

CARDIOLOGY
2025 

28th Annual Update on
Pediatric and Congenital
Cardiovascular Disease

Hope. Heal. Learn.



Global Perspectives on Pediatric and Congenital
Cardiovascular Health

Boosting prenatal diagnosis of cardiovascular disease in Mexico



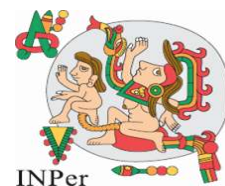
Alfonso de Jesús Martínez García, M.D.

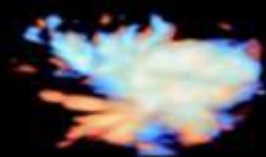
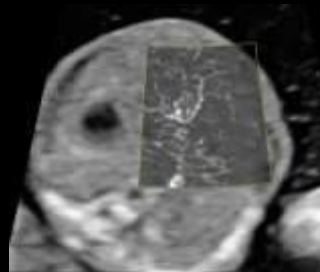
Fetal and Pediatric Cardiologist

Instituto Nacional de Perinatología

Universidad Nacional Autónoma de México

Mexico City

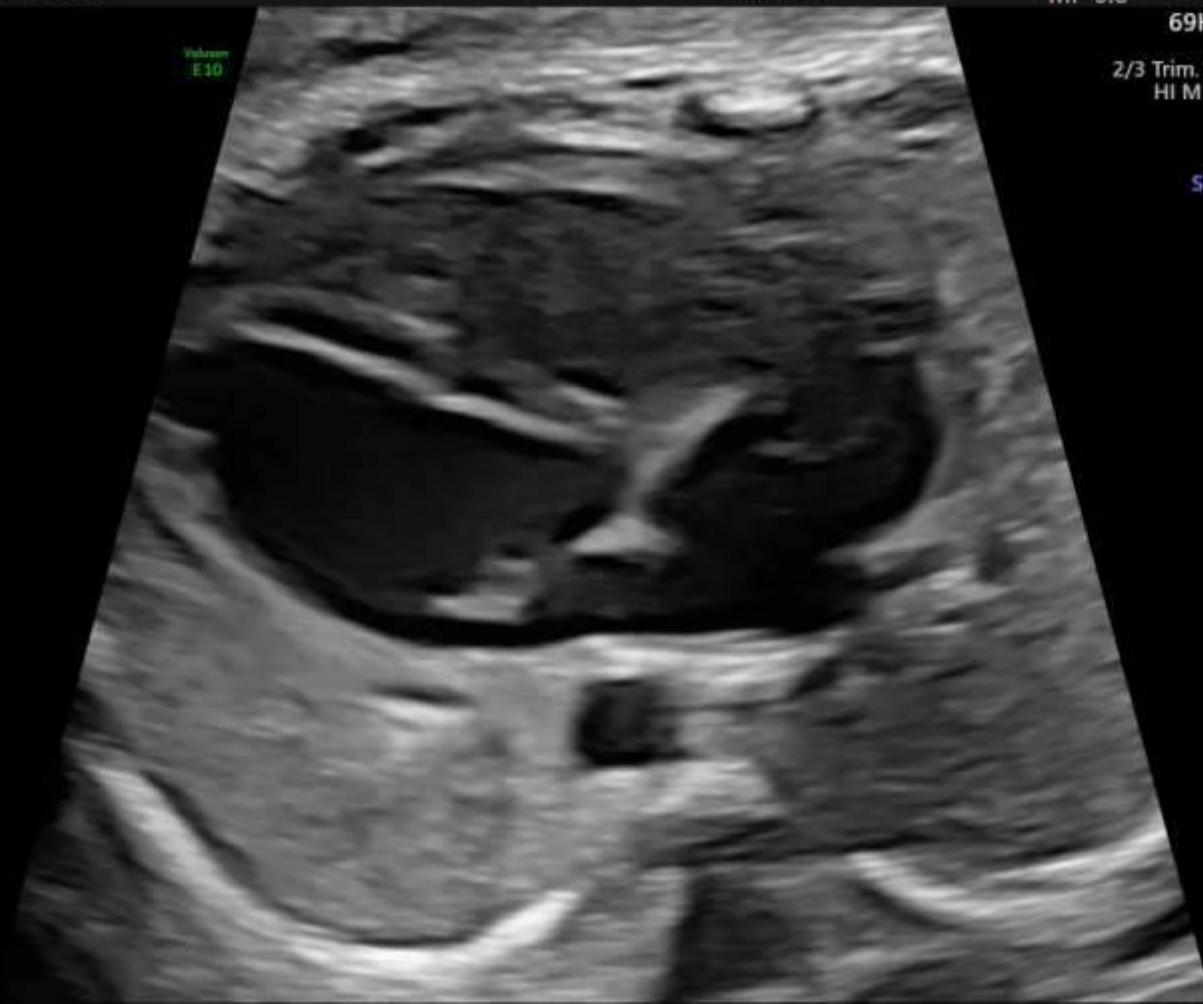




Clinical Case

- 35
- G3 P2
- 30 GA
- Reason for referral:
Cardiomegaly





Voluson™
E10
COMP

35

EG=32s0d

INPer Medicina Fetal

DR AMG

TIs 0.1

T1b 0.1

MI 0.8

19.09.2023

9:07:20 AM

RM7C

46Hz/11.8cm

45°/1.8

2/3 Trim. Cardiac/OB

HI M 7.80 - 4.50

Gn -1

C8/M16

FF2/E2

SRI II 3/CRI 1



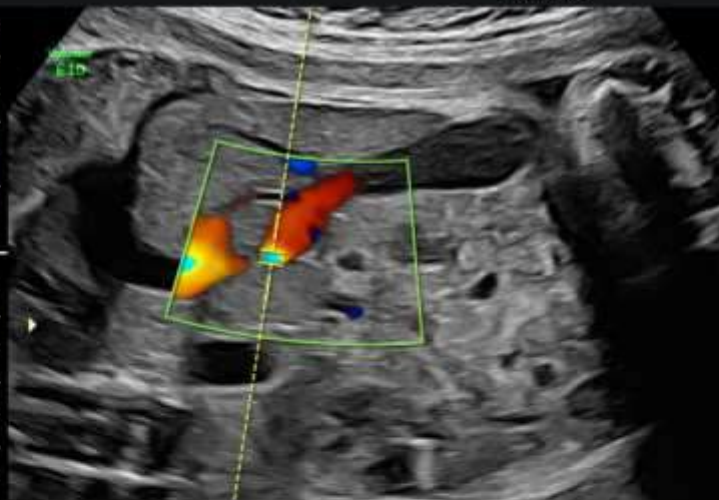
Voluson
E10



VENA UMBILICAL

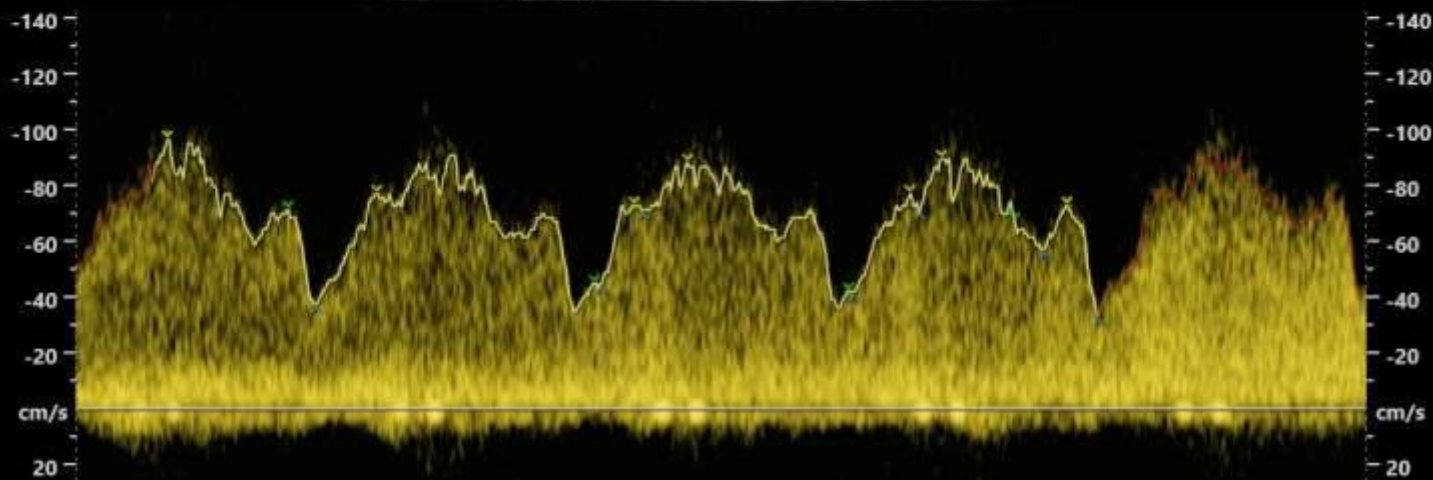


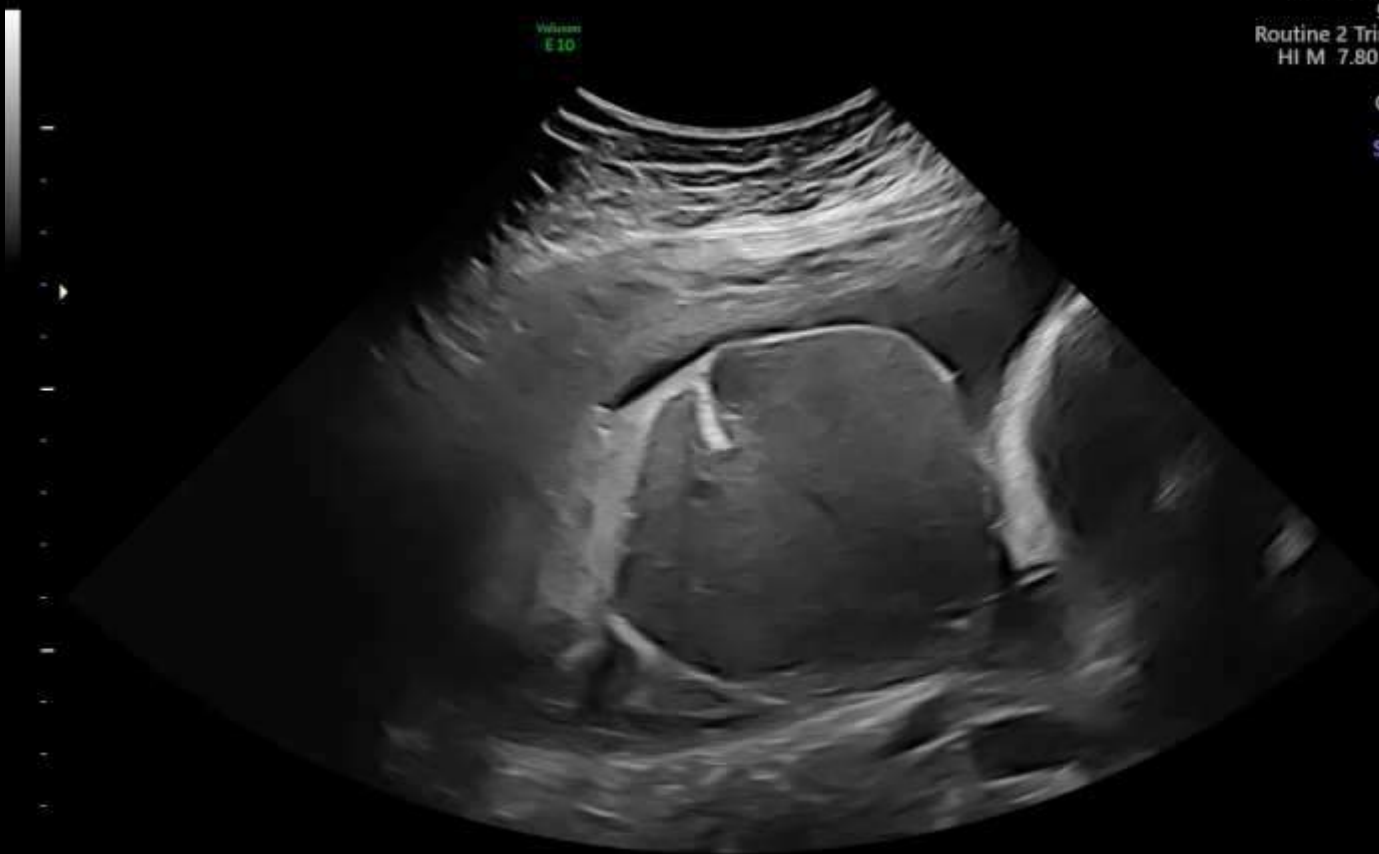
Gn 1.0
WMF 90 Hz
SV Angle 1
Size 2.0mm
Depth 51.9mm
Frq low
PRF 7.0kHz

