

# AEPC database template for fetal patients.

Today's date	ddmmyyyy
Date of fetal echo	ddmmyyyy
Fetal Cardiologist	drop down list
Hospital where seen	drop down list
Consultation type	Live, pre-recorded, telemed live, telemed pre-recorded

## 1. Maternal / fetal demographics

Mothers name	
Fetal hospital number (if given)	
Mother's hospital number (if different)	
Mothers date of birth	
Mothers postcode	
Country	
Referring Obstetrician	
Referring source (if different)	Specialist midwife, obstetric sonographer, paediatric cardiologist, patient request, other
Referring Hospital	drop down list
Delivery Hospital (if different)	drop down list

## 2. Current pregnancy status:

drop down list:

Singleton pregnancy,	14.10.77
Twin pregnancy,	14.10.31
Monochorionic twin pregnancy,	14.10.39
Monochorionic twin pregnancy: diamniotic,	14.10.63
Monochorionic twin pregnancy: monoamniotic,	14.10.64
Dichorionic diamniotic twin pregnancy,	14.10.71
Triplet pregnancy,	14.10.32
Multiple pregnancy: more than three fetuses,	14.10.33
Pregnancy through in vitro fertilisation (IVF),	14.10.30
Conjoined twin pregnancy,	14.10.40

Last menstrual period (LMP)	ddmmyyyy
Gestation at first fetal cardiac scan	xx weeks + x days
Current gestation	xx weeks + x days
Expected Date of Delivery (EDD)	ddmmyyyy
Nuchal thickness screening Result:	Y/N x.x mm at xx weeks gestation
Serum (biochemical) screening Result:	Y/N
Fetal karyotyping	Y/N: Chorionic villous sampling (CVS), amniocentesis, cordocentesis – as drop down

### **3. Previous obstetric history – could use EPCC drop down lists for each of these for better automation, or free text**

Para / gravida:	x / x
<b>3.1 Previous liveborn children:</b>	Y/N: number & year(s)
Child with cardiac anomaly:	Y/N/unknown: specify
Child with non-cardiac anomaly:	Y/N/unknown: specify
Child with chromosomal anomaly:	Y/N/unknown: specify
<b>3.2 Previous termination of pregnancy:</b>	Y/N: number, gestation & year(s)
Fetus with cardiac anomaly:	Y/N/unknown: specify
Fetus with non-cardiac anomaly:	Y/N/unknown: specify
Fetus with chromosomal anomaly:	Y/N/unknown: specify
<b>3.3 Previous miscarriage (&lt; 24 weeks):</b>	Y/N: number, gestation & year(s)
Fetus with cardiac anomaly:	Y/N/unknown: specify
Fetus with non-cardiac anomaly:	Y/N/unknown: specify
Fetus with chromosomal anomaly:	Y/N/unknown: specify
<b>3.4 Previous stillbirth (&gt; 24 weeks):</b>	Y/N: number & year(s)
Child with cardiac anomaly:	Y/N/unknown: specify
Child with non-cardiac anomaly:	Y/N/unknown: specify
Child with chromosomal anomaly:	Y/N/unknown: specify

### **4. Reason for fetal echo screening/ referral.**

All as drop down lists: *(There are EPCC codes for most of these if wanted)*

<b>4.1 Pregnancy Risk:</b>	High risk/ Low risk
<b>4.2 Family history CHD with respect to fetus:</b>	Y/N: mother, father, sibling, cousin, co-sibling, other Specify abnormality:
<b>4.3 Maternal risk factors</b>	
Maternal disease	Y/N: Diabetes (insulin dependent, gestational, non-insulin dependent), epilepsy, phenylketonuria, collagen vascular disease, hereditary disorder, anti Ro/La antibodies, other
Maternal drug ingestion	Y/N: anti-epileptics, lithium, alcohol, warfarin, other
Maternal infection	Y/N: rubella, toxo, parvovirus, varicella, CMV, other
Maternal age > 35 years	Y/N

## 4.4 Fetal risk factors

Multiple pregnancy	Y/N, Monochorionic twins, conjoined twins, triplets, other
Increased nuchal thickness:	Y/N, <3 mm, 3-6mm, >6mm, unknown
Inadequate fetal echo views:	Y/N: high maternal BMI, adverse fetal lie, oligohydramnios, other
Suspected Fetal arrhythmia	Y/N: Sustained tachycardia, sustained bradycardia, sustained ectopics, non-sustained arrhythmia, Fetal heart rate monitoring (CTG) abnormality

