Vermont Child Health Improvement Program
UNIVERSITY OF VERMONT LARNER COLLEGE OF MEDICINE

OB/GYN Webinar Series 2017-2018

Hot Topics in Obstetrical Care

Tuesday, March 13th, 12pm- 1pm EST

Presented by:

The University of Vermont
LARNER COLLEGE OF MEDICINE

THE University of Vermont MEDICAL CENTER

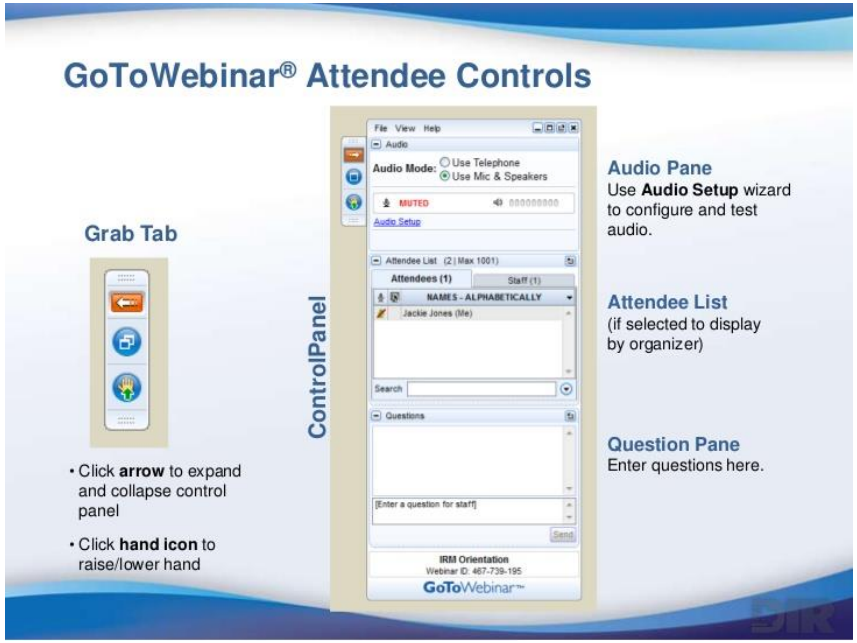
VERMONT DEPARTMENT OF HEALTH

Today's Webinar Topics:

- Domestic Violence: Screening, Intervention, Referral & Resources
  - Kim Swartz, MHSc, Director, Preventative Reproductive Health,
    Division of Maternal and Child Health
    Vermont Department of Health

- Low Dose Aspirin for the Prevention of Preeclampsia
  - Erin Morris, MD, Maternal Fetal Medicine, Obstetrics & Gynecology
    University of Vermont Medical Center

Questions/Comments During the Webinar



Use the Chat or Question box in your webinar toolbar

Domestic Violence: Screening Intervention, Referral & Resources

VERMONT
DEPARTMENT OF HEALTH

Kim Swartz, MHSc, Director, Preventive Reproductive Health,
Division of Maternal and Child Health, March 2018

Context

The public health burden of sexual violence, stalking, and intimate partner violence is significant.

IPV contributes to injuries, chronic health issues, and high risk health behaviors.

CDC's National Intimate Partner and Sexual Violence Survey (NISVS)

Vermont Data

- 7% of students have ever been physically forced to have sexual intercourse
- 9% of students who dated were physically hurt by someone they were dating in the past year (Vermont YRBS)
- Women are five times as likely as men to report someone has ever had sex with them without their consent (11% vs. 2%) (Vermont BRFSS, 2015)
- 19% of Vermont adults have experienced any type of Intimate Partner Violence (IPV) in their lifetime
- 13% of Vermont adults have been physically harmed or a partner had tried to control their daily activities (Vermont BRFSS, 2014)
- 72% of women experienced at least one major life stressor during the year before giving birth
  - 29% experienced partner-related stress
  - 4% were physically abused by a spouse or partner (VT PRAMS)

Why? The Role of the Health Care Provider

Important to remember….

Survivors of domestic violence are 4 times more likely to use an intervention after talking with a health care professional about abuse.

Definitions

Intimate Partner Violence (IPV)

- One person in a relationship uses a **pattern** of methods and tactics to gain and maintain **power and control** over the other person. These behaviors may include: inflicting physical injury, psychological abuse, sexual assault, isolation, stalking, deprivation, intimidation and threats. Perpetrators of IPV may use jealousy, social status, mental health, money and other tactics to be abusive and controlling, not just physical violence.

Definitions

Reproductive and Sexual Coercion

- Involves behaviors that a partner uses to maintain power and control in a relationship that are related to reproductive health:
  - Explicit attempts to impregnate a partner against her wishes
  - Controlling outcomes of a pregnancy
  - Coercing a partner to have unprotected sex
  - Interfering with birth control methods and birth control sabotage
  - Pressuring a partner to get pregnant when they do not want to
  - Repeatedly pressuring a partner to have sex when they do not want to

Health Impacts of Domestic Violence

- Immediate physical injury and death, as well as :
  - Increased risk of unintended pregnancy
  - Higher rates of rapid repeat pregnancies
  - Higher rates of STIs
  - Trauma, depression, substance use, suicide attempts
  - Higher rates of gastrointestinal conditions, hypertension, diabetes, asthma
  - Long term impacts on children who experience and/or witness abuse

Pregnancy and Postpartum

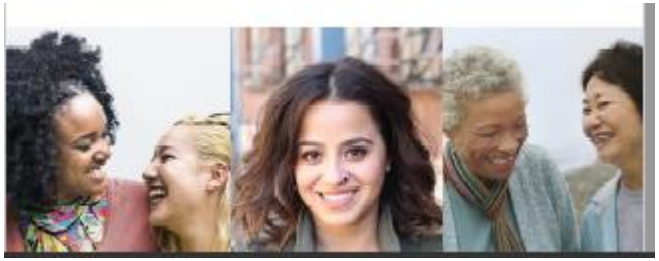
- Women who experience abuse around the time of pregnancy are more likely to:
  - Smoke tobacco
  - Drink during pregnancy
  - Misuse substances
  - Experience depression
  - Experience pregnancy complications
  - Women with a controlling or threatening partner are **5 times** more likely to experience symptoms of maternal depression (Blabey et al, 2009)

Getting Started

- Connect with partners
  - Connect with your local DV agency (for health care providers)
  - With hospital, health care provider, health center (for advocates)
- Promote shared knowledge between staff
- Develop clear referral process between advocacy agency and health care provider
- Consider developing an MOU

Safety Card: Is Your Relationship Affecting Your Health?

- Connects IPV to self, health and parenting
- Focuses on **universal education** to overcome barriers to screening
- **Normalizes conversation** and opens up space to discuss IPV and unhealthy behaviors in relationships
- Build bridges to community resources and supports **warm referrals**



How's It Going?

Everyone deserves to have partners listen to what they want and need. Ask yourself:

- ✔ Is my partner or the person I am seeing kind to me and respectful of my choices?
- ✔ Is my partner willing to talk openly when there are problems?
- ✔ Does my partner give me space to spend time with other people?

If you answered YES to these questions, it sounds like you have a supportive and caring partner. Studies show that being cared for by the person you are with leads to better health, a longer life, and helps your kids.

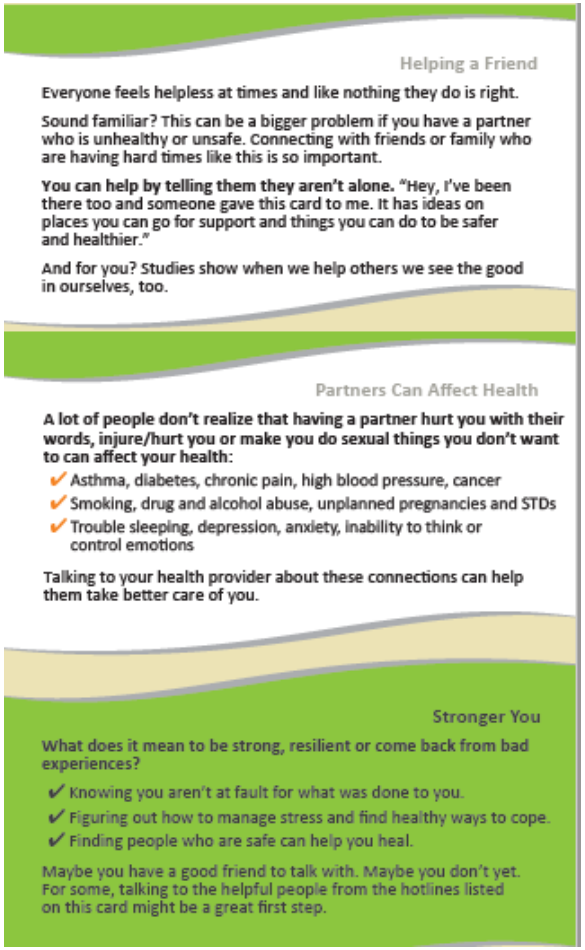
Are There Times...