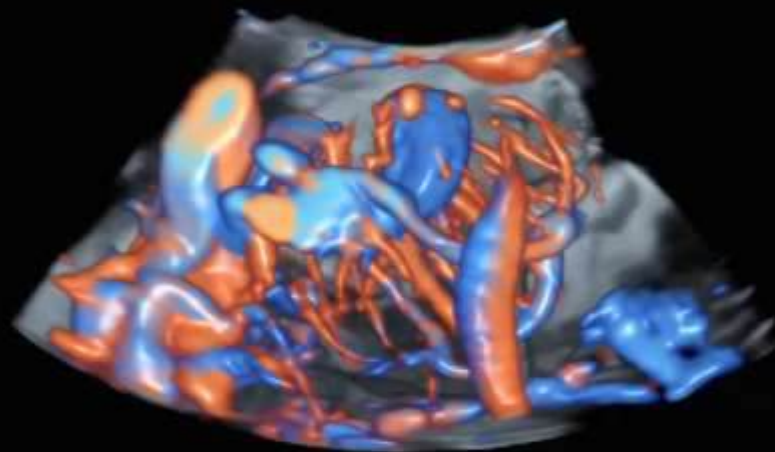


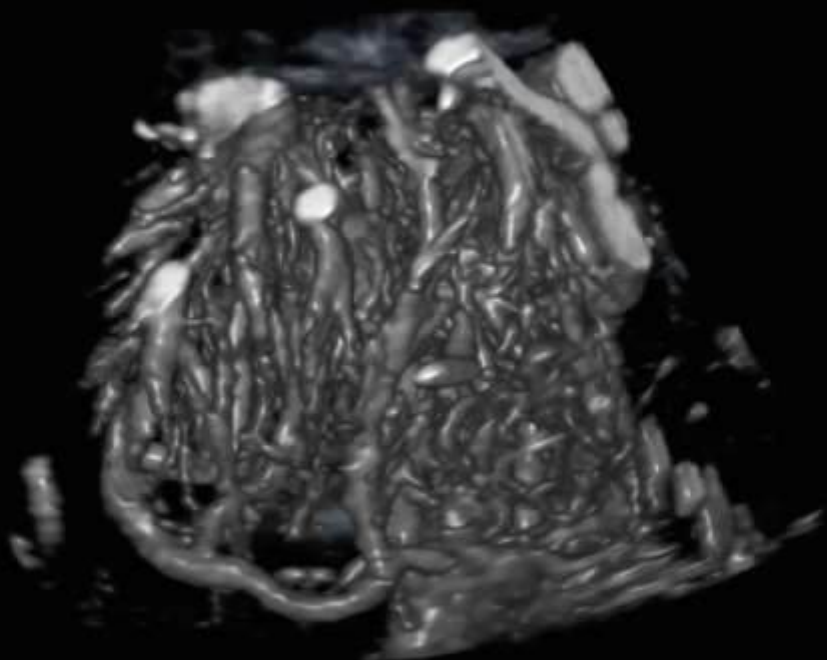
DV-S -88.42cm/s
DV-D -56.07cm/s
DV-a -36.84cm/s
DV-TAmax -71.48cm/s
DV-S/a 2.40
DV-a/S 0.42
DV-PI 0.72
DV-PLI 0.58
DV-PVIV 0.92
DV-FC 183bpm

