Doula Resource Training



Agenda

Greetings & Welcome

State Perinatal Quality Collaborative

Supporting clients with Preeclampsia & Hypertension

POST BIRTH WARNING Signs & Resources

Trauma Informed Care for Clients

Q&A

Closing Remarks



State Perinatal Quality Collaborative

Established in 2008

Advance health and improve outcomes

Over 30 QI projects

Current Projects: Cardiac Conditions of Obstetric Care, Necrotizing Enterocolitis & Best for ALL

Trainings/educational opportunities, data management & analysis & Community Resource Council



Supporting Clients with Preeclampsia & Hypertension



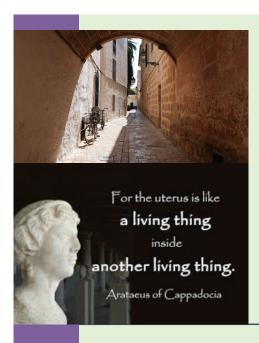
What you will learn

- Historical perspective
- Basic pathophysiology of pre-eclampsia and spectrum of disease
- Pre-eclampsia screening and diagnosis
- Signs and symptoms
- How to Manage and when to refer for high level of care
- Monitoring
- Doula support role
- Cultural considerations and myth busting



What is Pre-eclampsia Historical Perspective



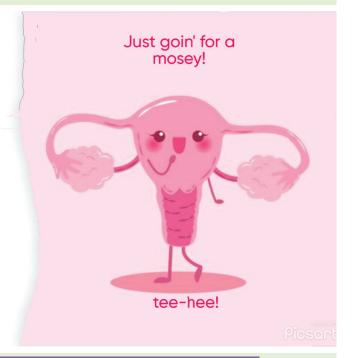


Preeclampsia: The Disease of Theories

- Historical Perspective
- Disease of convulsions in pregnancy described in ancient text from Africa, China and Europe
- Eclampsia comes from the Greek word meaning "lightening"
- 4th and 5th Century
 - Greeks and Egyptians believed the womb could move around in the body
 - An "unhappy uterus" was the cause of many ailments including preeclampsia
 - Women were either wet or dry and a dried-up uterus was in search of moisture
 - 4 types of convulsions-head, stomach, uterus or chilled extremities



Wandering Uterus



Preecla mpsia

Accounts for 1 in 5 maternal deaths

Accounts for 1 in 7 premature births

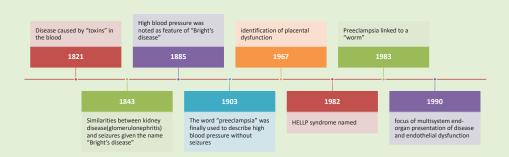
Incidence of preeclampsia is increasing

Disparities in maternal outcome

Leading cause of maternal death



Progression of Thought





Middle ages

• Charms, faith healing and prayers

17-18th Century

- Blood letting
- Opiates
- Meat restriction
- Development of lying-in hospitals

18-19th Century

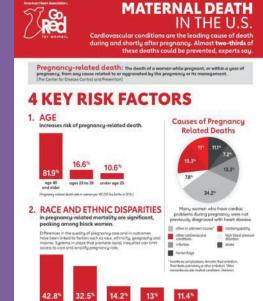
- Prevention of Eclampsia
 - Dark Room
 - Large Doses of opiates
 - Delay of Delivery



Treatment of Pre-eclampsia over time

- · 20th Century
 - 1906-Magnesium sulfate introduced
 - Recognition that delivery "cured" the disease
 - Since 1960's-very little change
 - Routine prenatal care
 - Hospitalization
 - Bedrest
 - Evaluation of symptoms
 - Blood pressure management
 - 21st Century
 - Focus on 2 stages of disease
 - -Abnormal implantation
 - -Maternal response
 - -Re-thinking "toxins"-angiogenic factors





HIGH BLOOD PRESSURE
 (or hypertension) rates during pregnancy have increased substantially among women hospitalized for delivery in the U.S. since 1993.

Hypertension on the rise. Rates of chronic hypertension — having high blood pressure even before pregnancy — hav also increased.

The dangers:
Hypertensive disorders in pregnancy include
Hypertensive disorders in pregnancy include
preeclampsia and can make it harde
for a fetus to get enough oxygen and nutrients to gre
increasing the risk of an early delivery.



OBESITY
is a major risk factor and could account for nearly
one-third of a steep increase in U.S. pregnancyrelated deaths.