My partner or the person I'm seeing:

- ✘ Shames or humiliates me, makes me feel bad about myself, or controls where I go and how I spend my money?
- ✘ Ever hurts or scares me with their words or actions?
- ✘ Makes me have sex when I don't want to?
- ✘ Keeps me from seeing my doctor or taking my medicine?

These experiences are common. 1 in 4 women is hurt by a partner in her lifetime. If something like this is happening to you or a friend, call or text the hotlines on this card.

Safety Cards



Helping a Friend

Everyone feels helpless at times and like nothing they do is right.

Sound familiar? This can be a bigger problem if you have a partner who is unhealthy or unsafe. Connecting with friends or family who are having hard times like this is so important.

You can help by telling them they aren't alone. "Hey, I've been there too and someone gave this card to me. It has ideas on places you can go for support and things you can do to be safer and healthier."

And for you? Studies show when we help others we see the good in ourselves, too.

Partners Can Affect Health

A lot of people don't realize that having a partner hurt you with their words, injure/hurt you or make you do sexual things you don't want to can affect your health:

- ✔ Asthma, diabetes, chronic pain, high blood pressure, cancer
- ✔ Smoking, drug and alcohol abuse, unplanned pregnancies and STDs
- ✔ Trouble sleeping, depression, anxiety, inability to think or control emotions

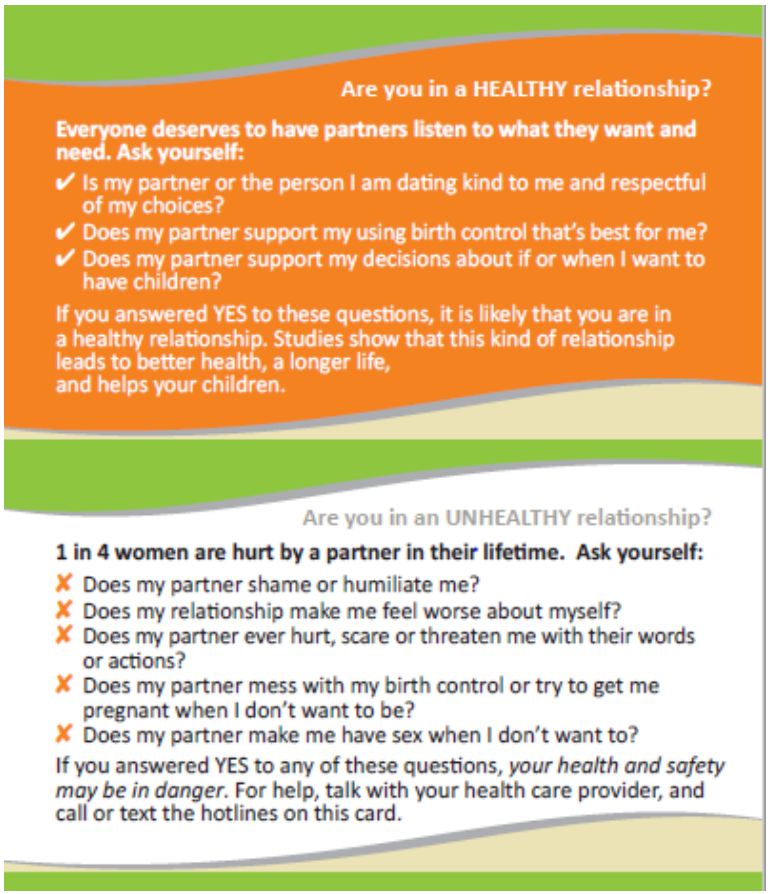
Talking to your health provider about these connections can help them take better care of you.

Stronger You

What does it mean to be strong, resilient or come back from bad experiences?

- ✔ Knowing you aren't at fault for what was done to you.
- ✔ Figuring out how to manage stress and find healthy ways to cope.
- ✔ Finding people who are safe can help you heal.

Maybe you have a good friend to talk with. Maybe you don't yet. For some, talking to the helpful people from the hotlines listed on this card might be a great first step.



Are you in a HEALTHY relationship?

Everyone deserves to have partners listen to what they want and need. Ask yourself:

- ✔ Is my partner or the person I am dating kind to me and respectful of my choices?
- ✔ Does my partner support my using birth control that's best for me?
- ✔ Does my partner support my decisions about if or when I want to have children?

If you answered YES to these questions, it is likely that you are in a healthy relationship. Studies show that this kind of relationship leads to better health, a longer life, and helps your children.

Are you in an UNHEALTHY relationship?

1 in 4 women are hurt by a partner in their lifetime. Ask yourself:

- ✘ Does my partner shame or humiliate me?
- ✘ Does my relationship make me feel worse about myself?
- ✘ Does my partner ever hurt, scare or threaten me with their words or actions?
- ✘ Does my partner mess with my birth control or try to get me pregnant when I don't want to be?
- ✘ Does my partner make me have sex when I don't want to?

If you answered YES to any of these questions, *your health and safety may be in danger.* For help, talk with your health care provider, and call or text the hotlines on this card.

Approaches to Screening for IPV

- **Scripts** are sample language for you to work with when getting comfortable when asking sensitive questions about domestic violence.
- **Framing Statements** and questions create a safe and nonjudgmental space for asking about sensitive issues. They are essential components to universal education and creating an environment that is safe for disclosure.
- **Screening Questions** are direct and indirect questions that provide information and insight into clients' experiences in relationships. This information is critical for you to be able to make the most appropriate and supported referral possible.

What should providers ask?

- Ask about patients' current and lifetime exposure to IPV, including direct questions about physical, emotional and sexual abuse.
- Framing language:
  - *Because violence is so common in many people's lives, I've begun to ask all my patients about this….*
  - *We're talking to all of our patients about the health of their relationships…*
- *Direct Questions:*
  - Are you in a relationship with a person who physically hurts or threatens you?
  - Has your partner or ex--partner ever hit you or physically hurt you?
  - Have you ever felt controlled or isolated by your partner?
  - Has your partner ever forced you to have sex when you didn't want to?
  - Has your partner ever refused to practice safe sex?
  - Has your partner ever messed with your birth control or tried to get you pregnant when you didn't want to be?

How to Respond

- Use scripts:

  I am sorry this is happening. It is not okay, but it is common. You are not alone.

  What you're telling me makes me worried abut your safety and health.

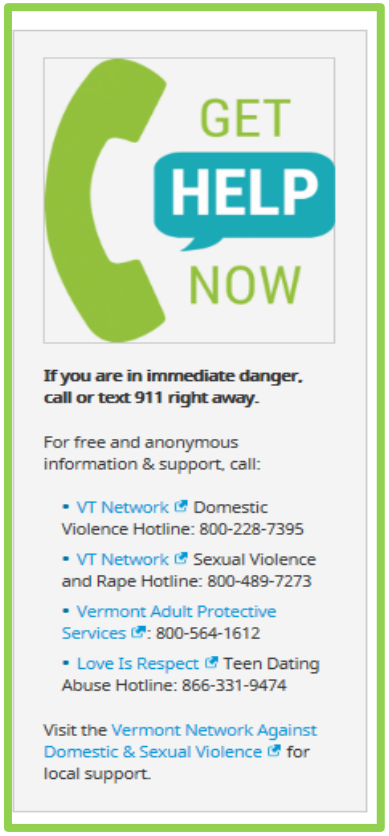
  Would you like me to explain your options and resources available to you?

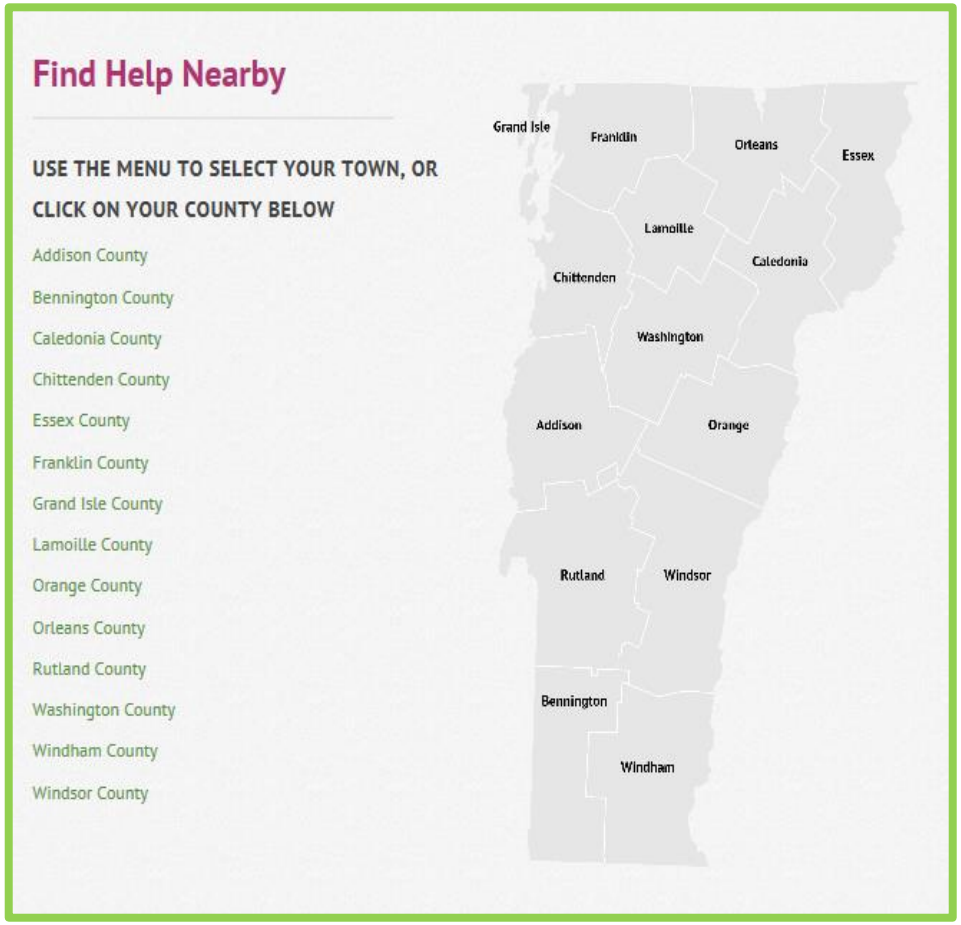
- Warm referral as a key component:
  - Increases likelihood of a successful referral
  - Opportunity for immediate in person or phone safety planning
  - Coordinated care