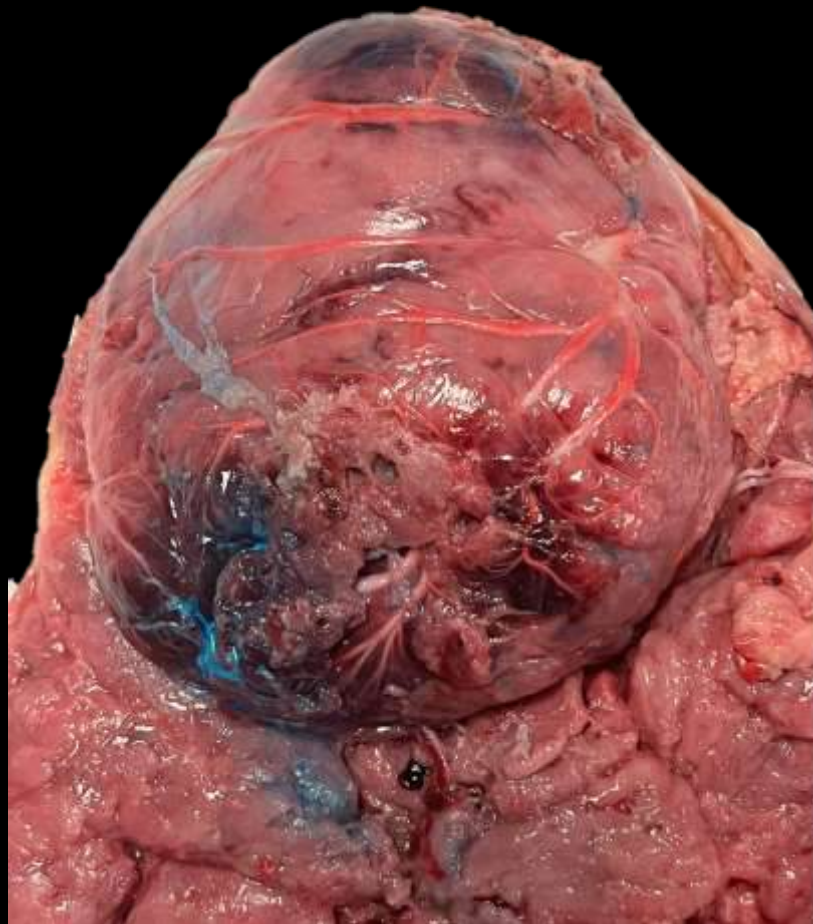
PRF 3.2kHz

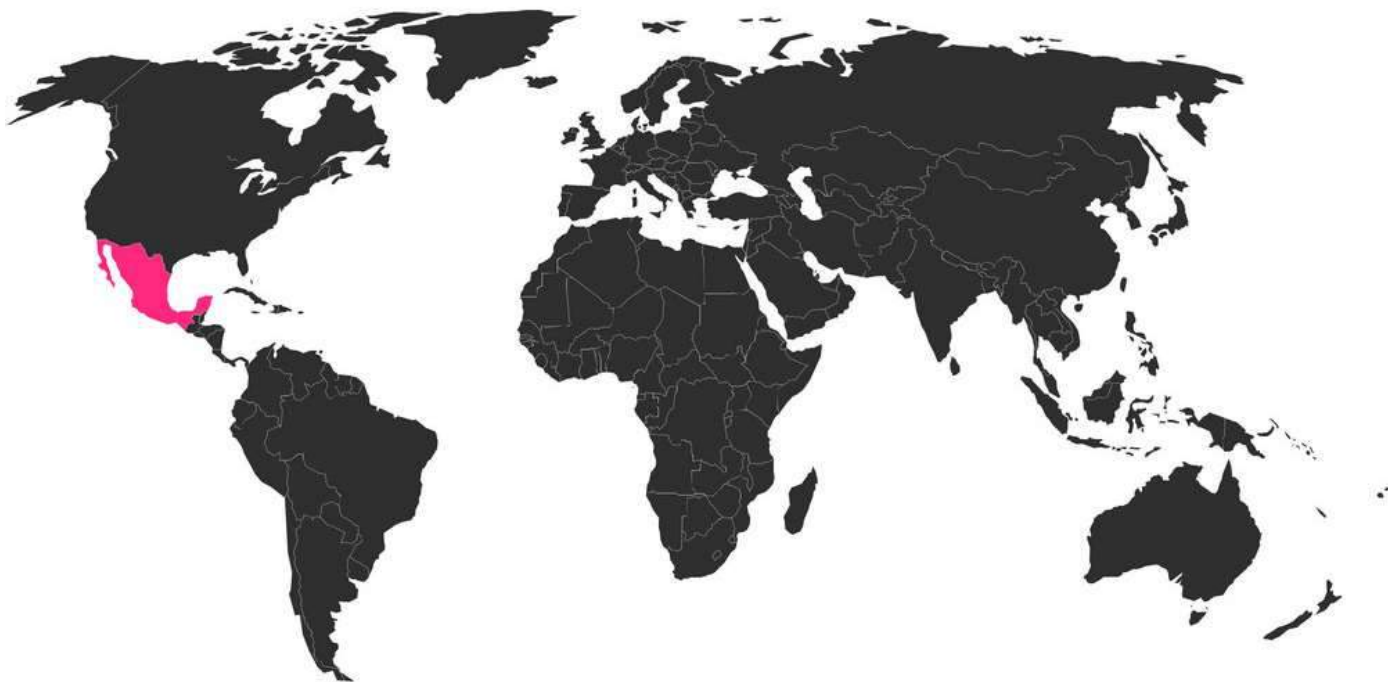














In Mexico: CHD is the second cause of infant mortality

18,000 – 20,000 newborns with CHD/year

Prenatal detection rate of CHD in the country is still low and there is no national multi-center registry

INEGI Mortality Statistics 2018



Moses, 1945 by Frida Kahlo.