## 5. Fetal Cardiovascular Findings and Abnormalities

### 5.1 Normal fetal cardiovascular findings:

Fetal cardiac abnormality not detected,	14.10.00
Fetal normal four chamber view,	14.12.01
Fetal normal great arterial views,	14.12.02
Fetal normal three vessel view,	14.12.03
Fetal right to left oval foramen flow (normal),	14.12.04
Fetal long axis of heart normal (apex at 45°),	14.12.05
Fetal cardiac size normal: cardiothoracic ratio 0.20-0.35,	14.12.06
Fetal arterial Doppler flows normal,	14.11.30
Fetal aortic arch blood flow normal,	14.11.31
Fetal umbilical arterial Doppler flow normal,	14.11.34
Fetal middle cerebral arterial flow normal,	14.11.32
Fetal venous Doppler flows normal,	14.11.60
Fetal venous Doppler flow(s) normal: inferior caval vein (IVC),	14.11.61
Fetal venous Doppler flow(s) normal: superior caval vein (SVC),	14.11.62
Fetal venous Doppler flow(s) normal: hepatic vein(s),	14.11.63
Fetal venous Doppler flow(s) normal: pulmonary vein(s),	14.11.64
Fetal venous Doppler flow(s) normal: umbilical vein,	14.11.65
Fetal venous Doppler flow(s) normal: venous duct,	14.11.66

### 5.2 Non-specific fetal cardiovascular abnormality

Y/N, drop down list:

Fetal echocardiographic abnormality,	14.10.25
Fetal structural heart abnormality,	14.10.60
Fetal abnormal 4 chamber view,	14.10.52
Fetal abnormal great arterial view,	14.10.53
Fetal abnormal three vessel view,	14.10.92
Fetal unexplained R heart dominance,	14.10.07
Fetal unexplained L heart dominance,	14.10.45
Fetal unexplained right atrial dilation,	14.10.48
Fetal restriction of oval foramen,	14.10.41
Fetal closure of oval foramen,	14.10.42
Fetal bidirectional oval foramen flow,	14.10.65
Fetal left to right oval foramen flow,	14.10.66
Fetal echogenic focus ('golf ball'),	14.10.08
Fetal long axis of heart deviated to right,	14.10.93
Fetal long axis of heart deviated to left,	14.10.94
Fetal reversal of ductal arch blood flow for gestational age,	14.11.44
Fetal reversal of aortic arch blood flow for gestational age,	14.11.42
Fetal increased middle cerebral arterial velocity for gestational age,	14.11.45
Fetal umbilical arterial flow abnormal,	14.11.49
Fetal pericardial effusion,	14.10.55

### 5.3 Fetal cardiomegaly, heart failure and function

Y/N, drop down list:

Fetal cardiomegaly,	14.10.95
Fetal cardiomegaly: cardiothoracic ratio 0.33-0.50,	14.10.96
Fetal cardiomegaly: cardiothoracic ratio > 0.5,	14.10.97
Fetal heart failure,	14.10.98
Fetal heart failure with myocardial hypertrophy,	14.11.00
Fetal heart failure due to extracardiac disease	14.10.99
Fetal heart failure with redistribution of cardiac output,	14.11.01
Fetal ventricular dysfunction,	14.11.87
Fetal right ventricular dysfunction,	14.11.88
Fetal left ventricular dysfunction,	14.11.89
Fetal biventricular dysfunction,	14.11.90
Fetal cardiac dysfunction due to noncardiac disease,	14.10.44

### 5.4 Specific Congenital and 'Acquired' Heart Disease:

**Main cardiac diagnosis:**

EPCC diagnostic list Short List

**Associated cardiac diagnoses:**

EPCC diagnostic list Short List

**Fetal arrhythmia:**

Y/N: EPCC arrhythmia section of Short List

**Fetal cardiomyopathy and tumours:**

Y/N, drop down list:

Fetal heart muscle abnormality,	14.11.80
Fetal cardiomyopathy,	14.11.81
Fetal hypertrophic cardiomyopathy,	14.11.82
Fetal hypertrophic cardiomyopathy due to maternal diabetes mellitus,	14.11.84
Fetal hypertrophic cardiomyopathy due to renal disease,	14.10.09
Fetal dilated cardiomyopathy,	14.11.85
Fetal myocarditis,	14.11.86
Fetal heart tumour: single,	10.03.40
Fetal heart tumour: multiple,	10.03.41