Maternal mortality increases with BMI, Pregnant women with a BMI at or above 30 faced 3.7 times the risk of pregnancy-related death than other women. Study of Michigan cases in 2004-06 found.]





CARDIOVASCULAR DISEASE accounts for more than **one-fourth** of maternal mortality in the U.S.

GoRedForWomen.org/pregnancy

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Pathophysiology



Cardiovascular Physiology

- Increase in blood volume of 30-50%
- Increase in cardiac output of 30-50%
 - Increase begins in the first trimester (7 weeks) peaks at 20-24 weeks gestation
- Heart rate increases by 10-20 bpm
- Systemic vascular resistance is decreased by 30%
- Hypercoagulable state
- · Marked fluctuations in volume status during labor and delivery



Hemodynamic Adaptations

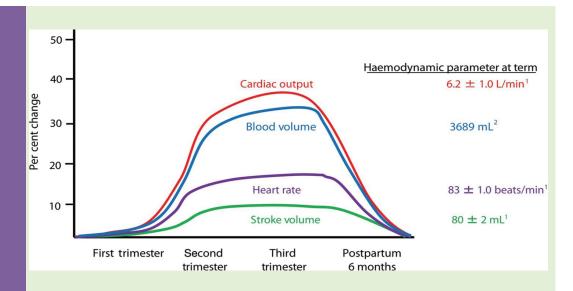
- Blood pressures
 - Decreases as early as 6-8 weeks gestation over preconception values
 - Nadir occurs in the second trimester
 - Diastolic and mean arterial pressure decrease more than systolic blood pressure



Blood Pressure in Pregnancy

- BPs will fall during 2nd and early 3rd trimester, return to baseline at term
 - Slight increase noted in labor
- · Maternal positioning may influence measurement of BP
 - BP less when taken with patient on side
 - BP may improve initially in patients placed on bedrest $\,$
- Patients with pre-existing HTN will exhibit greater percentage drop in BP







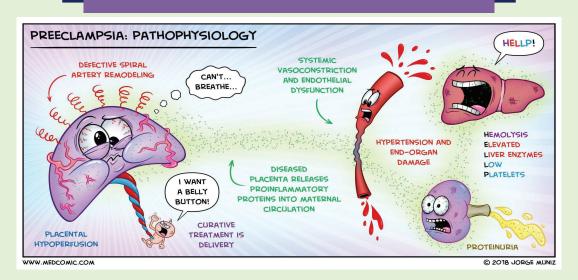
Hypertensive disorders in pregnancy 1,2 Hypertensive disorders of pregnancy PΕ GH chrHTN with superimposed PE chrHTN BP elevation at > 20 weeks Chronic hypertension in Hypertension that predates BP elevation at > 20 weeks gestation in the absence of association with PE gestation in the presence of pregnancy proteinuria and/or other proteinuria or other systemic systemic findings^a findings^a PE without severe features HELLP syndrome Eclampsia Hypertension with proteinuria Often characterised by The presence of new-onset Hemolysis, elevated liver or other systemic findings^a additional complications and grand mal seizures in a enzymes, low platelet count progressive deterioration of person with PE maternal and fetal conditions^b TIPQC

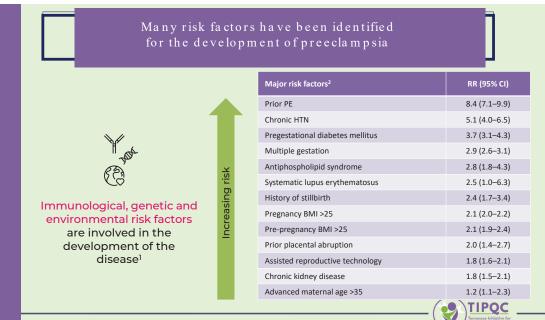
"Thrombocytopenia, impaired liver function, the new development of renal insufficiency, pulmonary edema or new-onset cerebral or visual disturb infarction, stroke, acute respiratory distress syndrome, coagulopathy, severe renal failure, and retinal injury. cht/HTNL, chronic hypertension, PE, preedampsia.