2017 Fetal Cardiology Clinic – National Institute of Perinatology



2017



2020



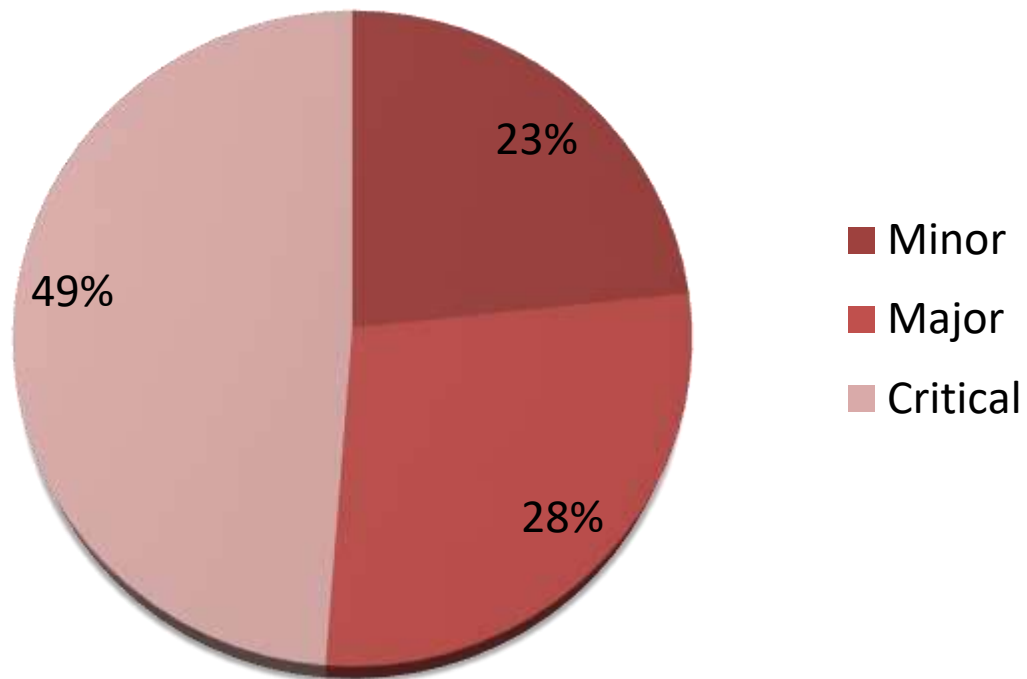


Newborns diagnosed with CHD with CHD 2017-2024

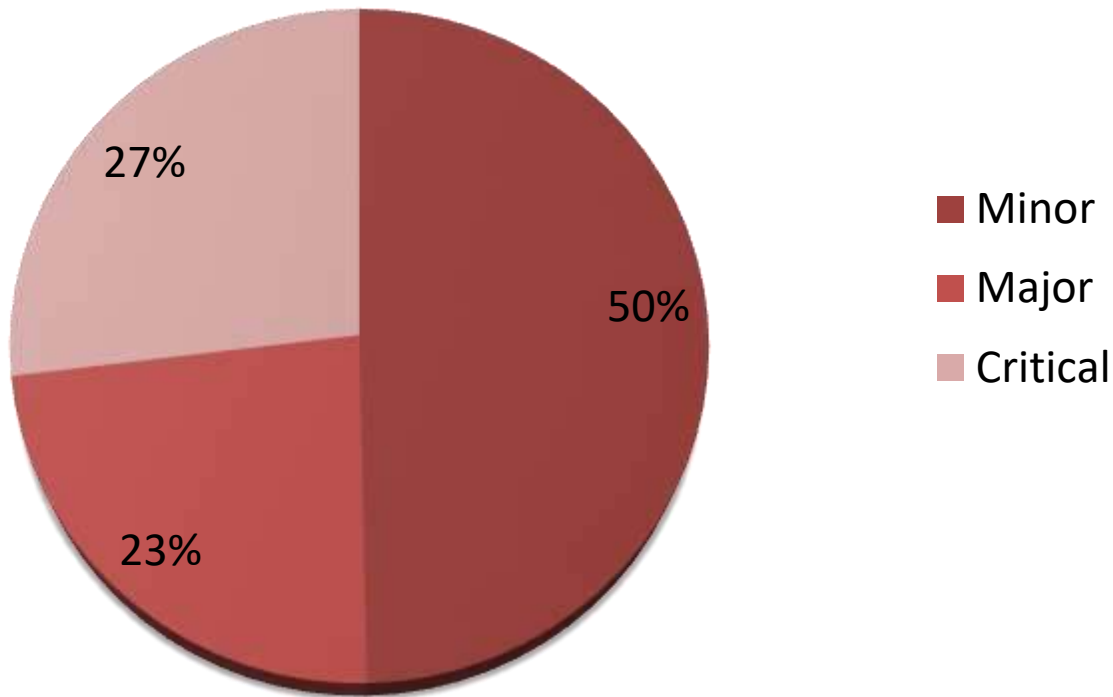
Year	Total Number of Births	Newborns with CHD	Percentage
2017	3242	88	2.7 %
2018	3110	101	3.2 %
2019	3180	91	2.9 %
2020	2511	68	2.7%
2021	1859	93	5.0%
2022	2155	127	5.8%
2023	2274	128	5.6%
2024	2648	177	6.6%
TOTAL	20,979	873	4.2%



