

Atrial and Atrioventricular Septal Defects

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EMORY
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Disclosures

- None
- Acknowledge Dr. Michael Fundora for sharing slides

Proposal

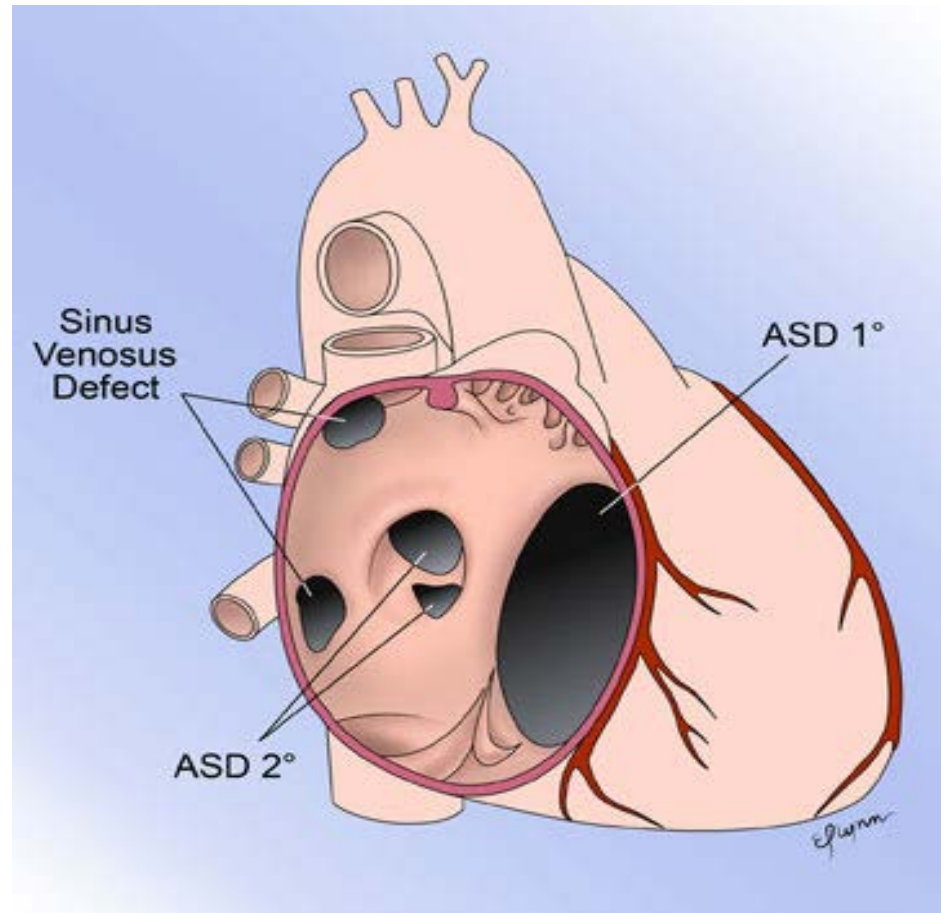
- The National Birth Defects Prevention Network, along with the Congenital Heart Public Health Consortium, are requesting the expansion of the following ICD-10-CM Codes:
 - Q21.1 (Atrial Septal Defect)
 - Q21.2 (Atrioventricular septal defect)

Problem

- Both codes are non-specific
 - Multiple birth defects captured under same code
 - Conditions have different clinical implications, severity, and treatments
 - E.g., Atrial Septal Defect (ASD) vs. Patent Foramen Ovale (PFO)
 - Passive registries that rely solely on ICD-10 codes have limited to no means to differentiate between conditions
 - Active registries that use ICD codes to flag records to review are burdened with reviewing numerous records for non-reportable conditions (e.g., PFO)
 - Inability to utilize administrative data for research purposes on specific defects