    If you are comfortable with this, I would like to call my colleague (name of advocate), she has helped many people who have been in similar situations…

Make Referrals~ Vermont Network

**Safely make supported warm referrals*





https://vtnetwork.org/get-help/

Vermont Department of Health

Important Considerations

- Inform clients of limits to confidentiality and see patient alone
- Use scripts and tools to offer information and screen clients for IPV (Safety Cards)
- Document your work with patient and ensure follow up
- Trauma and trauma informed approaches
- Safety and safety planning

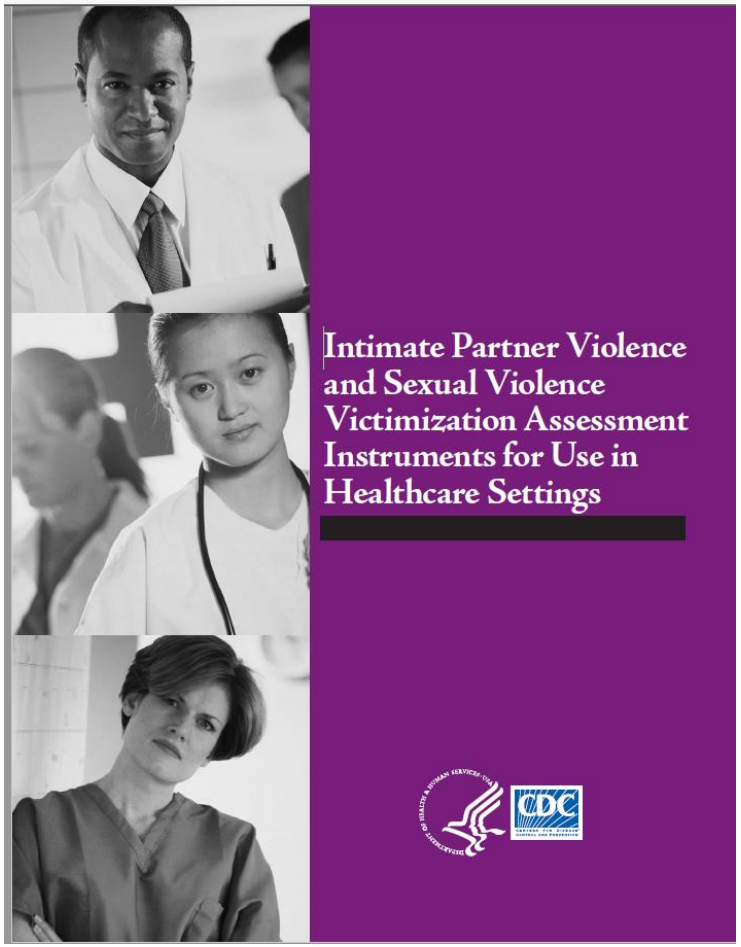
Important Considerations

- Provide a supported referral to your local domestic and/or sexual violence program
  - DV advocates have specialized training
  - Provide confidential, free services
  - Are connected to other support services
- Special populations
  - Adolescents
  - LGBTQ
  - Vulnerable adults
  - New Americans

Recommendations

- Clinical Preventive Services for Women: Closing the Gaps~ The IOM recommends that women's preventive services include…screening and counseling for all women and adolescent girls for interpersonal and domestic violence in a culturally sensitive and supportive manner.
- USPSTF~ Recommends that clinicians screen women of childbearing age for intimate partner violence (IPV), such as domestic violence, and provide or refer women who screen positive to intervention services. Grade: B Recommendation.
- ACOG Committee Opinion~ Based on the prevalence and health burden of IPV among women, education about IPV; screening at periodic intervals, including during obstetric visits; and ongoing clinical care can improve the lives of women who experience IPV. Preventing the lifelong consequences associated with IPV can have a positive effect on the reproductive, perinatal, and overall health of all women.
- AAP Intimate Partner Violence: The Role of the Pediatrician~ Pediatricians are in a unique position to identify abused caregivers in pediatric settings and to evaluate and treat children raised in homes in which IPV may occur.

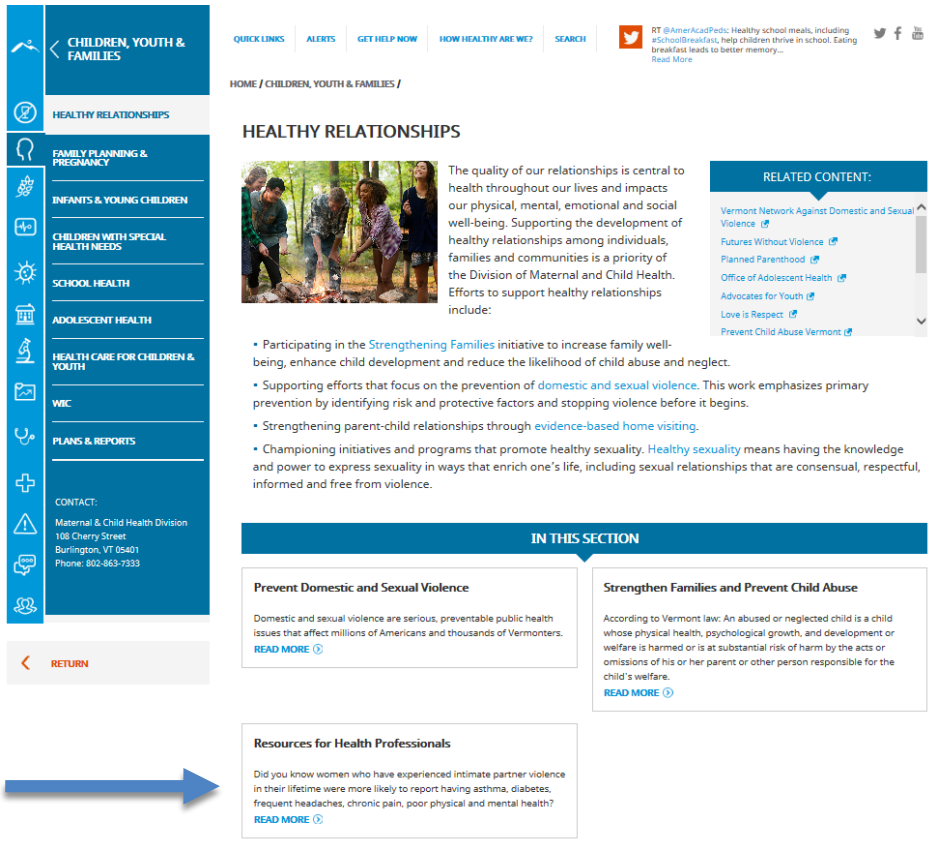
Screening Tools



https://www.cdc.gov/violenceprevention/pdf/ipv/ipvandsvscreening.pdf

Resources

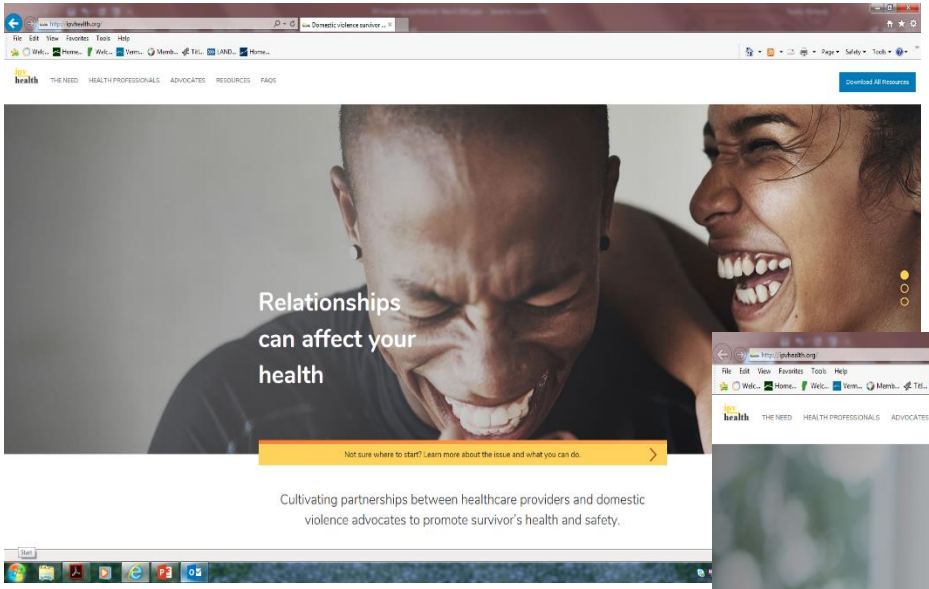
http://www.healthvermont.gov/family/relationships