Severity of CHD diagnosed prenatally 2017-2021

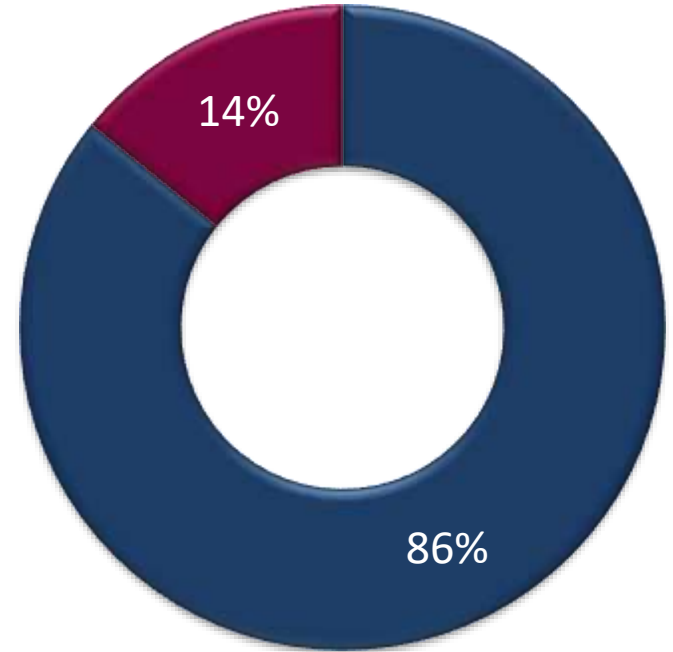


Severity of CHD in the Newborns 2017-2021



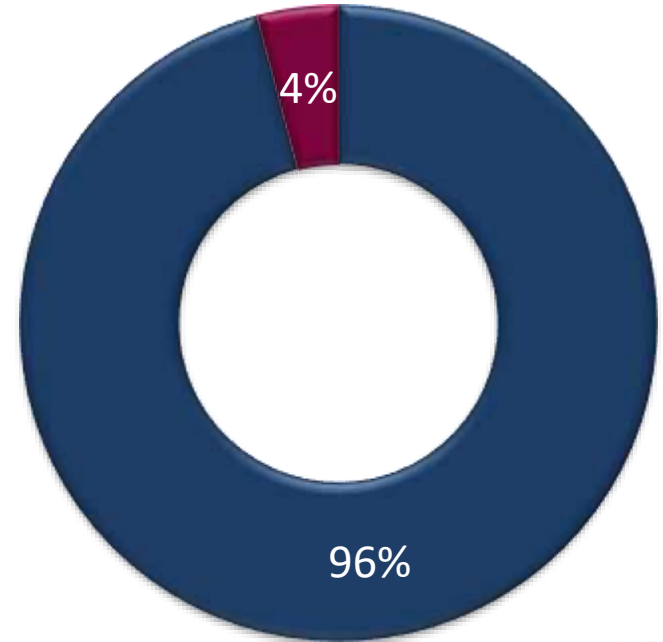
Prenatal Diagnosis of critical CHD in newborns 2021

- Newborns with prenatal diagnosis of CCHD
- Newborns without prenatal diagnosis of CCHD

