INTRODUCTION
Isolated reports from selected populations suggest early diagnosis of critical congenital heart disease (cCHD) may result in improved outcome, especially in conditions where the surgical outcome is excellent; however, there are few population-based data to support this hypothesis. Furthermore, interpretation is frequently complicated by failure to account for noncardiac comorbidity that may drive outcome.

METHODS
We undertook a population-based review of newborns with cCHD born between 2006 and 2014. Cases were acquired from the National Fetal Cardiology and Cardiac Surgical databases and from the statutory reporting body for perinatal deaths. All diagnoses from 20 weeks gestation and diagnoses made at post-mortem were included. The timing of diagnosis, survival to cardiac surgery and 30 day mortality were reviewed in all livebirths where there was potential for a two-ventricle circulation. Those with syndromes, additional major noncardiac anomalies were excluded from the analysis as were those born prematurely (i.e. <35 weeks gestation).

RESULTS
Of the 436 infants born with cCHD and a potential 2 ventricle circulation, 371 did not have a syndrome or a major non-cardiac abnormality. The rate of antenatal diagnosis increased during the study period while the rate of postnatal diagnosis before and after hospital discharge declined (p=0.006). The 30 day mortality rate declined from 7.0% to 0.9% during the study period (p=0.049) and was largely confined to those who died prior to cardiac surgery. Termination of pregnancy was uncommon and did not vary over the study period.

CONCLUSIONS
There has been a significant increase in the rate of antenatal diagnosis in infants with a potential two ventricle circulation. This has been an associated decrease in 30 day mortality. It is likely there are a number of factors responsible for these findings including earlier diagnosis allowing delivery at the cardiac surgical centre, and enhanced intensive care treatment before surgery.