Figure 1. Preeclampsia Screening Tools

A: Preeclampsia Early Recognition Tool integrated within a Maternal Early Warning System

Physiological Parameters	(Yellow) Triggers (Two or more)	(Red) Triggers (One or more)
Systolic BP, mm Hg (repeat in 15 min)	< 90 or > 155* – 159	≥ 160
Diastolic BP, mm Hg (repeat in 15 min)	105* - 109	≥ 110
Mean Arterial Pressure: mm Hg	< 65 or > 110	< 55
Heart Rate: beats per min	< 50 or 110-120	> 120
Respiratory Rate: breaths per min	< 12 or 25-30	> 30
Oxygen Saturation: % on room air	< 95	< 93
Oliguria: ml/hr for ≥ 2 hours	35-49	< 35

Severe (Red) triggers	
Altered mental status	Maternal agitation, confusion or unresponsiveness
Neurologic	Unrelenting, severe headache unresponsive to medication
Visual Disturbances	Blurred or impaired vision
Physical	Shortness of breath or epigastric pain

If "Yellow" or "Red" BP Triggers, recheck BP within 15 minutes

*Lowering the threshold for treatment should be considered at systolic BP of 155 mm Hg or diastolic BP of 105 mm Hg. See Section Borderline Severe-Range Blood Pressures

Abnormal Maternal Assessment

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If sustained for **15** minutes
OR
If the nurse is clinically concerned with patient status
REQUEST PROVIDER EVALUATION

↓

Sustained BP ≥ 160 systolic OR ≥ 110 diastolic
Initiate Hypertension in Pregnancy Protocol:
Treat blood pressure with antihypertensive therapy within 1 hour
and
Treat with Magnesium Sulfate – 4-6** gm bolus, followed by maintenance dose 1-2 gm per hour based upon renal status
**Use 6 gm if BMI > 35

↓

IF O2 Sat < 93% or RR > 24
CONSIDER PULMONARY EDEMA

This figure was adapted from the Improving Health Care Response to Preeclampsia: A California Quality Improvement Toolkit, funded by the California Department of Public Health, 2014; supported by Title V funds.

B: Preeclampsia Early Recognition Tool (PERT), page 1 of 2

ASSESS	NORMAL (GREEN)	WORRISOME (YELLOW)	SEVERE (RED)
Awareness	Alert/oriented	▸ Agitated/confused ▸ Drowsy ▸ Difficulty speaking	Unresponsive
Headache	None	▸ Mild headache ▸ Nausea, vomiting	Unrelieved headache
Vision	None	Blurred or impaired	Temporary blindness
Systolic BP (mm Hg)	100-139	≥ 155-159	≥ 160
Diastolic BP (mm Hg)	50-89	90-109	≥ 110
HR	61-110	110-120	> 120
Respiration	11-24	< 12 or 25-30	< 10 or > 30
SOB	Absent	Present	Present
O2 Sat (%)	≥ 95	< 95	< 93
Pain: Abdomen or Chest	None	▸ Nausea, vomiting ▸ Chest pain ▸ Abdominal pain	▸ Nausea, vomiting ▸ Chest pain ▸ Abdominal pain
Fetal Signs	▸ Category I ▸ Reactive NS	▸ Category II ▸ IUGR ▸ Non-reactive NST	Category III
Urine Output (ml/hr)	≥50	35-49	≤ 35 (in 2 hrs)
Proteinuria*	Trace	▸ ≥ +1** ▸ ≥ 300mg/24 hours	Protein/Creatinine Ratio (PCR) > 0.3 Dipstick ≥ 2+
Platelets	> 100	50-100	< 50
AST/ALT	< 70	> 70	> 70
Creatinine	≤ 0.8	0.9-1.1	≥ 1.1
Magnesium Sulfate Toxicity	▸ DTR +1 ▸ Respiration 16-20	Depression of patellar reflexes	Respiration < 12

B: Preeclampsia Early Recognition Tool, page 2 of 2

*Level of proteinuria is not an accurate predictor of pregnancy outcome

GREEN=NORMAL: proceed with caution

YELLOW=WORRISOME: Increase assessment frequency

1 Trigger, TO DO:
Notify provider

≥ 2 Triggers, TO DO:

- Notify charge RN
- In-person evaluation
- Order labs/test
- Anesthesia consult
- Consider magnesium sulfate
- Supplemental oxygen

**Provider should be made aware of worsening or new-onset proteinuria

RED=SEVERE: Trigger, 1 of any type listed below

1 of any type:

- Immediate evaluation
- Transfer to higher acuity level
- 1:1 staff ratio

Awareness, Headache, Visual

- Consider Neurology consult
- CT Scan
- R/O SAH/intracranial hemorrhage

BP

- Labetalol/Hydralazine/nifedipine within 30-60 min
- In-person evaluation
- Magnesium sulfate loading or maintenance infusion

Chest Pain

- Consider CT angiogram

Respiration SOB

- O2 at 10L per non-rebreather mask

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EVIDENCE GRADING
LEVEL OF EVIDENCE: B

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