

# Namibian Children's Heart Project: A new cardiac service in Africa

## AUTHORS

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## INTRODUCTION

Until recently there were no services for indigent Namibian children or adults with heart disease. The aim of this project, initiated by the Ministry of Health, is to develop a self sufficient, sustainable cardiac service for children and adults. This paper describes our 2 year experience with service development for children with paediatric and congenital heart disease (CHD).

## METHODS

Prospective study conducted between September 2008 and April 2011 at Windhoek Central, Christiaan Barnard Memorial (Cape Town) and Panorama Medi-Clinic (Cape Town) Hospitals. Patients were recruited from the Paediatric and Congenital Heart Disease and Rheumatic Heart Disease Clinics in Windhoek.. In phase 1 they were referred to two private hospitals in South Africa. Phase 2 reports early results with surgery at the state facility, Windhoek Central Hospital.

## RESULTS

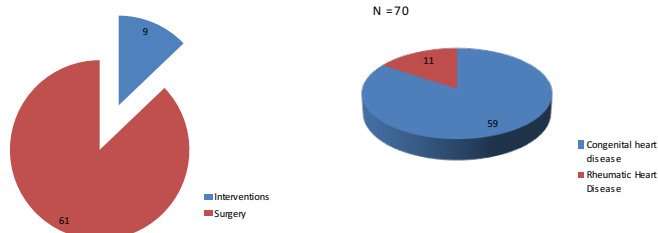
### PHASE 1

During the 2.5 year period 76 indigent patients were referred to Cape Town for surgery or intervention (PHASE 1). The age range was 3 months to 29 years, mean 8 years. Fourteen were over 18 years.

Tetralogy of Fallot (20), ventricular septal defect (14), patent ductus arteriosus (5) and atrial septal defects (4) were the commonest congenital heart diseases. There were 2 early deaths (operative mortality 2%) and 2 late deaths.

There were 8 re-operations in 6 patients. Three (3) patients needed surgery for post-operative complications.

PHASE 1 : 70 patients managed further



### More complicated pathology in Phase 1

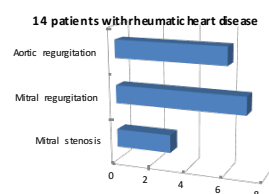
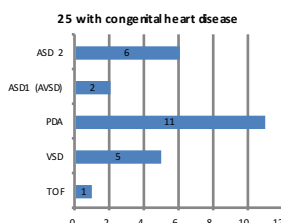
Coarct aorta/sinus venosus defect	1	
Coarct aorta		1
Interruption Ao/VSD/PDA	1	
Congenital mitral stenosis	1	
Single ventricle		3
Sub-aortic stenosis		2
Tetralogy of Fallot with pulm. atresia	1	

### Interventions (n = 8) in Phase 1

Mitral valve commissurotomy	4	
PDA device closure		2
Pulmonary valvuloplasty <sup>2</sup>		
ASD device closure		2

### PHASE 2

Since October 2010 39 patients (5 m – 48 years, mean 18 years) received surgery at Windhoek Central Hospital. Fifteen were adults (>18 years), 7 with CHD.



Fourteen patients had rheumatic heart disease (RHD); Three had mitral stenosis, 6 aortic regurgitation, 8 mitral regurgitation (2 with mixed mitral and aortic valve disease). There were 11 valve replacements and 3 mitral valve repairs.

### Differences between two cohorts (Phase 1 and Phase 2)

	Cape Town	Windhoek
Numbers	70	39
Age (years)	9	17.9
RHD	11	14
"Complicated" cases	10	1
Early mortality	2.8	7.6
Late mortality	2.8	0

## CONCLUSIONS

1. The absence of services has led to an older demographic with high numbers of adults with congenital heart disease and low numbers of babies referred with critical CHD.
2. The burden of rheumatic heart disease is high in this country and RHD accounts for almost 50% of referrals.
3. With goodwill, political commitment, regional cooperation and public/private partnership, we have developed a service for indigent children, with satisfactory early results.