Introduction
To detect 75-80% of congenital heart defects, current prenatal screening guidelines recommend four chamber (4C) and outflow tract imaging.

In the Inland Empire Region of Southern California, USA the prenatal detection rate of critical congenital heart disease (CCHD) remains less than 50%.

Objective
To describe fetal anatomy ultrasound imaging of the heart in CCHD cases detected postnatally in this specific patient population.

Methods
Maternal consent was obtained for record release of fetal anatomy ultrasound (US) images and reports for CCHD cases detected postnatally. US images and/or reports from providers were obtained. The US date, gestational age, provider type, maternal ethnicity, insurance type and postnatal CCHD diagnosis were collected. US images or reports were reviewed for documentation of adequate visualization of the heart with 4C and outflow tract views, along with recommendations for further imaging in cases with inadequate heart visualization.

Results
• 31 mothers of neonates with CCHD detected postnatally were recruited
  • 19/31 (61%) were Hispanic
  • 24/31 (77%) had government subsidized insurance

• 25/31 mothers had a fetal anatomy US performed between 2014-2018
  • 5/6 pregnant women without fetal anatomy US screening had neonates with single ventricle CCHD
  • Majority of US 20/25 (84%) were performed between 18-24 weeks’ gestation.
  • Only 8/25 (32%) attempted to obtain 4C and outflow tract imaging.
  • Of the 8 cases where the 4C heart was poorly visualized only 1 had further imaging.

Conclusions
Despite 2013 ISUOG and AIUM Updated Guidelines for Fetal Heart Screening:
1. Many providers continue to evaluate only the 4C view, without imaging the outflow tracts
2. Further imaging is not performed if the heart is poorly visualized.

Outreach education for community providers may improve prenatal detection of CCHD in the LLUCH region by:
1. Increasing outflow tract imaging
2. Encouraging fetal echocardiography referrals for suboptimal imaging of the heart

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