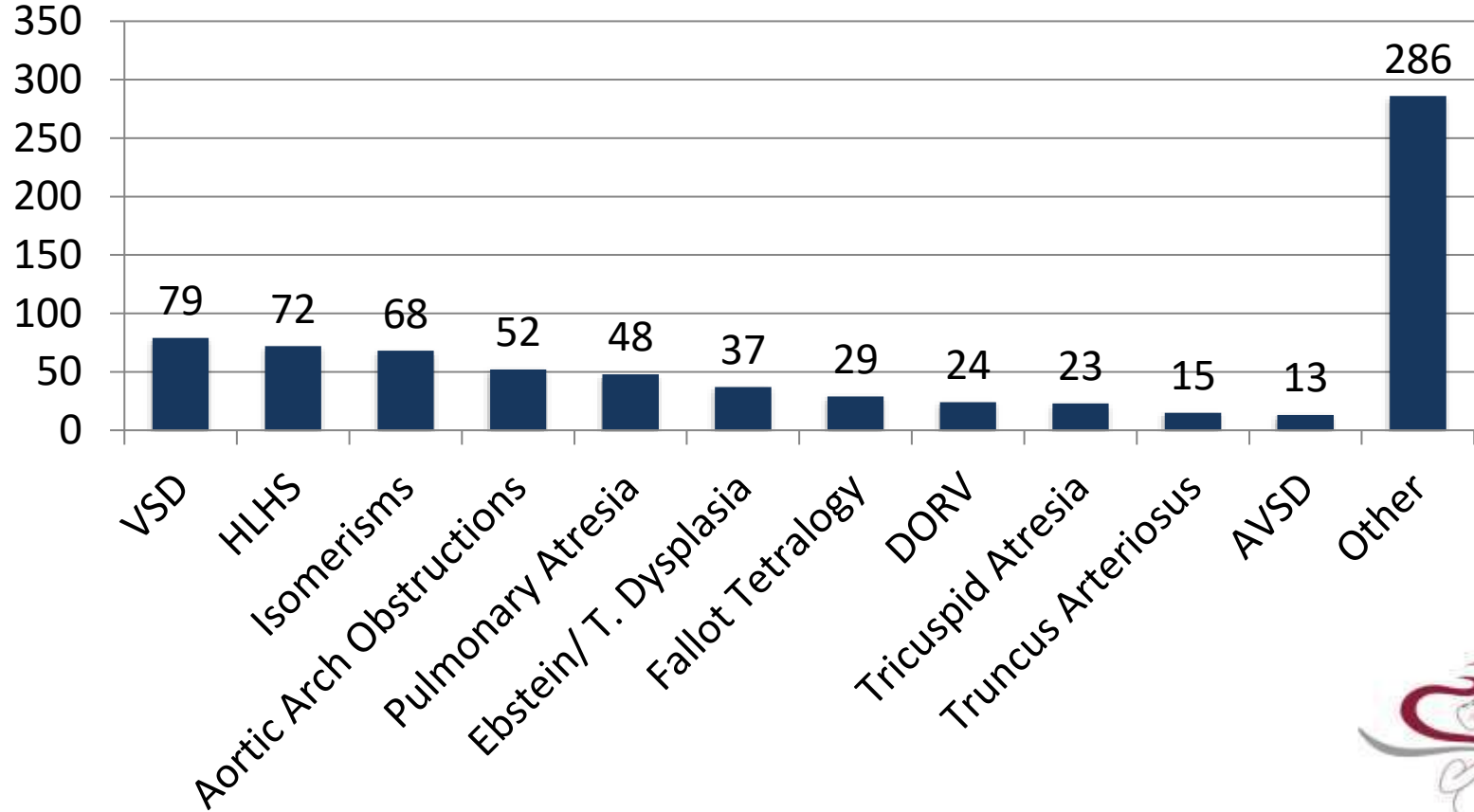


Prenatal Diagnosis of CCHD in Newborns INPer 2024

- Recién Nacidos con Dx. Prenatal de C.C.C.
- Recién Nacidos sin Dx. Prenatal de C.C.C.

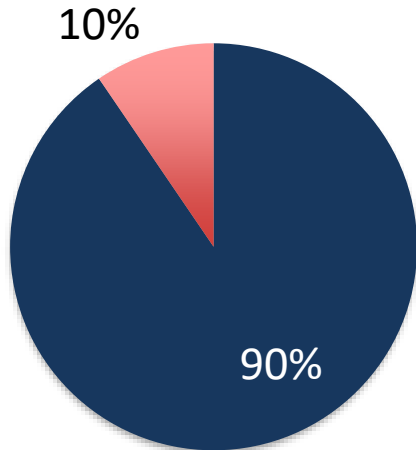


CHD diagnosed prenatally 2017-2024 INPer (n=746)



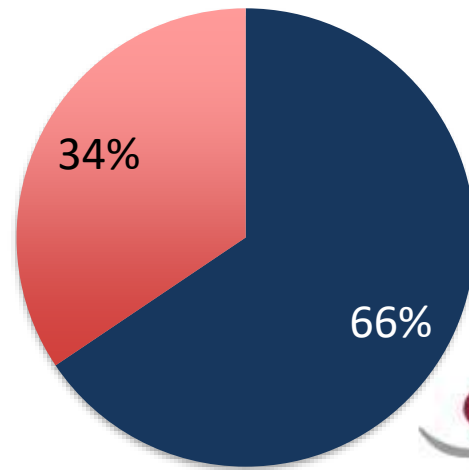
Type of treatment in all newborns with CHD (n= 441)

- Medical, Surgery or surveillance
- Palliative Care

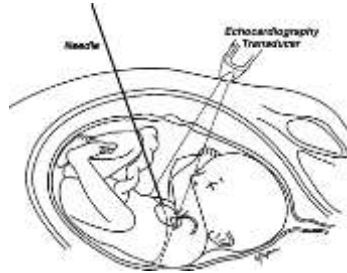
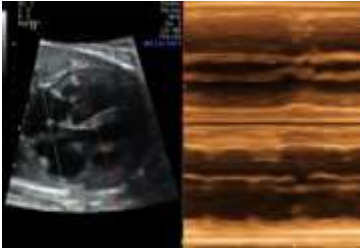


Type of treatment in CCHD (n=122)

- Surgical or Interventionism
- Palliative care



Prenatal treatment of fetal cardiac disease



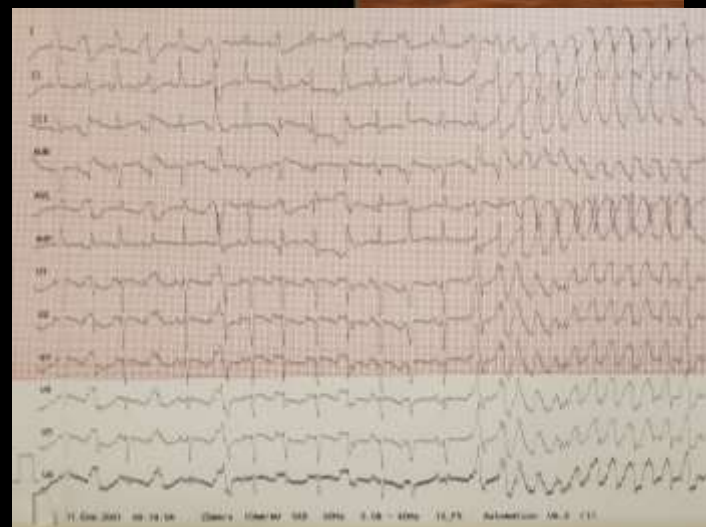
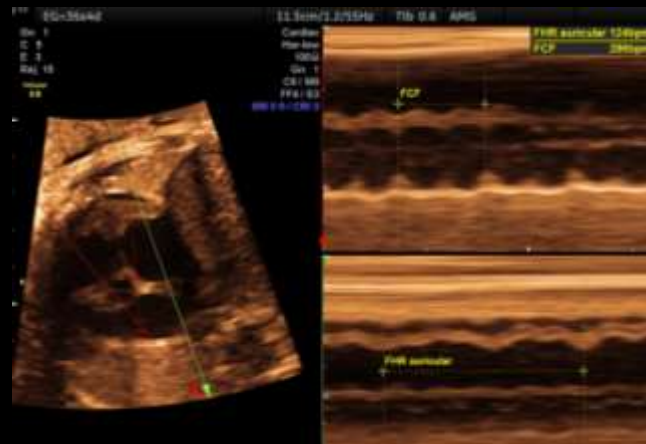
Arrhythmias

