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Required Credentials for an Interventional Cardiologist to Intervene in Adult Congenital Heart Disease.

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BACKGRAUND

- To date, there is no uniformity of provision of adult CHD training.
- The number of patients with CHDs reaching adulthood has steadily increased, so that more adult CHD healthcare providers are gradually required.
- Many pediatric cardiologists have grown older together with their patients and have continued to care for them, based “ongoing clinical practice”.
- On the other hand, adult cardiologists have more training and experience in both acquired heart disease and the wider diseases of aging. So, have begun to focus on the care of adolescents and adults with CHD, “practice-based approach”.
- Both type of specialists can be considered as “made by the job.”

BACKGRAUND

- Expert centres worldwide which had already developed a well-structured adult CHD program opened the doors for training pediatric cardiologists and adult cardiologists to become fully fledged adult CHD specialists.
- It is very important standardizing pediatric or adults cardiologists training to achieve certification.

- Based on the experience of each of you:

✓ Those who think that **pediatric cardiologists** should take care of adults with CHD?

✓ Those who think that **adult cardiologists** should take care of adults with CHD?

✓ Those who think that **team-work** should take care of adults with CHD?

- Based on the experience of each of you:

✓ Those who think that **pediatric cardiologists** should take care of adults with CHD?

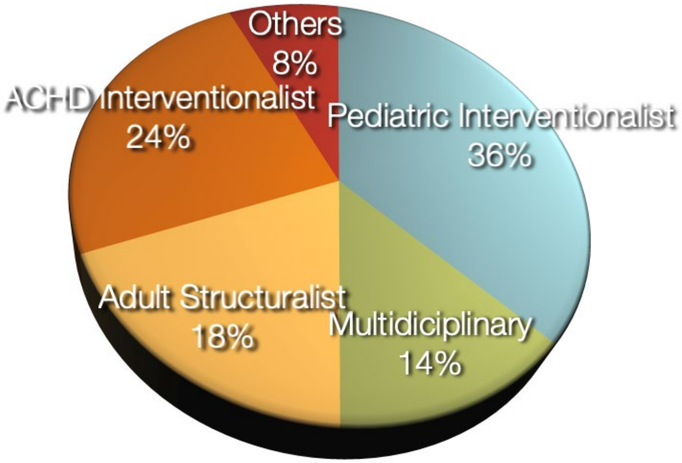
✓ Those who think that **adult cardiologists** should take care of adults with CHD?

✓ Those who think that **team-work** should take care of adults with CHD?

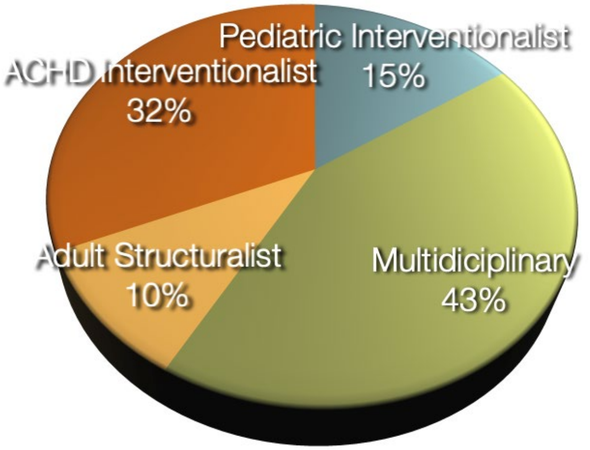
ORIGINAL STUDIES

WILEY

Transcatheter interventions in adults with congenital heart disease: Surveys from the Society for Cardiovascular Angiography and Interventions to identify current patterns of care and perception on training requirements



Who is currently believed to be performing the majority of transcatheter ACHD interventions,



Who respondents thought should be performing the majority of transcatheter ACHD interventions

Catheter Cardiovasc Interv. 2017;90(3): 418–424. https://doi.org/10.1002/ccd.27151

TABLE 1 Responses to current practice trends according to training background (pediatric vs. adult)