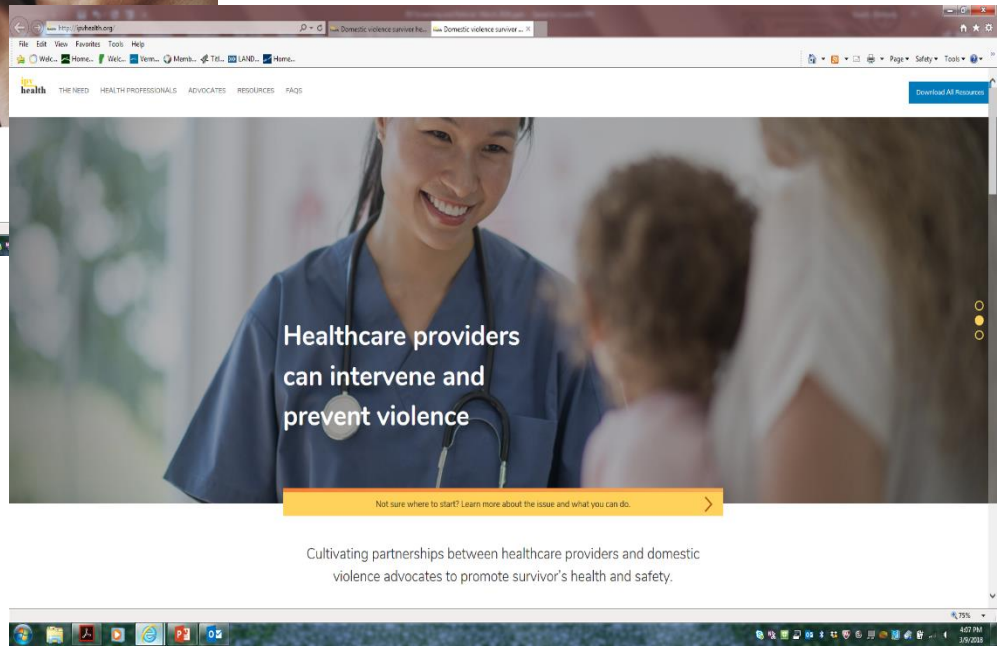


Additional Resources

- *Vermont Network Against Domestic and Sexual Violence*
- *Vermont Home Visitation Guide on Screening, Assessment & Response to Domestic Violence*
- Futures Without Violence
  - Order materials~ *From Futures Without Violence*
  - *LGBTQ IPV*
  - *Adolescent Relationship Abuse*
  - *Addressing Intimate Partner Violence, Reproductive and Sexual Coercion: A Guide for Obstetric, Gynecologic and Reproductive Health Care Settings*
  - *Webinars*
  - *Educational training videos*

IPV Health~ Health care provider toolkit





Please Be in Touch

Kim Swartz, MHSc

kimberly.swartz@vermont.gov

Check us out online: http://healthvermont.gov/family

Low Dose Aspirin for the Prevention of Preeclampsia

Erin Morris, MD

OB/GYN Special Webinar Series 2017-2018

March 13, 2018

Disclosure

I have no actual or potential conflict of interest in relation to this presentation.

THE AMERICAN COLLEGE OF
OBSTETRICIANS AND GYNECOLOGISTS

Office of Communications
P.O. Box 96920
Washington, DC 20090-6920

tel: 202-484-3321 fax: 202-479-6826
email: communications@acog.org
www.acog.org

ACOG Practice Advisory on Low-Dose Aspirin and Prevention of Preeclampsia: Updated Recommendation

July 11, 2016

ACOG has issued a **Practice Advisory** on Low-Dose Aspirin and Prevention of Preeclampsia that supports the **United States Preventive Services Task Force's recommendations** on the same topic. As a result and based on recent, evolving expert consensus, ACOG now recommends an expanded set of high-risk criteria to determine if a pregnant woman is eligible for low-dose aspirin to prevent preeclampsia.

# # #

The American College of Obstetricians and Gynecologists (The College), a 501(c)(3) organization, is the nation's leading group of physicians providing health care for women. As a private, voluntary, nonprofit membership organization of approximately 57,000 members, The College strongly advocates for quality health care for women, maintains the highest standards of clinical practice and continuing education of its members, promotes patient education, and increases awareness among its members and the public of the changing issues facing women's health care. The American Congress of Obstetricians and Gynecologists (ACOG), a 501(c)(6) organization, is its companion organization. ***www.acog.org***

Recommendations: Low-dose Aspirin for Preeclampsia Prevention USPSTF, September 2014 (now endorsed by ACOG)

Table. **Clinical Risk Assessment for Preeclampsia***

Risk Level	Risk Factors	Recommendation
High†	History of preeclampsia, especially when accompanied by an adverse outcome Multifetal gestation Chronic hypertension Type 1 or 2 diabetes Renal disease Autoimmune disease (i.e., systemic lupus erythematous, the antiphospholipid syndrome)	Recommend low-dose aspirin if the patient has ≥1 of these high-risk factors
Moderate‡		t has several of
Low		

"ACOG supports the recommendation to consider the use of low-dose aspirin (**81 mg/day**), **initiated between 12 and 28 weeks** of gestation, for the prevention of preeclampsia, in women with **high-risk factors**."

* Includes only risk factors that can be obtained from the patient medical history. Clinical measures, such as uterine artery Doppler ultrasonography, are not included.
† Single risk factors that are consistently associated with the greatest risk for preeclampsia. The preeclampsia incidence rate would be approximately ≥8% in a pregnant woman with ≥1 of these risk factors (1, 5).
‡ A combination of multiple moderate-risk factors may be used by clinicians to identify women at high risk for preeclampsia. These risk factors are independently associated with moderate risk for preeclampsia, some more consistently than others (1).
§ Moderate-risk factors vary in their association with increased risk for preeclampsia.

LeFevre ML. Low-dose aspirin use for the prevention of morbidity and mortality from preeclampsia: U.S. Preventive Services Task Force recommendation statement. Annals of internal medicine 2014;161:819-26.

Prior Recommendations

USPSTF, 1996: ***Insufficient evidence*** to recommend for or against the routine use of aspirin for the prevention of either preeclampsia or IUGR

National Institute for Health and Clinical Excellence (NICE), 2009: Women at high risk of developing preeclampsia take **75 mg** of ASA daily from **12 weeks until delivery**

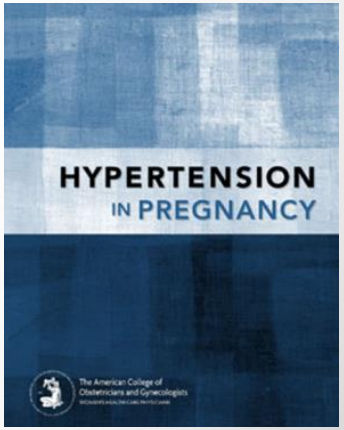
WHO, 2011: Low-dose ASA (**75 mg/day**) for women deemed **high-risk** for developing preeclampsia, **initiation < 20 weeks or as early as 12 weeks**.

ACOG Hypertension in Pregnancy Task Force Recommendation, 2013:

"For women with a medical history of **early-onset preeclampsia and preterm delivery at less than 34 weeks** of gestation **OR preeclampsia in more than one prior pregnancy**, initiating the administration of daily low-dose aspirin beginning in the late first trimester is suggested."