1. American College of Obstetricians and Cynecologists. Obstet Cynecod 2013(12:21122-1131

2. American College of Obstetricians and Cynecologists. Obstet Cynecod 2020(315:22127-6260.

Preeclampsia is a placental disease





Preeclampsia affects many organs of the body



PE can affect the mother's brain, vasculature, lungs, liver and kidney, as well as causing placental dysfunction1

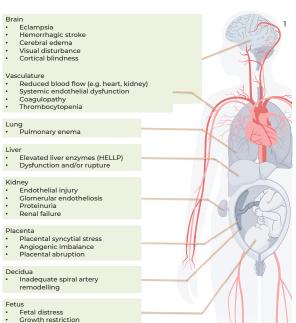


The placenta is central to the development of PE²



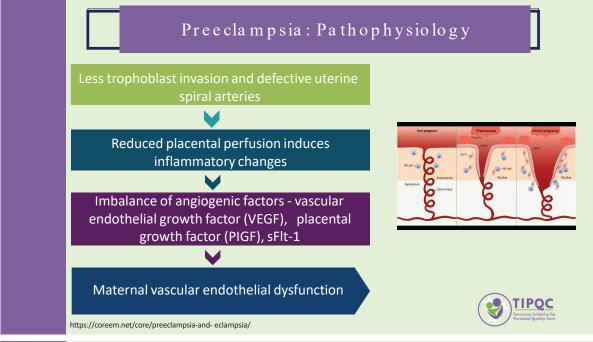
Delivery of the placenta can remove most signs and symptoms of PE;

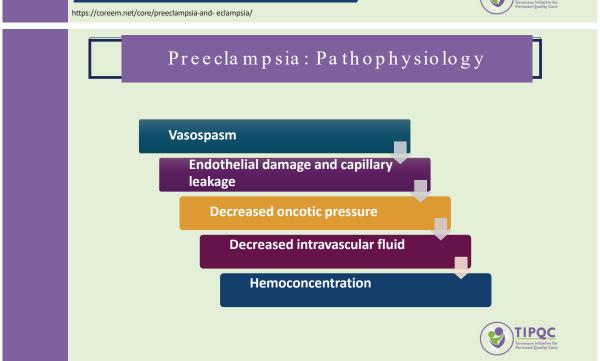
however, in some cases, PE can persist after delivery^{3,4}



PE, preclampsia.

1. Dimitriadis E, et al. Nat Rev Dis Primers 2023;9:8; 2. Rana S, et al. Circ Res 2019;124:1094-1112; 2. American College of Obstetricians and Cynecologists. Obstet Cynecol 2013;122:1122-1131; 3. Goel A, et al. Circulation 2015;132:1726-1733.





Preeclampsia: Pathophysiology

Phenotype	HR	SV	CO	TPR
High Output Hypertension	\uparrow	\uparrow	\uparrow	\downarrow
High Resistance Hypertension	\downarrow	\downarrow	\downarrow	\uparrow

<u>High Cardiac Output</u> <u>Hypertension:</u>

- Late onset preeclampsia
- Normal fetal growth
- · More favorable outcomes

<u>High Resistance</u> <u>Hypertension:</u>

- Early onset Preeclampsia
- Fetal Growth Restriction
- · Worse perinatal outcomes



BMI, body mass index; CI, confidence interval; HTN, hypertension; PE, preeclampsia; RR, relative risk. 1. Uzan J. et al. Vasc Health Risk Manag 2011:7:467–474; 2. Rana S. et al. Circ Res 2019:124:1094–1112.

Screening and Diagnosis



Chronic Hypertension

Preexisting diagnosis

- 1) normal (systolic blood pressure less than 120 mm Hg and diastolic blood pressure less than 80 mm Hg)
- 2) elevated (systolic blood pressure of 120–129 mm Hg and diastolic blood pressure less than 80 mm Hg)
 - 3) stage 1 hypertension (systolic blood pressure of 130–139 mm Hg or diastolic blood pressure of 80–89 mm Hg)-AHA
- 4) stage 2 hypertension (systolic blood pressure of 140 mm Hg or more or diastolic blood pressure of 90 mm Hg or more) ACOG



New onset hypertension prior to 20 weeks gestation Blood pressure of $\geq 140/90$ Gesta tional • 4 hours apart on 2 separate occasions Hypertension No proteinuria NOTE: More than 50% will develop signs or symptoms of preeclampsia • More likely if diagnosis prior to 32 weeks gestation New onset hypertension after 20 weeks gestation -BP-140/90 on 2 separate occasions 4 hrs. apart -300 mg protein in 24 hr. specimen -Edema or weight gain OR in the absence of Preeclampsiaproteinuria Ecla m p s ia Oliguria Headache; visual disturbances • Epigastric pain, nausea Pulmonary edema • HELLP • Severe features -BP greater than or equal to 160/110 at least 6hr apart, pt at bed rest Preeclampsia--Oliguria Ecla mpsia -Headache; visual disturbances - Epigastric pain, nausea -Pulmonary edema -HELLP