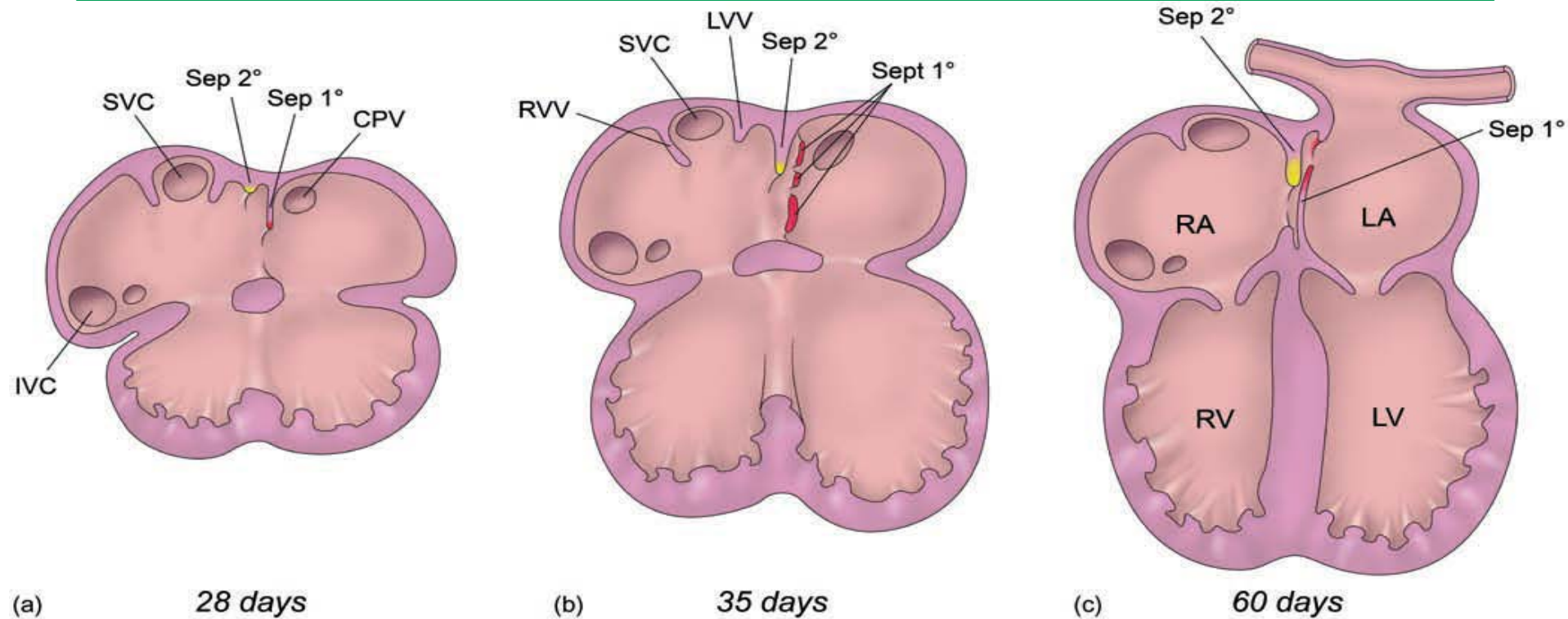
Atrial Septal Defects (ASD)

- ASD Secundum (70%)
- ASD Primum (20%)
- Sinus Venosus (6-8%)
- Coronary Sinus ASD (uncommon)