**Other fetal specific cardiovascular abnormality:**

Fetal pulmonary outflow obstruction due to twin-to-twin transfusion,	14.10.43
Fetal acardia,	14.10.23
Fetal pseudo-acardia (non-functional recipient heart in TRAP),	14.10.46
Fetal arterial duct narrowing/ closure,	14.10.51
Fetal arterial duct narrowing/ closure due to maternal NSAID ingestion,	14.10.47
Single umbilical artery,	09.50.01
Venous duct absent,	04.05.05

### 5.5 Fetal Cardiovascular Profile Scores (Huhta)

Normal fetal Cardiovascular Profile Score (Huhta),	14.13.50
Abnormal fetal Cardiovascular Profile Score (Huhta),	14.13.51
Fetal Cardiovascular Profile Score (Huhta) = 10,	14.13.52
Fetal Cardiovascular Profile Score (Huhta) = 9,	14.13.53
Fetal Cardiovascular Profile Score (Huhta) = 8,	14.13.54
Fetal Cardiovascular Profile Score (Huhta) = 7,	14.13.55
Fetal Cardiovascular Profile Score (Huhta) = 6,	14.13.56
Fetal Cardiovascular Profile Score (Huhta) = 5,	14.13.57
Fetal Cardiovascular Profile Score (Huhta) = 4,	14.13.58
Fetal Cardiovascular Profile Score (Huhta) = 3,	14.13.59
Fetal Cardiovascular Profile Score (Huhta) = 2,	14.13.60
Fetal Cardiovascular Profile Score (Huhta) = 1,	14.13.61
Fetal Cardiovascular Profile Score (Huhta) = 0,	14.13.62

## 5.6 Abnormal fetal venous Doppler flows

Y/N, drop down list:

Fetal venous Doppler flow(s) abnormal for gestational age,	14.10.26
Fetal venous Doppler flow(s) abnormal in Intrauterine Growth Restriction (IUGR),	14.11.70
Fetal venous Doppler flow(s) abnormal for gestational age: inferior caval vein (IVC),	14.11.71
Fetal venous Doppler flow(s) abnormal for gestational age: superior caval vein (SVC),	14.11.72
Fetal venous Doppler flow(s) abnormal for gestational age: hepatic vein(s),	14.11.73
Fetal venous Doppler flow(s) abnormal for gestational age: pulmonary vein(s),	14.11.74
Fetal venous Doppler flow(s) abnormal for gestational age: umbilical vein,	14.11.76
Fetal venous Doppler flow(s) abnormal for gestational age: venous duct,	14.11.77
Fetal venous Doppler flow(s) abnormal for gestational age: portal vein,	14.11.78

## 6. Fetal Non-Cardiovascular Findings and Abnormalities

### 6.1 Fetal Fluid Retention and Hydrops

Y/N, drop down list:

Fetal fluid retention,	14.12.20
Fetal fluid retention: 1 compartment,	14.12.21
Fetal fluid retention: 2 compartments,	14.12.22
Fetal skin oedema,	14.12.23
Fetal pleural effusion,	14.12.24
Fetal ascites,	14.12.25
Fetal hydrops,	14.10.02
Non-immune fetal hydrops,	14.10.03
Immune fetal hydrops,	14.10.04
Fetal hydrops not present,	14.12.26

### 6.2 Fetal extracardiac abnormality: Y/N – drop down list (tick as may as relevant):

Fetal abnormality	14.10.01
Omphalocele,	14.03.10
Multiple congenital malformations,	14.06.01
Duodenal stenosis/atresia,	14.03.11
Diaphragmatic hernia,	14.03.07
Tracheo-oesophageal fistula,	14.03.08
Anorectal anomaly,	14.03.14
Fetal hyperechogenic bowel,	14.10.15
Fetal mediastinal shift to right,	14.10.49
Fetal mediastinal shift to left,	14.10.50
Cystic congenital adenomatous malformation of the lung,	14.03.41
Cystic hygroma,	14.03.27
Fetal choroid plexus cysts,	14.10.16
Fetal anaemia,	14.10.17
Renal abnormality,	14.03.23
Club foot (talipes),	14.04.03
Skeletal abnormality,	14.04.01
Cleft lip / palate,	14.04.12
Cerebral anomaly,	14.03.91
Arteriovenous fistula,	09.19.01

