## Appendix L

### Labor Duration Guidelines

### FIRST STAGE LATENT LABOR: Cervical dilation of 0-6 cm

| Normal                                      | Difficult to define due to challenge of determining the onset of labor  
|---------------------------------------------|-------------------------------------------------------------------------|
|                                             | - No range exists for the new latent labor definition of 0-6 cm per Zhang  
|                                             |   - Nulliparas (data exists only for 3-6cm): Median duration of 3.9 hours; 95th percentile  
|                                             |     17.7 hours  
|                                             |   - Multiparas (data exists only for 4-6cm): Median duration of 2.2 hours; 95th percentile  
|                                             |     10.7 hours  
|                                             | - Per Friedman: <20 hours in the nullipara, and <14 hours in the multipara from 0-3 cm  

| Prolonged                                   | - No range exists for the new latent labor definition of 0-6 cm  
|---------------------------------------------|-------------------------------------------------------------------------|
|                                             |   - Nulliparas: >18 hours from 3-6cm  
|                                             |   - Multiparas: >10.7 hours from 4-6cm  
|                                             | - Per Friedman: >20 hours in the nullipara, >14 hours in the multipara from 0-3 cm  

### FIRST STAGE ACTIVE LABOR: Cervical dilation of 6-10 cm

| Normal                                      | Nulliparas: Median duration of 2.1 hours; 95th percentile 7 hours  
|---------------------------------------------|-------------------------------------------------------------------------|
|                                             | - Multiparas: Median duration of 1.5 hours; 95th percentile 5.1 hours  

| Prolonged/Slow Slope                        | Slow progress from 6-10cm: Presence of labor progress, but duration outside the 95th percentile  
|---------------------------------------------|-------------------------------------------------------------------------|
|                                             | range of normal (>7 hours in a nullipara, or >5 hours in a multipara)  

| Arrest                                      | Dilation of 6 cm or more, with membrane rupture and absence of cervical change for:  
|---------------------------------------------|-------------------------------------------------------------------------|
|                                             | - 4 hours OR MORE of adequate UCs (MVUs >200) OR  
|                                             | - 6 hours OR MORE with Pitocin if UCs inadequate  

### SECOND STAGE LABOR: Complete dilation to birth of the neonate

| Normal                                      | Nulliparas: <3 hours WITHOUT epidural, <4 hours WITH epidural  
|---------------------------------------------|-------------------------------------------------------------------------|
|                                             | - Multiparas: <2 hours WITHOUT epidural, <3 hours WITH epidural  

| Prolonged                                   | Presence of descent, but duration outside normal range.  
|---------------------------------------------|-------------------------------------------------------------------------|
|                                             | - Nulliparas: >3 hours without epidural, >4 hours with epidural  
|                                             | - Multiparas: >2 hours without epidural, >3 hours with epidural  

| Arrest                                      | No (or minimal) descent after good pushing efforts for:  
|---------------------------------------------|-------------------------------------------------------------------------|
|                                             | - Nulliparas: >3 hours without epidural, >4 hours with epidural  
|                                             | - Multiparas: >2 hours without epidural, >3 hours with epidural  

**NOTE:** According to a 2014 retrospective cohort study by Cheng and colleagues, of 42,268 women who delivered vaginally and had normal neonatal outcomes, the 95th percentile duration of second stage labor with epidural anesthesia is more than two hours greater for both nullips and multip (as opposed to one hour) when compared to women in second stage labor without epidural use. Additionally, according to the ACOG/SMFM guidelines, a specific absolute maximum amount of time for the second stage of labor has not been identified.

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