Patient Education





BP Standard Assessment

- Seated position w/ legs flat, bare upper arm after brief period of rest (preferably 5-10 minutes)
- Manual sphygmomanometer w/ appropriate cuff
 - Use 1st and last audible (Korotkoff 1 and V) sound recorded to nearest 2mmHg
 - Perform 2 additional readings at least 1 minute apart
 - Record HIGHEST reading
- If BP ≥ 140/90 mmHg or higher, repeat within 30 minutes- if still elevated, evaluate patient for preeclampsia
 - -Do not reposition patient to either side





Hypertensive
Emergency
In
Pregnancy

Systolic BP of 160 mm Hg or greater—2 readings 15 minutes apart

OR

- Diastolic BP of 110 mm Hg or greater2 readings 15 minutes apart
- Prompt recognition and treatment improves outcomes



Treatment of Acute Severe Hypertension In Pregnancy Goal is to treat within 30-60 minutes of diagnosis

2 blood pressures meeting criteria



ACOG Evidenced based protocols



Management of Hypertensive Emergencies



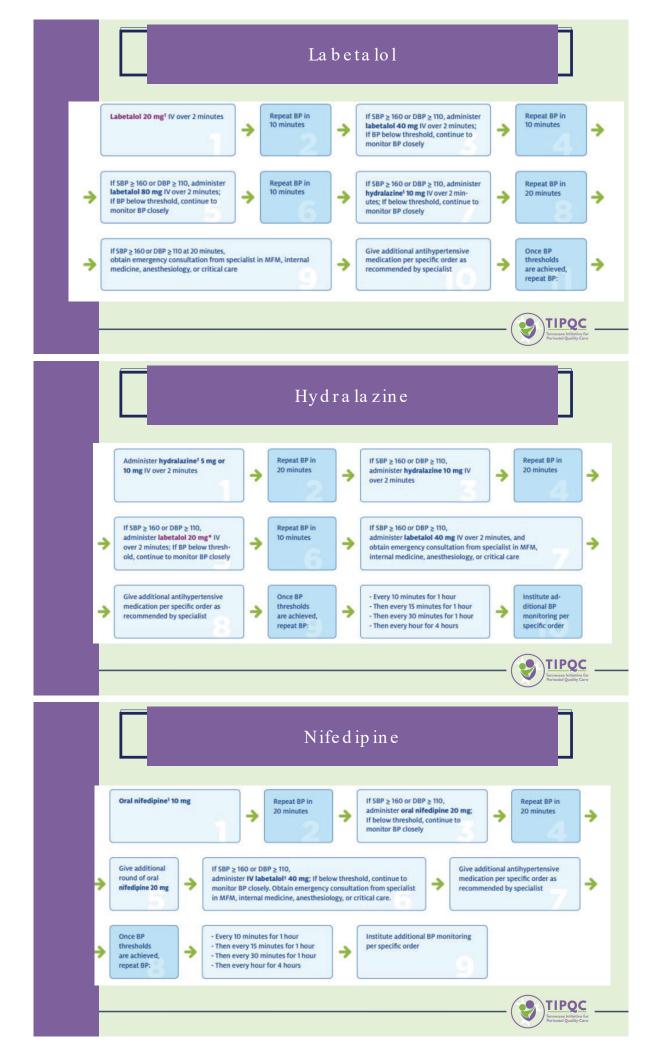
- Goals
 - Prevent end-organ damage
 - Avoid eclamptic seizure
 - Immediate and prompt treatment
 - 30 to 60 minutes after diagnosis
- Note:
 - Returning BP to normal should not be a goal



Management of Hypertensive Emergencies

Standardized Order sets





• Onset of action 1-2 minutes Management • Onset of action 10-20 minutes Hypertensive Emergencies • Onset of action 5-10 minutes Onset of action-immediately Neuroprophylaxis -Magnesium sulfate is the drug of choice Management • Dose: 4-6gm bolus, followed by 2 gms /hr Care should be taken in patients with decreased renal function **Gestational Hypertension** •37 weeks gestation **Chronic Hypertension** Delivery Recommendations •37-39 weeks Preeclampsia •Without severe features-37 weeks •With severe features-34 weeks or for accelerating disease