Quality of evidence: Moderate,

Strength of recommendation: Qualified



Preeclampsia

New-onset hypertension and proteinuria in the second half of pregnancy

Complicates 2-8% of pregnancies

Leading cause of maternal and perinatal morbidity and mortality worldwide

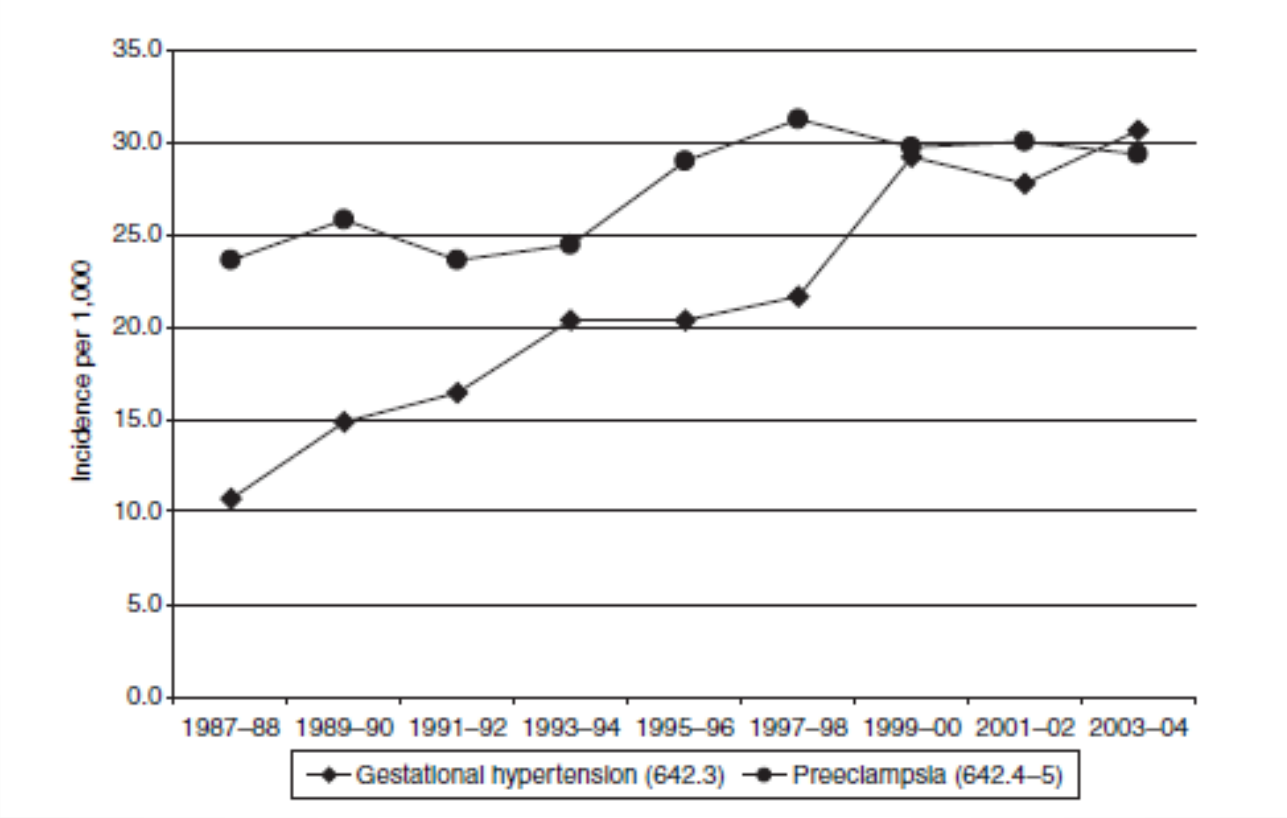
- 12.3% of pregnancy-related deaths in the US, 1998-2005[1]
- 1 in 7 preterm births in the US[2]
- Marker for future cardiovascular disease in women

1. Berg CJ, Callaghan WM, Syverson C, Henderson Z. Pregnancy-related mortality in the United States, 1998 to 2005. Obstetrics and gynecology 2010;116:1302-9.
2. Creanga AA, Berg CJ, Syverson C, Seed K, Bruce FC, Callaghan WM. Pregnancy-related mortality in the United States, 2006-2010. Obstetrics and gynecology 2015;125:5-12.

Preeclampsia

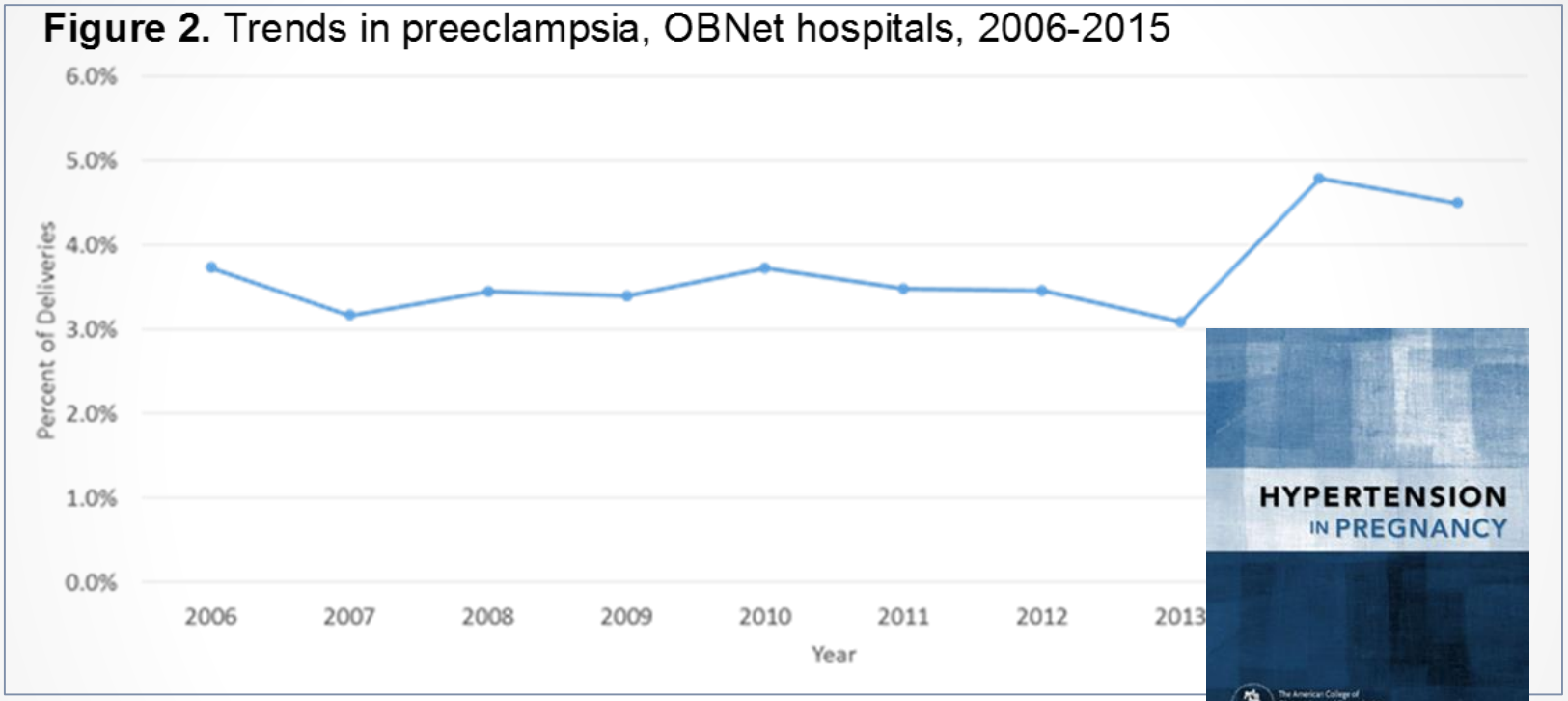
25% increase in the US over the past 3 decades

2010: preeclampsia affected **3.8%** of deliveries in the US



Wallis AB, Saftlas AF, Hsia J, Atrash HK. Secular trends in the rates of preeclampsia, eclampsia, and gestational hypertension, United States, 1987-2004. American journal of hypertension 2008;21:521-6.

What about Vermont?



Review of OBNet data, 2006-2015:

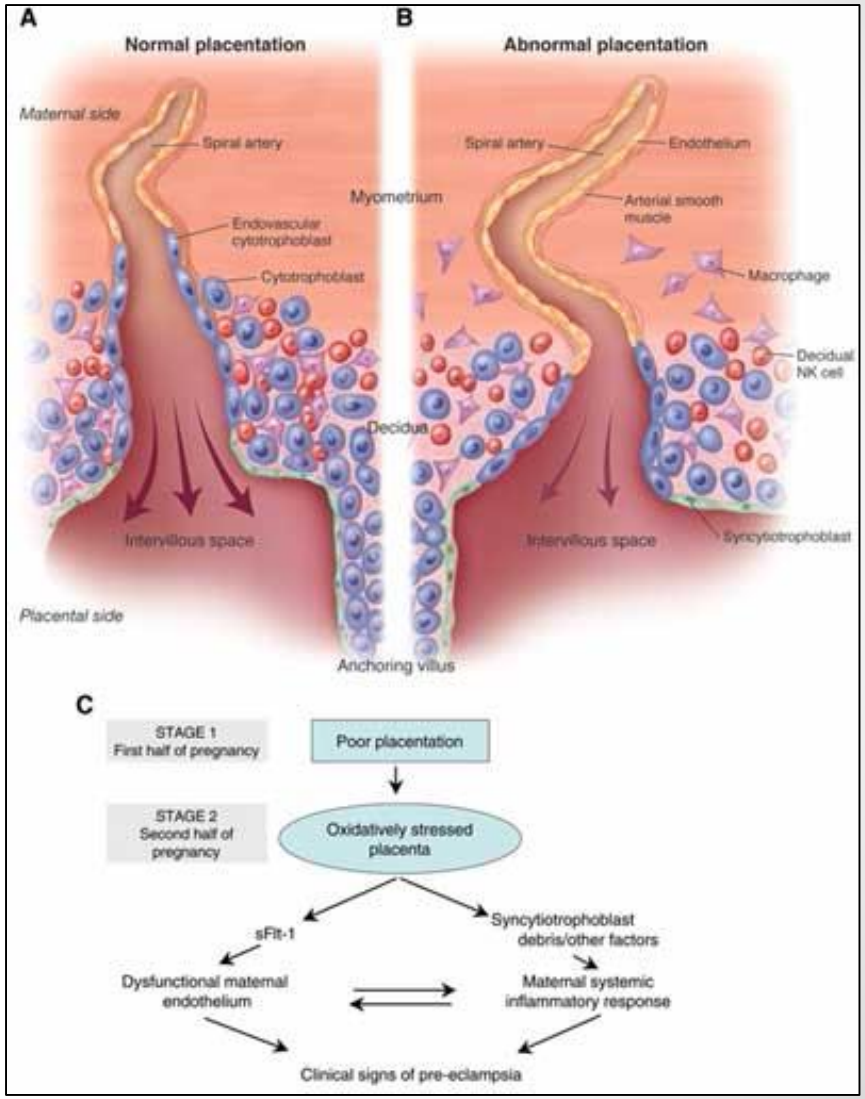
- **7.8%** of pregnant women had one or more high risk factors for preeclampsia
- **21.3%** of pregnant women **≥ 2** moderate risk factors, **5.1%** had **≥ 3** moderate risk factors