	Pediatric-trained ($n = 103$)	Adult-trained ($n = 130$)	*P*
Registered with ACHA? (% yes)	60%	30%	<0.001
Which setting should cases and post-procedure management occur? (% adult hospital)	50%	83%	<0.001
Who currently performs majority of ACHD cases?			0.04
Pediatric Interventional	67%	14%	
Adult Structural	5%	38%	
Co-Teams	15%	12%	
ACHD-trained Interventional	9%	25%	
Other	4%	11%	
Who should perform the majority of ACHD cases?			0.02
Pediatric Interventional	33%	2%	
Adult Structural	1%	18%	
Co-Teams	46%	40%	
ACHD-trained Interventional	20%	40%	
Other	0%	0%	

- This data highlights the variability in the management and training needs for adults with complex CHD.
- Most care providers (75%) believe that care should be provided by interventionalists trained in ACHD or a multidisciplinary group (pediatric and adult co-proceduralists).
- Following a pediatric cardiology fellowship, the one-year congenital interventional training is, by itself, unlikely to provide most trainees with an adequate adult procedural volume to be proficient in ACHD structural interventions.
- Therefore, one would be expected to complete both pediatric interventional and the two-year ACHD fellowship for competency, provided that the ACHD fellowship incorporated an appropriate volume of ACHD catheterizations/interventions.

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General operator background

- Cardiologist performing ACHD catheterizations and interventions should possess extensive knowledge of CHD: native and postoperative anatomy, natural history of the disease in adults, hemodynamics, appropriate diagnostics, optimal medical therapy, application and outcome of invasive therapies, and procedural and peri-operative expertise and skill sets.

Pediatric interventional cardiologists

- Possess extensive knowledge and experience with CHD and possess the expertise and skillsets for CHD interventions.
- May be lacking in knowledge and experience with adult-acquired heart disease, CAD and coronary interventions, adult comorbidities, pregnancy, and structural heart interventions.

Adult interventional cardiologist

- Possess extensive knowledge and experience with adult-acquired heart disease, CA revascularization, and adult comorbidities
- May be lacking in knowledge and experience with clinical ACHD
- May have limited expertise and skillsets for ACHD interventions and are further hindered by a lack of expertise in SHD interventions.

Volume recommendations for ACHD training

- Participation as a first or second operator in a total of 150 ACHD procedures with at least 100 of those being interventional in nature. This is in addition to noncongenital case numbers that are required during adult (noncongenital) invasive training.
- At least 10% of cases (but no more than 25%) should be performed in children, given that certain interventional procedures are uncommon in the ACHD population; based on an overall training volume of 150 cases, this equates to at least 15 pediatric and 135 ACHD cases.
- Minimum procedure-specific volume requirements

JACC Cardiovasc Interv 2024 Jan 22;17(2):115-216

Minimum Interventional Procedure-Specific Experience for Adult Congenital Heart Disease Interventional Cardiologists

Device closures:

- Atrial septal defect ≥15
- Patent foramen ovale ≥12
- Intracardiac echocardiography to guide septal closure ≥20 casesb
- Ventricular septal defect ≥5
- Patent ductus arteriosus ≥8

Angioplasty/stenting procedures:

- Coarctation with stent ≥8
- Pulmonary valve implant ≥12
- Right ventricular outflow tract, conduit, or branch pulmonary artery stents ≥10
- Aortic valvuloplasty ≥3
- Pulmonary valvuloplasty ≥5
- Stent implantation in venous vessels ≥5
- Stents baffles ≥5
- Pulmonary vein stents >2
- Fontan baffle fenestrations >2

Other procedures:

- Balloon atrial septostomy ≥2 (can be with other left atrial procedures)
- Transseptal catheterization ≥10
- Perivalvular leak closure ≥5
- Ultrasound-guided access ≥100
- Large vessel vascular closure techniques ≥30
- Radial artery access ≥20

JACC Cardiovasc Interv 2024 Jan 22;17(2):115-216

Conclusion.

- ACHD fellowship program has to be incorporated.
- An appropriate volume of ACHD catheterizations/interventions has to be stablished.
- In places where there is no training program, a **team-work** (pediatric and adult interventionist) has to be stablished.

- Life is like riding a bicycle…. To keep your balance, you must keep moving

- Thank you…….