Myths and Misconceptions



Myths

Bedrest is a treatment

Only unhealthy people get pre-eclampsia

Pre-eclampsia is rare

Pre-eclampsia only happens in first pregnancies

Delivery is the cure for preeclampsia

Preeclampsia does not affect the baby



Role of the Doula



Preconception

- Discuss risk of pre-eclampsia with patients at risk for hypertension in pregnancy
- Identify risk factors
- Discuss preconception counseling in patients with a history of pre-eclampsia in a previous pregnancy



Antepartum

- Educate all women about pre-eclampsia and warning signs
- Discuss low dose aspirin in patients at risk for preeclampsia
- Encourage home BP monitoring
- Advise patients to seek medical attention for elevated readings



Postpartum

- Continue to encourage home BP monitoring especially the first 2 weeks postpartum
- Recognize the signs and symptoms of postpartum preeclampsia
 - Shortness of breath
 - Headache
 - Fatigue
- Encourage patients to keep postpartum followup
 - 3 days for patients with severe HTN
 - 7 days for all others
- Counsel patients regarding long term risk of cardiovascular disease and arrange follow up



Key Points

Preeclampsia is a common complication of pregnancy

Preeclampsia is NOT about blood pressure but is a multi system disease

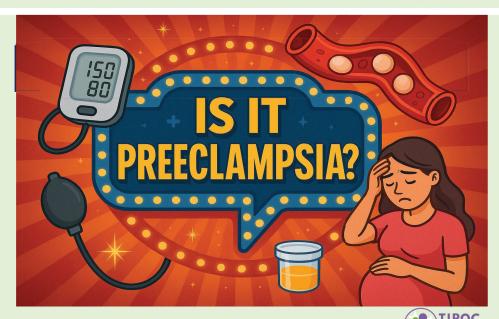
Prompt recognition and treatment of hypertension can reduce maternal and fetal complications

There are disparities in incidence and outcome in patients with preeclampsia

Dispelling myths about the disease is essential to improve outcomes

Doulas can plan an important role is recognition and management of Preeclampisa







A client at 28 weeks with blood pressure of 141/90, repeat blood pressure 1 day later is 152/90. Urine protein/creatinine ratio: 0.45



A client at 32 weeks with blood pressure of 142/89, repeat blood pressure 1 hour later is 151/72.

Urine protein/creatinine ratio: 0.45





A client at 33 weeks with blood pressure of 162/115, repeat blood pressure 2 hours later is 150/95. She also complains of a headache that is not relieved by Tylenol and Compazine.





A client at 33 weeks with blood pressure of 162/115, repeat blood pressure 20 minutes later is 150/95. She reports severe pain under her right breast.





A client at 32 weeks with blood pressure of 139/89, repeat blood pressure 6 hours later is 138/87. She also complains of a headache that is not relieved by Tylenol and Compazine.





A client at 35 weeks with blood pressure of 135/92, repeat blood pressure 6 hours later is 150/101.

24-hour urine protein level: 230.





A client at 34 weeks with blood pressure of 135/92, repeat blood pressure 4 hours later is 142/90. Urine protein/creatinine ratio is 0.25. She mentions needing to make an eye doctor appointment as recently it's been harder to see clearly with with and without her contacts.





A client at 33 weeks calls with concern about blood pressures taken at home. Initial blood pressure was 145/95, repeat blood pressure 4 hours later is 152/90. She reports blood pressure was taken with her mother's wrist cuff.



A client at 35 weeks with initial blood pressure of 145/90, repeat blood pressure 4 hours later is 152/90. She reports being told she had high blood pressure 2 years ago. She was started on an unknown blood pressure medication at that time but stopped after 6 months because blood pressure improved.



A client at 21 weeks calls reporting she was sent to the hospital by her doctor because of new onset shortness of breath. She states her initial blood pressure was 145/91, repeat blood pressure 4 hours later is 148/90. A chest X-ray was done, and she was told there is fluid in her lungs.

Prevention of Preeclampsia



Prevention

Low dose Aspirin 81 mg daily starting at 12 weeks through delivery to prevent preeclampsia and adverse perinatal outcomes.



Prevention: Candidates

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 (systemic lupus erythematosus, antiphospholipid syndrome)	Recommend low-dose aspirin if the patient ha- one or more of these high-risk factors
Moderate [‡]	Nulliparity Obesity (body mass index greater than 30) Family history of preeclampsia (mother or sister) Sociodemographic characteristics (African American race, low socioeconomic status) Age 35 years or older Personal history factors (eg. low birthweight or small for gestational age, previous adverse pregnancy outcome, more than 10-year pregnancy interval)	Consider low-dose aspirin if the patient has more than one of these moderate-risk factors
Low	Previous uncomplicated full-term delivery	Do not recommend low-dose aspirin

Prevention

- Calcium may help in calcium deprived population (not in the US)
- Vitamin E and C not recommended
- No need for salt restriction in pregnancy
- Bed rest or restriction of other physical activity not be used for primary prevention.





