**Supplementary Material 6-1** Estimation of LMP with presence of abortion, sonography, and preterm codes

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| **Code** | **Procedure code/KCD-7 code** | **Definition** | **Midpoint** **(weeks)** | **Estimation of LMP** |
| Abortione | R4452  | Induced abortion < 8 weeks | 4 | LMP=Date of pregnancy outcome-4\*7+1 |
| R4441 | Miscarriage, dilation & curettage <12 weeks | 6 | LMP=Date of pregnancy outcome-6\*7+1 |
| R4456 | Induced abortion 8–12 weeks | 10 | LMP=Date of pregnancy outcome-10\*7+1 |
| R4457 | Induced abortion 12–16 weeks | 14 | LMP=Date of pregnancy outcome-14\*7+1 |
| R4442 | Miscarriage, dilation & curettage ≥ 12 weeks | 16 | LMP=Date of pregnancy outcome-16\*7+1 |
| R4458 | Induced abortion 16–20 weeks | 18 | LMP=Date of pregnancy outcome-18\*7+1 |
| R4459  | Induced abortion ≥ 20 weeks | 20 | LMP=Date of pregnancy outcome-20\*7+2 |
| Sonographyf | Sonography 1st trimester (0–14 weeks) | 7 | LMP=Date of pregnancy outcome-7\*7+1 |
| E9471a | 1st trimester - General |
| EB511b | 1st trimester - General |
| EB512 b | 1st trimester - General - Pregnancy confirmation |
| Sonography 1st trimester – Target Scan (11–14 weeks) | 12.5 | LMP=Date of pregnancy outcome-12.5\*7+1 |
| E9473 a | 1st trimester - Target scan |
| EB513 b | 1st trimester - Target scan |
| EB514 b | 1st trimester - Target scan - Fetal malformation |
| Sonography 2nd and 3rd trimester (14–42 weeks) | 28 | LMP=Date of pregnancy outcome-28\*7+1 |
| E9472a | 2nd and 3rd trimester - General |
| EB515b | 2nd and 3rd trimester - General |
| EB516b | 2nd and 3rd trimester - High-risk pregnancy |
| Sonography 2nd and 3rd trimester – Target Scan (20–22 weeks) | 21 | LMP=Date of pregnancy outcome-21\*7+1 |
| E9474a | 2nd and 3rd trimester - Target scan |
| EB517b | 2nd and 3rd trimester - Target scan |
| EB518b | 2nd and 3rd trimester - Target scan - Fetal malformation |
| Pre-term delivery, specified gestational agee | O6010b | Pre-term delivery with pre-term labor (<22 weeks) | 21 | LMP=Date of pregnancy outcome-21\*7+1 |
| O6030b | Pre-term delivery without labor (<22 weeks) | 21 | LMP=Date of pregnancy outcome-21\*7+1 |
| O6011b | Pre-term delivery with pre-term labor (22–34 weeks) | 28 | LMP=Date of pregnancy outcome-28\*7+1 |
| O6031b | Pre-term delivery without labor (22–34 weeks) | 28 | LMP=Date of pregnancy outcome-28\*7+1 |
| O6012b | Pre-term delivery with pre-term labor (≥ 34 weeks) | 35.5 | LMP=Date of pregnancy outcome-35.5\*7+1 |
| O6032b | Pre-term delivery without labor (≥ 34 weeks) | 35.5 | LMP=Date of pregnancy outcome-35.5\*7+1 |
| Pre-term delivery, not specifiede | O60c | Pre-term labor or pre-term delivery | 35 | LMP=Date of pregnancy outcome-35\*7+1 |
| O601d | Pre-term delivery with pre-term labor | 35 | LMP=Date of pregnancy outcome-35\*7+1 |
| O6013b | Pre-term delivery with pre-term labor, unknown gestational age  | 35 | LMP=Date of pregnancy outcome-35\*7+1 |
| O603d | Pre-term delivery without labor | 35 | LMP=Date of pregnancy outcome-35\*7+1 |

a Codes utilized from 2013 to 2015 b Codes utilized from 2016 c Codes utilized from 2002 d Codes utilized from 2008 eAbortion procedure and pre-term delivery diagnosis codes were investigated within 12 weeks prior to the date of the pregnancy outcome. fSonography procedure codes were identified based on the earliest plausible LMP using first-trimester sonography codes, with 13 and 35 weeks before the dates of abortion and delivery/stillbirth, respectively.