Maternal
hyperoxygenation

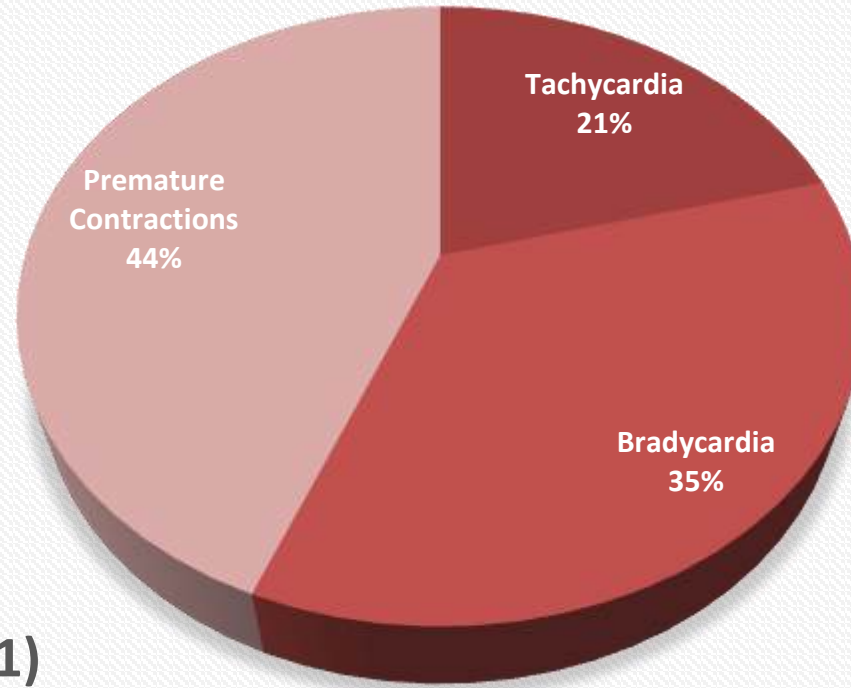
valvuloplasty

Rhabdomyomas





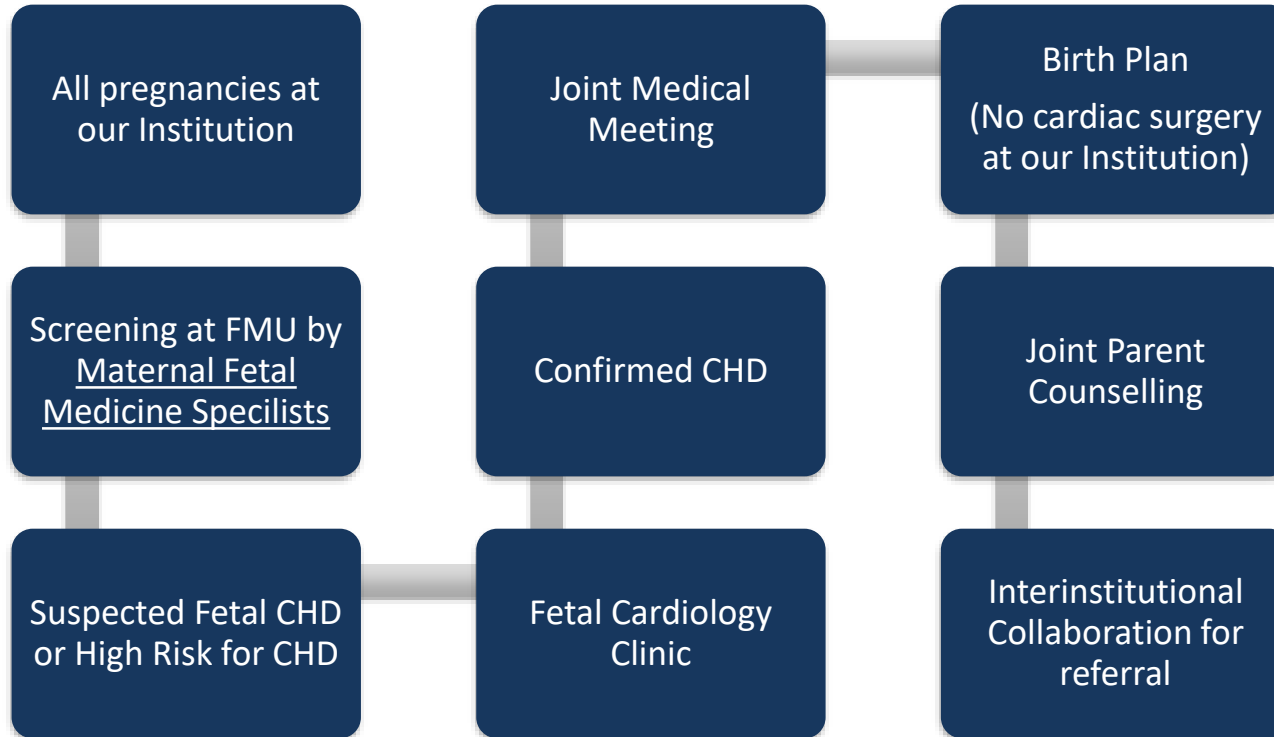
Fetal arrhythmias 2017-2024



(Patients = 91)

■ Tachycardia ■ Bradycardia ■ Premature contractions

Algorithm



Challenges for the future in Mexico

- Improving prenatal detection nation wide
- Optimizing our referral system
- Increase the number of cardiovascular surgery centers and the capacity of the existing ones.
- National registry of CHD diagnosed prenatally





Thank You

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