Two-Stage Model of Preeclampsia

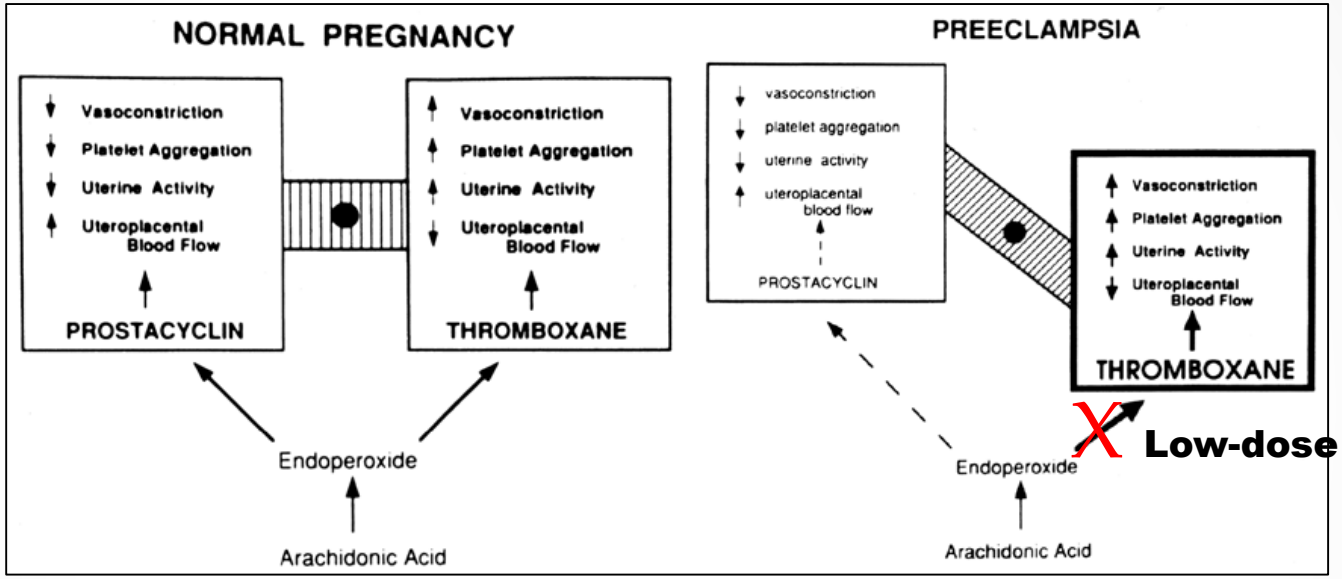
Stage 1
Reduced placental perfusion secondary to abnormal placentation

Interacts with maternal factors (genetic, behavioral, environmental)

Stage 2
Maternal syndrome of preeclampsia



How Does Aspirin Prevent Preeclampsia?



Preeclampsia is associated with increased thromboxane : prostacyclin ratio

Low doses of aspirin (60-150 mg/day) preferentially inhibit thromboxane production without significantly affecting prostacyclin production

In one study, thromboxane to prostacyclin ratio decreased 35% after 3 weeks of LDA therapy, and increased 51% over the same period in the control group (Schiff et al. NEJM 1989)

THE LANCET, JULY 1, 1978

ASPIRIN FOR THE TREATMENT OF RECURRENT TOXÆMIA

Sacramento Medical Center,
Sacramento, California 95817, U.S.A.

R. C. GOODLIN
H. O. HAESSLEIN

Glenn Memorial Hospital
Willows, California

J. FLEMING

1978:

Case Report, Lancet

1994:

CLASP (Collaborative Low-dose Aspirin Study in Pregnancy), Lancet

1998:

MFMU Trial, NEJM

2007:

PARIS Collaborative Group, Meta-analysis of individual patient data

2007:

Cochrane Review

2014:

Systematic Evidence Review for the USPSTF

This online-first version will be replaced with a final version when it is included in the issue. The final version may differ in small ways.

Annals of Internal Medicine | REVIEW

Low-Dose Aspirin for Prevention of Morbidity and Mortality From Preeclampsia: A Systematic Evidence Review for the U.S. Preventive Services Task Force

Jillian T. Henderson, PhD, MPH; Evelyn P. Whitlock, MD, MPH; Elizabeth O'Connor, PhD; Caitlyn A. Senger, MPH; Jamie H. Thompson, MPH; and Maya G. Rowland, MPH

Study Selection: Comprehensive search of RCTs that used a risk selection approach aimed at achieving a sample of **women at high risk for preeclampsia (**Preeclampsia incidence was **8% to 30%** in included studies)

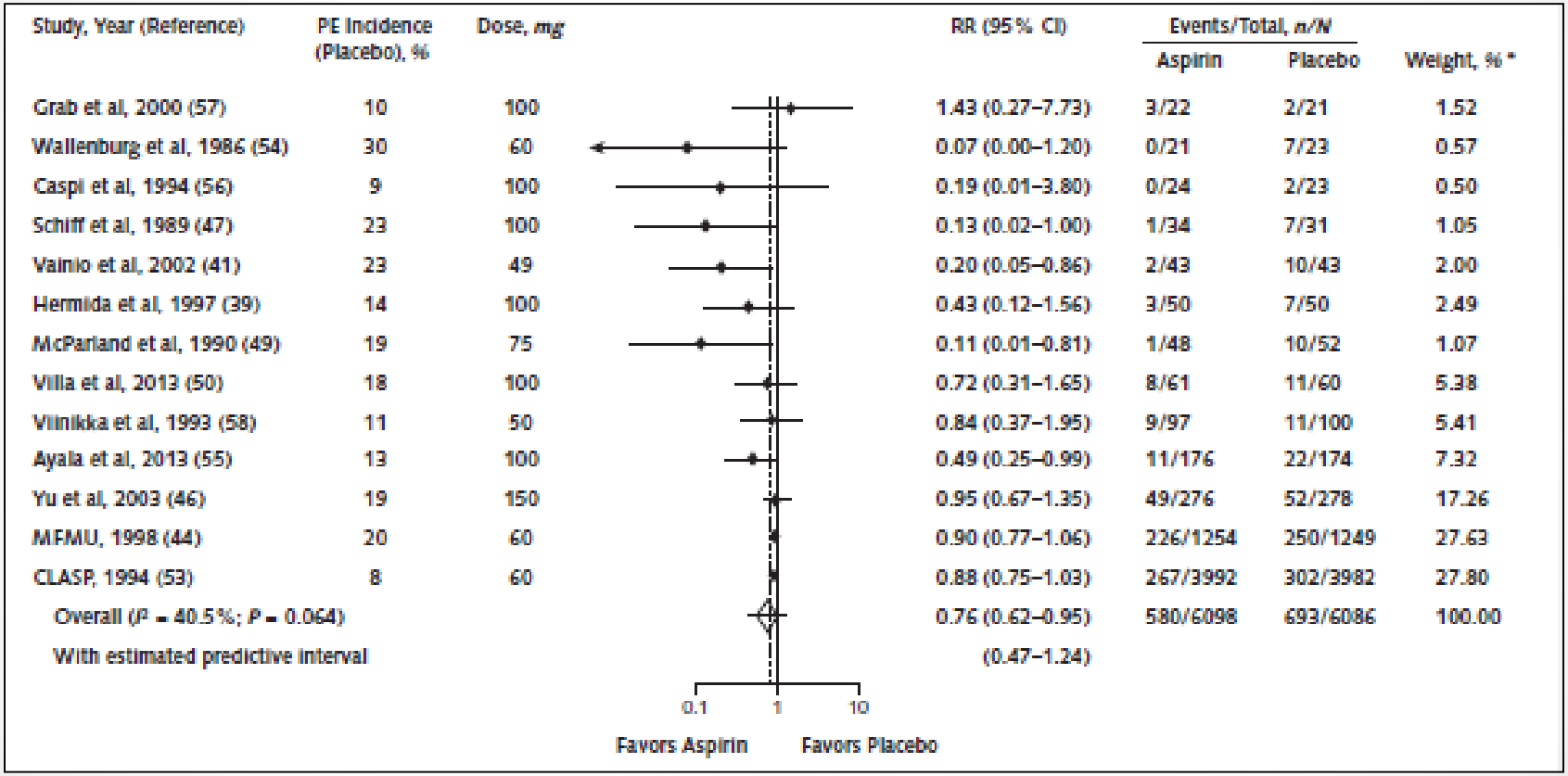
Included:

- 13 RCTs reporting preeclampsia incidence (12,184 women)
- 21 studies to evaluate maternal, perinatal and developmental harms with antenatal aspirin use

All trials **initiated aspirin treatment after 12 weeks**

Daily aspirin doses ranged from **50 to 150 mg** (11,949 women = 60 mg)

Benefits of Aspirin: Preeclampsia Risk



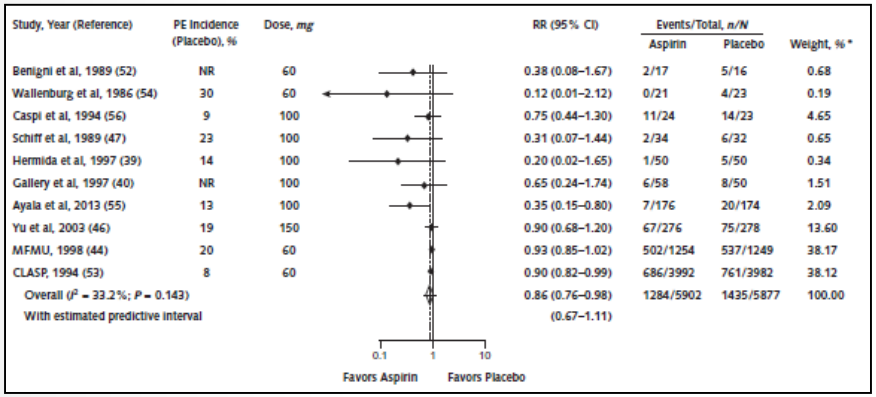
Study, Year (Reference)	PE Incidence (Placebo), %	Dose, *mg*	RR (95% CI)	Events/Total, *n/N*		
				Aspirin	Placebo	Weight, %*
Grab et al, 2000 (57)	10	100	1.43 (0.27–7.73)	3/22	2/21	1.52
Wallenburg et al, 1986 (54)	30	60	0.07 (0.00–1.20)	0/21	7/23	0.57
Caspi et al, 1994 (56)	9	100	0.19 (0.01–3.80)	0/24	2/23	0.50
Schiff et al, 1989 (47)	23	100	0.13 (0.02–1.00)	1/34	7/31	1.05
Vainio et al, 2002 (41)	23	49	0.20 (0.05–0.86)	2/43	10/43	2.00
Hermida et al, 1997 (39)	14	100	0.43 (0.12–1.56)	3/50	7/50	2.49
McParland et al, 1990 (49)	19	75	0.11 (0.01–0.81)	1/48	10/52	1.07
Villa et al, 2013 (50)	18	100	0.72 (0.31–1.65)	8/61	11/60	5.38
Viinikka et al, 1993 (58)	11	50	0.84 (0.37–1.95)	9/97	11/100	5.41
Ayala et al, 2013 (55)	13	100	0.49 (0.25–0.99)	11/176	22/174	7.32
Yu et al, 2003 (46)	19	150	0.95 (0.67–1.35)	49/276	52/278	17.26
MFMU, 1998 (44)	20	60	0.90 (0.77–1.06)	226/1254	250/1249	27.63
CLASP, 1994 (53)	8	60	0.88 (0.75–1.03)	267/3992	302/3982	27.80
Overall (I^2 = 40.5%; P = 0.064)			0.76 (0.62–0.95)	580/6098	693/6086	100.00
With estimated predictive interval			(0.47–1.24)			

24% risk reduction (RR 0.76, 95% CI 0.62 to 0.95)
13 trials (12,184 women)

Benefits of Aspirin:

Preterm Birth

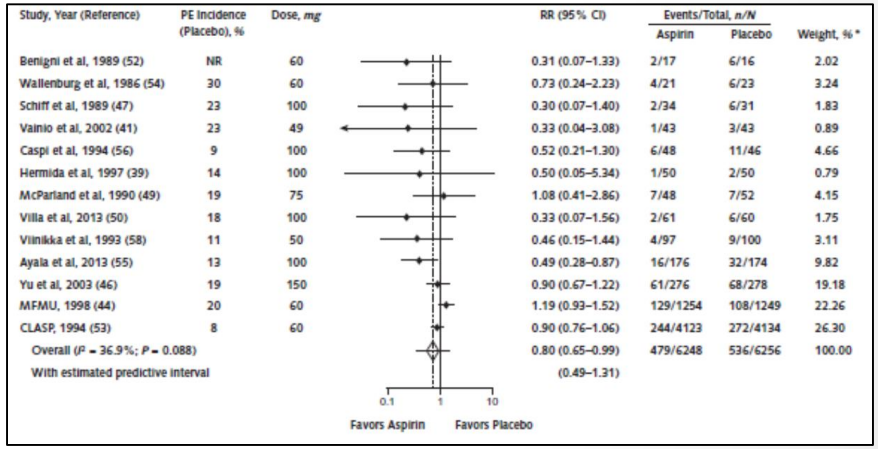
14% risk reduction
(RR 0.86, 95% CI 0.76 to 0.98)
10 trials (11,779 women)



Study, Year (Reference)	PE Incidence (Placebo), %	Dose, *mg*	RR (95% CI)	Events/Total, *n/N*		Weight, %*
				Aspirin	Placebo	
Benigni et al, 1989 (52)	NR	60	0.38 (0.08–1.67)	2/17	5/16	0.68
Wallenburg et al, 1986 (54)	30	60	0.12 (0.01–2.12)	0/21	4/23	0.19
Caspi et al, 1994 (56)	9	100	0.75 (0.44–1.30)	11/24	14/23	4.65
Schiff et al, 1989 (47)	23	100	0.31 (0.07–1.44)	2/34	6/32	0.65
Hermida et al, 1997 (39)	14	100	0.20 (0.02–1.65)	1/50	5/50	0.34
Gallery et al, 1997 (40)	NR	100	0.65 (0.24–1.74)	6/58	8/50	1.51
Ayala et al, 2013 (55)	13	100	0.35 (0.15–0.80)	7/176	20/174	2.09
Yu et al, 2003 (46)	19	150	0.90 (0.68–1.20)	67/276	75/278	13.60
MFMU, 1998 (44)	20	60	0.93 (0.85–1.02)	502/1254	537/1249	38.17
CLASP, 1994 (53)	8	60	0.90 (0.82–0.99)	686/3992	761/3982	38.12
Overall (I^2 = 33.2%; P = 0.143)			0.86 (0.76–0.98)	1284/5902	1435/5877	100.00
With estimated predictive interval			(0.67–1.11)			

IUGR

20% risk reduction
(RR 0.80, 95% CI 0.65 to 0.99)
13 trials (12,504 women)



Study, Year (Reference)	PE Incidence (Placebo), %	Dose, *mg*	RR (95% CI)	Events/Total, *n/N*		Weight, %*
				Aspirin	Placebo	
Benigni et al, 1989 (52)	NR	60	0.31 (0.07–1.33)	2/17	6/16	2.02
Wallenburg et al, 1986 (54)	30	60	0.73 (0.24–2.23)	4/21	6/23	3.24
Schiff et al, 1989 (47)	23	100	0.30 (0.07–1.40)	2/34	6/31	1.83
Vainio et al, 2002 (41)	23	49	0.33 (0.04–3.08)	1/43	3/43	0.89
Caspi et al, 1994 (56)	9	100	0.52 (0.21–1.30)	6/48	11/46	4.66
Hermida et al, 1997 (39)	14	100	0.50 (0.05–5.34)	1/50	2/50	0.79
McParland et al, 1990 (49)	19	75	1.08 (0.41–2.86)	7/48	7/52	4.15
Villa et al, 2013 (50)	18	100	0.33 (0.07–1.56)	2/61	6/60	1.75
Viinikka et al, 1993 (58)	11	50	0.46 (0.15–1.44)	4/97	9/100	3.11
Ayala et al, 2013 (55)	13	100	0.49 (0.28–0.87)	16/176	32/174	9.82
Yu et al, 2003 (46)	19	150	0.90 (0.67–1.22)	61/276	68/278	19.18
MFMU, 1998 (44)	20	60	1.19 (0.93–1.52)	129/1254	108/1249	22.26
CLASP, 1994 (53)	8	60	0.90 (0.76–1.06)	244/4123	272/4134	26.30
Overall (I^2 = 36.9%; P = 0.088)			0.80 (0.65–0.99)	479/6248	536/6256	100.00
With estimated predictive interval			(0.49–1.31)			

