



# Follow-up of infants diagnosed with PFO, secundum ASD, muscular VSD, or PDA during their newborn hospitalization

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## BACKGROUND

- Neonatal echocardiography is a vital tool in the early assessment of congenital heart disease
- Many newborns have echocardiographic findings that may spontaneously resolve
- There are no guidelines for follow up of non-critical congenital heart disease in newborns

## METHODS

### Data collection:

- Retrospective chart review

### Inclusion criteria:

- Infants with an echocardiogram during their birth hospitalization and at least one echocardiogram in outpatient follow-up between 9-1-17 and 9-1-21.
- Newborns with findings limited to an ASD, PFO, muscular VSD and/or PDA

### Exclusion criteria:

- Neonates with obvious surgical heart disease or other diagnoses requiring ongoing follow up

### Study Group:

- 143/1091 babies with a birth hospitalization echo met criteria
- The most common indications were follow-up fetal echo (55) and murmur (43).
- 42/143 were discharged from follow-up in the study period.

In our group of infants diagnosed with *PFO, ASD, muscular VSD or PDA* on echocardiogram during newborn hospitalization, **none required intervention** during the time studied, but **the majority had ongoing follow up.**

## RESULTS

Diagnosis on last birth hospitalization echocardiogram	Number	Intervention N (%)	Discharged from Follow-up N (%)	# Outpatient echoes Mean (SD)	Age at last Outpatient echo (days) Mean (SD)
PFO only	21	0	7 (33.3)	1.3 (0.7)	108.0 (123.7)
ASD	31	0	9 (29.0)	1.5 (0.9)	192.7 (253.0)
ASD or PFO +VSD	21	0	8 (38.1)	1.6 (1.1)	143.1 (142.8)
ASD or PFO +VSD + PDA	21	0	2 (9.5)	1.5 (0.6)	281.1 (404.7)
ASD or PFO + PDA	43	0	15 (34.9)	1.7 (1.2)	214.7 (328.4)
VSD only	0	0	NA	NA	NA
VSD + PDA	1	0	0	3	82
PDA only	5	0	1 (20.0)	1.2 (0.4)	83.8 (32.1)
P value			0.347	0.507	0.435

## RESULTS

Diagnosis	N	Outpatient Echoes Per Baby, Mean (SD), Range	Discharge from Care, Mean (SD), Range
F/U Fetal Echo	55	1.6 (1.1), 1-7	11 (20.0%)
Murmur	49	1.6 (1.0), 1-6	15 (30.6%)
Other	39	1.5 (1.1), 1-7	16 (41.0%)
P Value		0.803	0.086

## CONCLUSIONS

- No infants referred for outpatient follow-up in pediatric cardiology for PFO, ASD, and muscular VSD and/or PDA required any intervention during the study time frame.
- The majority of infants have continued follow-up scheduled but may not require surgical or procedural intervention in the future.
- A trend to less discharge from care was seen in those babies with follow-up from fetal echocardiography, but this was not statistically significant.
- Pediatric cardiologists may be continuing to follow patients for shunts that are unlikely to be clinically significant.