Heart: Location of ASD and Sinus Venosus Defect

Secundum atrial septal defect vs. PFO



Heart: Description of Cardiac Septation Development

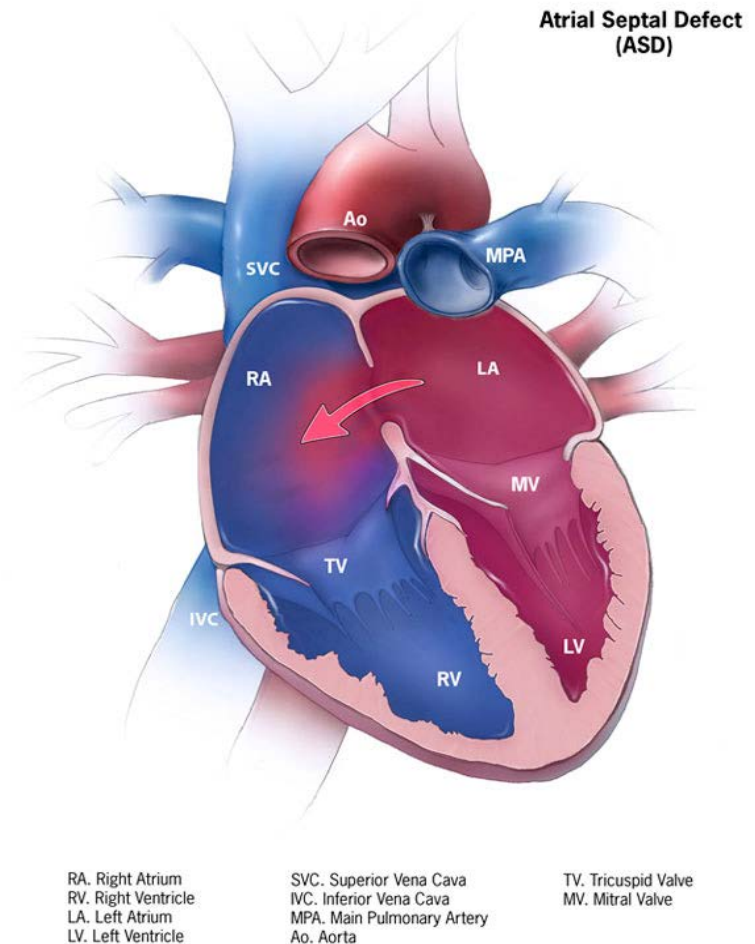
SVC: Superior Vena Cava
IVC: Inferior Vena Cava
CPV: Common pulmonary vein
Sep: Septation

RVV: Right venous valve
LVV: Left venous valve

RA: Right Atrium
RV: Right Ventricle
LA: Left Atrium
LV: Left Ventricle

Secundum ASD

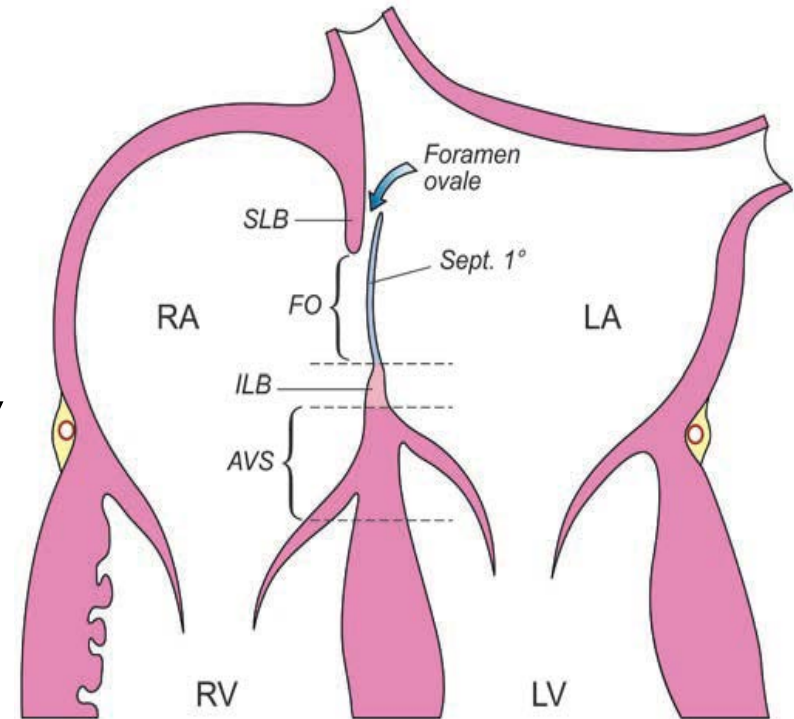
- Left to right shunting
- Cardiac failure rare in childhood
- Increased pulmonary blood flow over time can lead to pulmonary hypertension
- Repair recommended in childhood or upon diagnosis



Heart: Description of Atrial Septal Defect

Patent Foramen Ovale (PFO)