Aspirin Dose/Timing

Aspirin Dose:

The estimated risk reduction was greater in studies using higher doses of aspirin, but the difference in effect size was not significant

> 75 mg: RR 0.58, (95% CI 0.36 to 0.95)

< 75 mg: RR 0.85, (95% CI 0.68 to 1.05)

(Some MFM providers now recommending 162 mg daily)

Timing of Initiation:

No evidence that timing of aspirin (<16 weeks) had different effects

Safety of Aspirin

No evidence of perinatal harms from LDA exposure during pregnancy, including average-risk study populations

Perinatal Death: 10 trials, 12,240 women
- Possible reduced risk, RR 0.81, 95% CI 0.65 to 1.01

Placental Abruption: 11 trials, 23,332 women
- No significant increase, RR 1.17, 95% CI 0.93 to1.48

PPH: 7 trials, 22,616 women
- No treatment effect, RR 1.02, 95% CI 0.96 to 1.09

Intracranial Hemorrhage: 10 trials
- All but 1 trial reported more events in the placebo group, RR 0.84, 95% CI 0.61 to 1.16

***Long Term Follow-Up:** CLASP Trial, 1994 (9364 women)
- No difference in developmental outcomes in infants up to **18 months** (gross motor development, height/weight, hospital visits)

Contraindications to aspirin therapy: active PUD, recent GI bleed, aspirin allergy, bleeding disorders, renal failure, severe liver disease, thrombocytopenia

Original Research

A Cost–Benefit Analysis of Low-Dose Aspirin Prophylaxis for the Prevention of Preeclampsia in the United States

Erika F. Werner, MD, Alisse K. Hauspurg, MD, and Dwight J. Rouse, MD

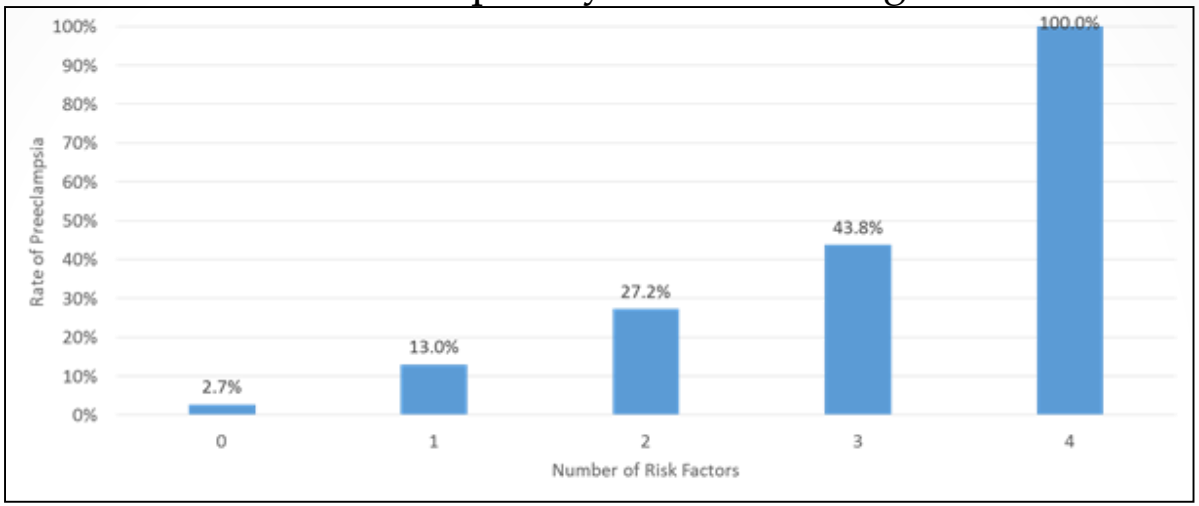
Decision model to evaluate approaches to aspirin prophylaxis applied to a hypothetical cohort of 4 million pregnant women in the US:

- 81 mg/day, started after first prenatal visit, 77% compliance
- Included costs associated with aspirin, preeclampsia, preterm birth and potential aspirin-associated adverse effects

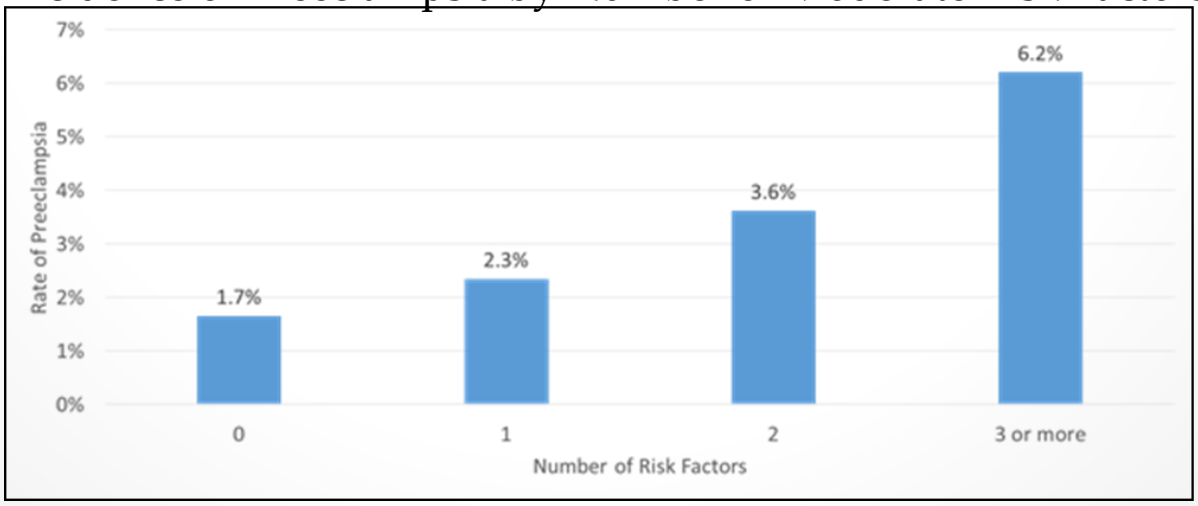
1. No prophylaxis: rate of PE 4.2%
2. Prophylaxis per ACOG/USPSTF: **23.5%** of pregnant women receive LDA, **rate of PE 3.83%,** saves **$377.4 million**
3. Universal aspirin prophylaxis: **rate of PE 3.81%,** saves **$365 million**

What about Vermont?

Incidence of Preeclampsia by Number of High Risk Factors



Incidence of Preeclampsia by Number of Moderate Risk Factors



Recommendations:
Low-dose Aspirin for Preeclampsia Prevention

Table. **Clinical Risk Assessment for Preeclampsia***

Risk Level	Risk Factors	Recommendation
High†	History of preeclampsia, especially when accompanied by an adverse outcome Multifetal gestation Chronic hypertension Type 1 or 2 diabetes Renal disease Autoimmune disease (i.e., systemic lupus erythematous, the antiphospholipid syndrome)	Recommend low-dose aspirin if the patient has ≥1 of these high-risk factors
Moderate‡	Nulliparity Obesity (body mass index >30 kg/m^2) Family history of preeclampsia (mother or sister) Sociodemographic characteristics (African American race, low socioeconomic status) Age ≥35 y Personal history factors (e.g., low birthweight or small for gestational age, previous adverse pregnancy outcome, >10-y pregnancy interval)	Consider low-dose aspirin if the patient has several of these moderate-risk factors§
Low	Previous uncomplicated full-term delivery	Do not recommend low-dose aspirin

* Includes only risk factors that can be obtained from the patient medical history. Clinical measures, such as uterine artery Doppler ultrasonography, are not included.
† Single risk factors that are consistently associated with the greatest risk for preeclampsia. The preeclampsia incidence rate would be approximately ≥8% in a pregnant woman with ≥1 of these risk factors (1, 5).
‡ A combination of multiple moderate-risk factors may be used by clinicians to identify women at high risk for preeclampsia. These risk factors are independently associated with moderate risk for preeclampsia, some more consistently than others (1).
§ Moderate-risk factors vary in their association with increased risk for preeclampsia.

Acknowledgements

Many thanks to Maureen Matthews for OBNet data acquisition and to Rachel Wallace-Brodeur for her work in data organization and analysis.

Questions?

This webinar was recorded and will be available to view within 5 days at https://vchipwebinars.wordpress.com

Vermont Child Health Improvement Program
UNIVERSITY OF VERMONT LARNER COLLEGE OF MEDICINE

OB/GYN Webinar Series 2017-2018

Upcoming Webinar:

Tuesday, May 8th, 12-1pm EST

Topics:

- -Tranexamic Acid for Postpartum Hemorrhage

- -Preconception Health and Well Women Care

- Gestational Diabetes

Webinar Registration: https://vchipwebinars.wordpress.com
Contact: Amanda.slater@uvmhealth.org

The University of Vermont
LARNER COLLEGE OF MEDICINE

VERMONT
DEPARTMENT OF HEALTH

THE
University of Vermont
MEDICAL CENTER

Thank you!