### 6.3 Fetal chromosomal abnormality

Y/N – drop down list:

Chromosomal anomaly,	14.01.01
Trisomy 21 - Down's syndrome,	14.01.02
Trisomy 18 - Edwards' syndrome,	14.01.03
Trisomy 13 - Patau's syndrome,	14.01.04
45X0 - Turner's syndrome,	14.01.05
22q11 microdeletion – CATCH 22,	14.01.21

Other fetal soft marker

(Free text box)

## 7. Fetal status and general abnormality

Normal fetal status,	14.10.70
Intrauterine growth restriction (retardation),	14.10.34
Fetal heart rate monitoring (CTG) abnormality,	14.10.62
Twin-to-twin transfusion syndrome,	14.10.11
Twin reversed arterial perfusion (TRAP) sequence,	14.10.67

## 8. Quality of fetal echo study:

Satisfactory fetal cardiac images,	13.01.89
Inadequate fetal cardiac images,	13.01.90
Inadequate fetal cardiac images due to adverse fetal lie,	13.01.91
Inadequate fetal cardiac images due to high maternal body mass index,	13.01.92
Inadequate fetal cardiac images due to oligohydramnios,	13.01.93

## 9. Subsequent management and findings during current pregnancy

**9.1 Karyotype undertaken** Already performed, Y, N, declined

**9.2 In utero fetal cardiac changes** Y/N – drop down list:

Fetal progression of RV outflow tract obstruction,	14.10.27
Fetal progression of LV outflow tract obstruction,	14.10.28
Fetal failure of right ventricular growth,	14.10.90
Fetal failure of left ventricular growth,	14.10.91

**9.3 Abnormal fetal arterial and venous Doppler flows: insert tables as above**

**9.4 Follow-up arrangements:** None, Repeat fetal echo, Postnatal cardiac assessment

**9.5 Fetal well being during pregnancy** Normal, Small for gestational age, Large for gestational age

**9.6 Amniotic Fluid volume** Normal, oligohydramnios, polyhydramnios

**10. In utero intervention:** Y/N/offered/declined – drop down list:

Fetal transluminal catheter procedure,	12.45.70
Fetal pulmonary valvotomy,	12.45.78
Fetal balloon pulmonary valvotomy,	12.45.71
Fetal pulmonary valvar perforation & balloon dilation,	12.45.72
Fetal aortic valvotomy,	12.45.79
Fetal balloon aortic valvotomy,	12.45.73
Fetal aortic valvar perforation & balloon dilation,	12.45.74
Fetal pericardiocentesis - transcatheter,	12.45.75
Fetal balloon atrial septostomy,	12.45.76
Fetal atrial septal perforation & balloon septostomy,	12.45.77
Fetal atrial septal perforation with laser & balloon septostomy,	12.45.78
Fetal balloon atrial septostomy with stent implantation,	12.45.79
Percutaneous transamniotic approach,	12.41.10
Open transamniotic approach,	12.41.11

## 11. Pregnancy and Postnatal Outcomes:

### 11.1 Pregnancy outcome: drop down list

Liveborn,	14.10.72
Spontaneous abortion-miscarriage (< 24 wks),	14.10.35
Stillbirth (> 24 wks),	14.10.36
Termination of pregnancy procedure,	14.10.37
In utero death,	14.10.18
Selective feticide in multiple pregnancy,	14.10.73

**11.2 Delivery date / date of death:** ddmmyyyy

**11.2 Gestation at delivery / death:**

### 11.3 Neonatal demographics

Baby's name:

Baby's hospital number:

### 11.4 Neonatal outcome and diagnoses

<b>Neonatal outcome (0-1year)</b>	Neonatal death, Infant death, alive
<b>Date last seen</b>	ddmmyyyy
<b>Diagnosis confirmed</b>	Postnatally, at post mortem, not confirmed
<b>Final diagnoses/ changes</b>	EPCC diagnostic Short List
<b>Fetal echo accuracy</b>	Correct, false positive, false negative, modified prenatally, modified postnatally
<b>Post-natal intervention</b>	Y/N + drop down EPCC Short List procedure list
<b>Comments</b>	Free text