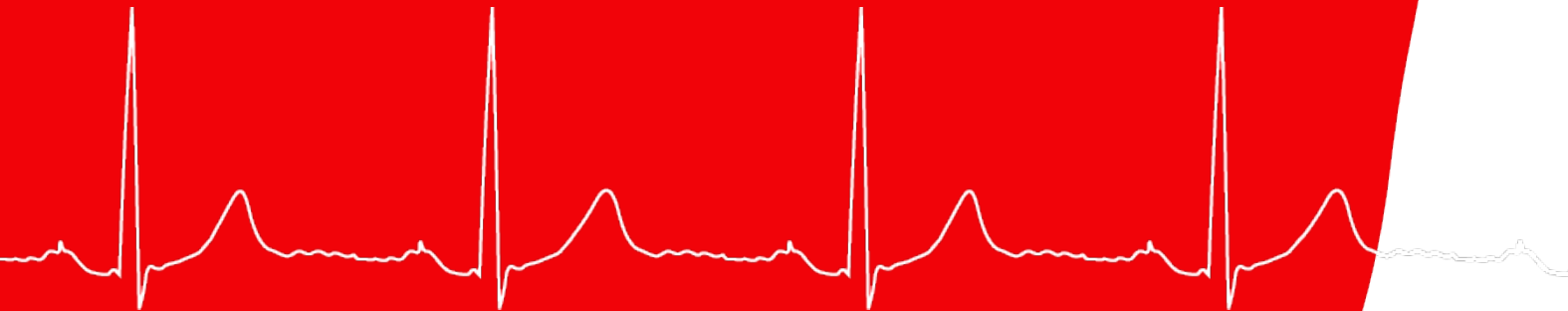
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Pilot Results



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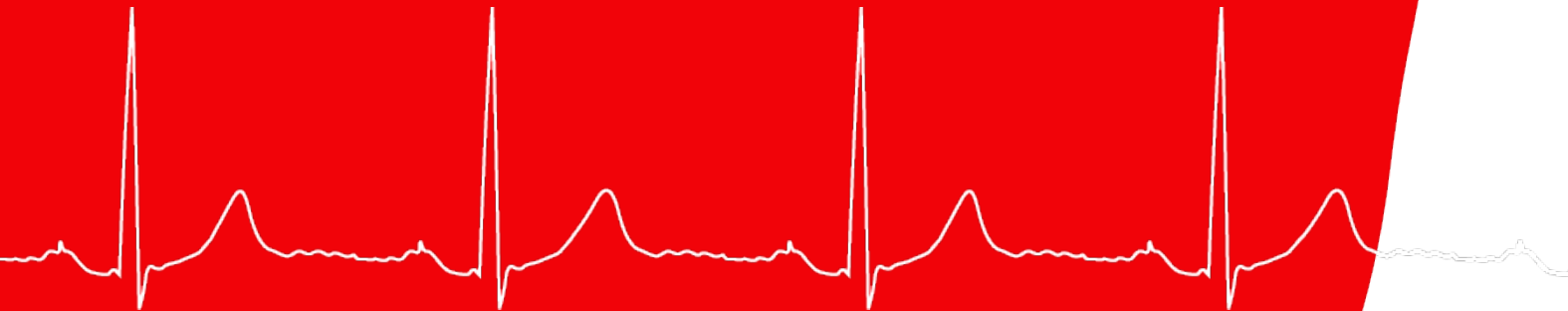
Results

- Amongst middle aged women screened in this pilot, multicenter program in community OB/GYN clinics, the prevalence of cardiovascular risk factors and symptoms were common (87% and 42% respectively).
- 25.2% of patients screened were subsequently referred to another health care provider (e.g. cardiologist, endocrinologist).
- 32.4% of PIC women were referred vs 23.5% with no PIC ($P<0.001$).
- Cardiovascular assessment in the setting of community based OB/GYN clinics may enhance the delivery of primary CV prevention and education to female patients.

Moderated Poster ACC, 2012, J. Yu
Oral Presentation AHA, 2012, J. Yu



Conclusions



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Conclusions

- Non-specialists may be unaware of the burden of disease in their population, but can be motivated by data.
- Education and engaging primary care providers and their patients about medical research and clinical trials has the potential to provide future willing and aware participants and referring providers.
- PCPs and OB/GYNs may be an underutilized resource to identify women at risk for CVD and who may be willing to participate in clinical trials.
- The creation of multi-specialty teams to advance women's health may also be a way to share research opportunities.