- Normal fetal structure present in all newborns.
- At birth, pulmonary blood flow and venous return \uparrow markedly \rightarrow left atrial pressure \uparrow \rightarrow closes the foramen ovale functionally.
- Most close by a few years of age anatomically
- PFO may persist in 10-20% children >5 yrs and adults.
- Usually small and clinically insignificant in children
- In adults closure may be indicated in cases of TIAs/strokes related to R \rightarrow L shunt thru foramen ovale. May be associated with migraines



Heart: Description Patent Foramen Ovale

RA: Right Atrium
RV: Right Ventricle
LA: Left Atrium
LV: Left Ventricle

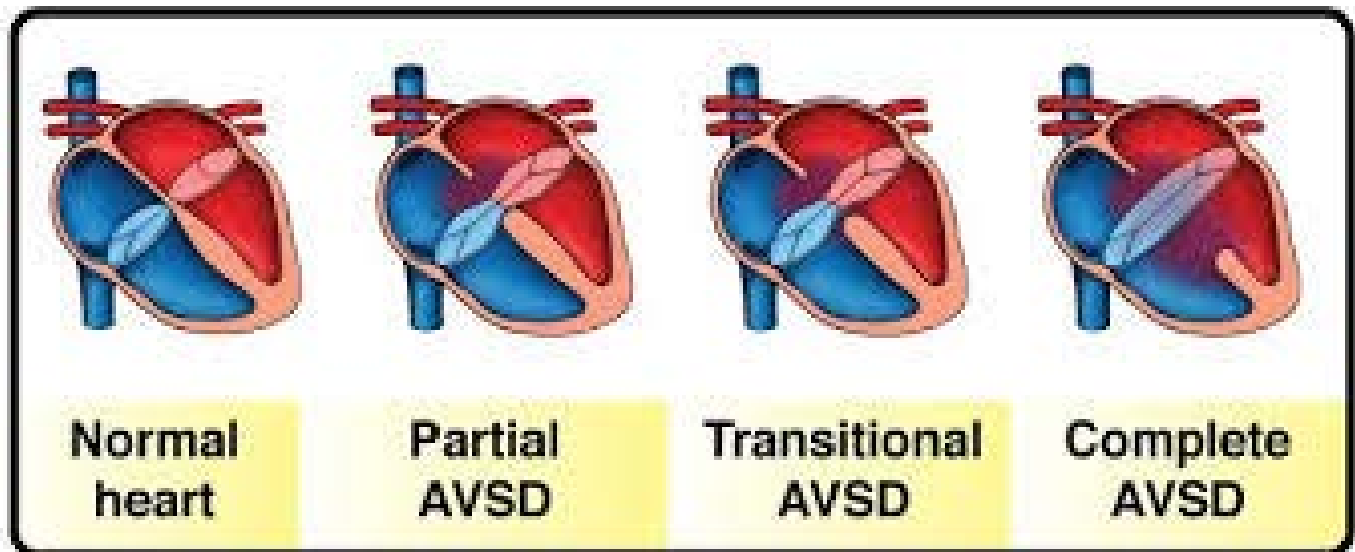
FO: Foramen ovale
SLB: Superior limbic band
ILB: Inferior limbic band
AVS: Atrioventricular septum

Atrioventricular Septal Defects

- Birth Prevalence of AV canal defects
 - 0.19 in 1,000 live births
- Prevalence
 - 4% - 5% of CHD
- AV canal defects
 - 50% have Down syndrome
- Down syndrome
 - 50% have CHD
 - 45% AV canal defect
 - 75% complete AV canal defect
- Repair recommended in infancy

Atrioventricular Septal Defects cont.

Type	AV Valves	ASD	Inlet VSD
Partial (Incomplete)	Two distinct orifices, with left valve often malformed (cleft)	Primum	None
Transitional (Intermediate)	Two distinct orifices	Primum	Small, restrictive
Complete	One valve	Primum	Nonrestrictive



Benefits of Expanded Codes

- Ability to estimate prevalence of specific birth defects with higher accuracy
- Decrease burden for active surveillance programs reviewing medical records
- Increase ability to perform healthcare utilization and long-term outcomes research with administrative data sources
 - inform policies, guidelines, research, patient care recommendations

Thank you

- Questions?