May 2025

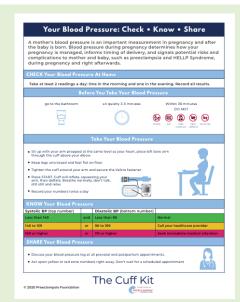
TennCare announced that pregnant and postpartum members now qualify for home monitoring blood pressure cuff kits at no cost.

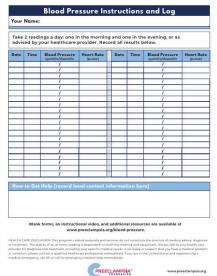




BlueCare Tennessee	United Healthcare	Wellpoint
*Home Care Delivered (HCD) 866- 332-4193 *Byram Healthcare 877-902-9726 *Aeroflow 844-867-9890	*Adapt Health 844-727-6667 *Byram Healthcare 877-902-9726 *Edge Park Medical Supply 800- 321-0591	• <u>Pomelo</u> 901-698-4232









POSTBIRTH Warning Signs & Resources



EMERGENCY SIGNS...Ca ll 9 11

- Pain in The Chest May Signal Heart or Lung Emergency
- Obstructed Breathing Shortness of Breath is Serious
- Seizures May be Postpartum Preeclampsia
- Thoughts of Harming Self or Others Mental Health Crisis



URGENT SIGNS...Call the Provider

- Heavy Bleeding Soaking 1 Pad per Hour or Passing Clots greater than the size of an egg
- Incision not Healing,
 Red, or has a Foul Smell

 May Be Infection or Breakdown
- Red, Painful, Swollen Leg

 Could be a Blood Clot
- Headache with Vision Changes Possible Preeclampsia



Effective July 1st, 2025

All Tennessee Hospitals and Birth Centers must provide postpartum mothers with information related to POSTBIRTH Warning Signs







Podcast: Episode 162





Trauma Informed Care for Clients



The CDC statistics on abuse and violence

- 1 in 4 children experiences some sort of maltreatment (physical, sexual, or emotional abuse).
- •1 in 4 women has experienced domestic violence.
- •1 in 5 women and 1 in 71 men have experienced rape
- •12% of these women and 30% of these men were younger than 10 years old when they were raped.

THE PREVALENCE OF TRAUMA





Acute Trauma

Results from exposure to a single overwhelming event.





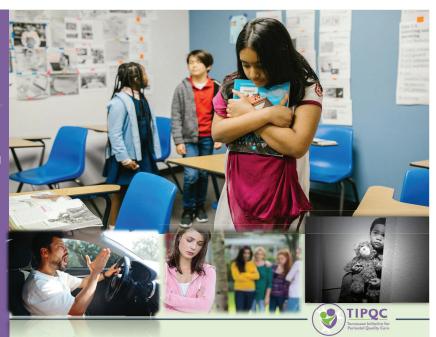






Chronic Trauma

Results from extended exposure to traumatizing situations.



Complex Trauma

Results from a single traumatic event that is devastating enough to have long-lasting effects.











A trauma-informed program, organization, or system:

Realizes

 Realizes widespread impact of trauma and understands potential paths for recovery

Recognizes

 Recognizes signs and symptoms of trauma in clients, families, staff, and others involved with the system

Responds

Responds by fully integrating knowledge about trauma into policies, procedures, and practices

Resists

· Seeks to actively Resist re-traumatization.



Risk Factors for Compassion Fatigue:

- 1. Being new to the field.
- 2. History of personal trauma or burnout.
- 3. Working long hours and/or having large caseloads.
- 4. Having inadequate support systems.











TIPQC

Vicarious/Secondary Trauma & Compassion Fatigue



Effects of Trauma on Behavior

- What type of trauma could be at play?
- What are some possible triggers?

They could be obvious or subtle.

How could you respond in a trauma-informed way?





6 tips for preventing re-traumatization

- 1.Learn
- 2.Attunement
- **3.**Causes of Behaviors
- 4.Use person-centered, strength-based thinking and language.
- 5. Provide consistency, predictability, and choice-making opportunities.
- 6. Weigh the physiological, psychological, and social risks



A Trauma-Informed Perspective Asks

"What happened to you?"

Instead of "What's wrong with you?"















































Evaluation







