APPENDIX R: PRENATAL CARE MONITORING: DOCUMENTATION OF DIAGNOSIS AND ACCURAGE ICD9 CODING

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Diagnostic accuracy

A large proportion of preeclampsia related deaths are preventable.[1,2] Of preventable deaths and near-miss morbidities a large proportion of the preventable factors are provider related including delay in diagnosis, and incomplete or inappropriate management.[3,4] Making a timely and correct diagnosis is fundamental for improving outcomes in preeclampsia. Further, an inaccurate diagnosis of preeclampsia is not uncommon. Only 45% of the ICD-9 diagnoses of preeclampsia without severe features (mild) were confirmed by chart review.[5] Half of these were gestational hypertension and the other half severe preeclampsia. This study illustrates that even in a university hospital there is significant confusion around the classification of hypertension in pregnancy. If the diagnosis is not clear or is inaccurate (i.e., she is diagnosed with preeclampsia without severe features (mild) but she actually has severe preeclampsia), it is not surprising that she may receive the wrong treatment (e.g., expectant management rather than delivery). The need for clear diagnostic accuracy is even more important in a progressive disease, such as preeclampsia, that will typically worsen as the pregnancy progresses and correspondingly requires changes in management. Because the treatment will change as the disease evolves and or the gestational age advances, the provider must appropriately reevaluate the patient to capture the evolution of the disease. The correct diagnosis based on signs and symptoms for gestational hypertension, preeclampsia without severe features (mild), severe preeclampsia, eclampsia, or superimposed preeclampsia must be made and appropriately documented. All interventions should be based on diagnosis and gestational age of the pregnancy.

Recommendations:

1. Clearly document and communicate initial diagnosis based on initial signs and symptoms.
2. Clearly document and communicate initial treatment plan, and plan for reevaluation based on initial diagnosis and gestational age.
3. Clearly document and communicate any changes in diagnosis and plan.
4. Hospital coders should review progress notes to identify most advanced stage of preeclampsia during hospital admission to code for discharge diagnosis.

Table 1: ICD-9 Codes for Hypertensive Diseases in Pregnancy and Postpartum*

ICD-9 Code	**Description**
642.0	Benign essential hypertension complicating pregnancy, childbirth, and the puerperium
642.1	Hypertension secondary to renal disease, complicating pregnancy, childbirth, and the puerperium
642.2	Other pre-existing hypertension complicating pregnancy, childbirth, and puerperium
642.3	Transient hypertension of pregnancy (gestational hypertension)
642.4	Mild or unspecified preeclampsia
642.5	Severe preeclampsia
642.6	Eclampsia
642.7	Preeclampsia or eclampsia superimposed on preexisting hypertension

*5th digits are used to denote the current episode of care (e.g. delivered, antepartum, postpartum)

Table 2: ICD-10 Codes for Hypertensive Diseases in Pregnancy and Postpartum**

ICD-10 Code	**Description**
010.01	Preexisting essential hypertension complicating pregnancy
010.02	Preexisting essential hypertension complicating childbirth
010.03	Preexisting essential hypertension complicating the puerperium
011	Preexisting hypertension with preeclampsia
013	Gestational hypertension without significant proteinuria
014	*Preeclampsia [excludes preexisting hypertension with preeclampsia (011)]: see specific codes below:*
014.0	Mild to moderate preeclampsia
014.1	Severe preeclampsia [excludes HELLP syndrome (014.2)]
014.2	HELLP syndrome (HELLP)
014.9	Unspecified preeclampsia
015.0	Eclampsia in pregnancy
015.1	Eclampsia in labor
015.2	Eclampsia in the puerperium
015.9	Eclampsia, unspecified as to time period

**Additional digits are used to denote the trimester (1, 2, 3, and 0=unspecified)

Suggested Strategies for Data Quality Improvement Opportunities

What strategies can be used to improve the quality of coding of hypertensive diseases in pregnancy? The release of new definitions for preeclampsia will create an educational opportunity that should be embraced. Small posters with the new definitions (and codes) should be placed on Labor and Delivery units and shared with the hospital coders. As a follow-up to a Grand Rounds on Preeclampsia, diagnostic criteria can be reinforced by going over a few cases at serial department meetings and asking the physicians to select the "right" diagnostic category. Finally, as a QI effort, as cases are reviewed in Perinatal Quality review Committees, attention can be focused on the correct categorization. Feedback can be quite effective.

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