

Steps		YES/NO		Weight of step (1-5)	Included in HOST-CHS Holistic Score
1	Exposure of the aortic valve				
1	Has the aorta been transected just above the sinotubular junction?	Y	N	2	KNOWLEDGE
2	Is the incision a safe distance away from the coronary artery ostia (i.e. >5mm)?	Y	N	4	RESPECT
3	Have retraction sutures placed above the aortic valve commissure to improve exposure?	Y	N	2	FLUENCY
2	Excision of the coronary buttons and aortic valve				
4	Have the coronary buttons been excised with a liberal amount of aortic sinus wall with the coronary artery?	Y	N	5	RESPECT
5	Is the coronary button rectangular shaped?	Y	N	3	KNOWLEDGE
6	Is the coronary orifice in the centre of the button?	Y	N	5	KNOWLEDGE
7	Have both coronary buttons been adequately mobilised without any damage?	N	Y	5	KNOWLEDGE
8	Have all the leaflets of the native aortic valve been excised?	Y	N	3	KNOWLEDGE
3	Transection of the pulmonary artery				
9	Has the pulmonary trunk been transected?	Y	N	2	KNOWLEDGE
	Is the cut:				
10	i) Perpendicular to the vessel?	Y	N	3	RESPECT
11	ii) Clean? (i.e. not jagged or having sharp protruding points)	Y	N	3	RESPECT
12	iii) A safe distance away from the pulmonary bifurcation that it does not compromise the origin of the right pulmonary artery?	Y	N	4	RESPECT
13	iv) A safe distance away from the commissure of the pulmonary valve?	N	Y	5	RESPECT
4	Harvesting of the pulmonary autograft:				
14	Has the pulmonary autograft been carefully dissected in the fat plane between autograft and LAD? (Note: The proximal coronary may require further mobilisation to facilitate dissection)	Y	N	4	RESPECT
15	Has a right-angled instrument been placed carefully through the pulmonary valve to identify a safe location (>10mm) below the nadir of the non-facing cusp on the RVOT?	Y	N	3	KNOWLEDGE
16	i) Has an incision been made into the RVOT?	Y	N	2	FLUENCY
17	ii) Has the incision been enlarged along the anterior RVOT maintaining a safe distance from the pulmonary valve (i.e. preserving a muscle skirt)?	Y	N	4	FLUENCY
18	Has the posterior muscle skirt been harvested/maintained with appropriate thickness?	Y	N	5	FLUENCY
19	Has the septal perforator branch of the left anterior descending artery been preserved?	Y	N	5	RESPECT
20	Has the autograft been damaged during harvesting?	N	Y	5	RESPECT
21	Is there a good sized muscle skirt around the whole autograft?	Y	N	4	RESPECT

	22	Has the anterior muscle skirt been taken as V shape to accommodate the Konno incision?	Y	N	3	KNOWLEDGE
5	Konno incision					
	23	Has the Konno incision been performed to enlarge the LVOT?	Y	N	4	KNOWLEDGE
	24	Has the incision commenced at the region of the right-left commissure and into the LVOT until the LVOT is widely open?	Y	N	4	KNOWLEDGE
	25	Has the autograft been aligned correctly to allow reimplantation of the coronary buttons?	Y	N	5	KNOWLEDGE
6	Anastomosis of pulmonary autograft (Aortoventriculoplasty):					
	26	Has the suture commenced at the apex of the Konno incision to the tip of the muscle skirt of the autograft?	Y	N	3	FLUENCY
	27	Does each ends of the suture continue along the Konno incision to the aortic annulus?	Y	N	3	FLUENCY
	28	Has the suture continued along the posterior annulus? (Note: usually one to two suture(s) per sinus)	Y	N	3	FLUENCY
	29	Have shallow bites been taken around the region of the AV conduction (i.e. region of the RCC and NCC)?	Y	N	4	RESPECT
	30	Has the autograft been parachuted into position and the muscle skirt been pushed into LVOT as much as possible?	Y	N	2	FLUENCY
	Suture assessment:					
	31	i) Are all the sutures evenly spaced from one another WITH a gap of 2-3mm between suture bites?	Y	N	3	FLUENCY
	32	ii) Are all the sutures an adequate distance from the edge (2-3mm)?	Y	N	3	FLUENCY
7	Reimplantation of the LEFT coronary button to autograft:					
	LEFT coronary button incision					
	33	i) In the correct position for the technique of choice?	Y	N	5	KNOWLEDGE
	34	ii) Adequate sized incision for technique of choice? (i.e. Closed technique: incision is slightly smaller than button [4-6mm])	Y	N	4	RESPECT
	Is the LEFT coronary artery					
	35	i) In the 'best lie' position? (i.e. lateral + superior avoiding compression from PA, not stretching)	Y	N	5	KNOWLEDGE
	36	ii) Kinked or twisted?	N	Y	5	RESPECT
	Suture assessment:					
	37	i) Are all the sutures evenly spaced from one another WITH a gap of 1-2mm between suture bites?	Y	N	3	FLUENCY
	38	ii) Are all the sutures an adequate distance from the edge (1-2mm)?	Y	N	3	FLUENCY
	39	Has the coronary button been trimmed appropriately?	Y	N	3	KNOWLEDGE
	40	Is the coronary still intact by the end of anastomosis (i.e. not avulsed)?	Y	N	5	RESPECT
8	Reconstruction of RVOT (Implantation of pulmonary homograft)					
	41	Has the distance between the posterior wall of the RVOT and the distal main PA been measured?	Y	N	4	KNOWLEDGE
	42	Has the homograft been trimmed accordingly?	Y	N	3	KNOWLEDGE
	43	Has the pulmonary homograft been anastomosed distally to the distal main PA?	Y	N	4	FLUENCY

44	Has the suture commenced on the posterior wall and continued anteriorly?	Y	N	3	FLUENCY
45	Has the distal anastomosis been completed without purse-stringing the suture in a way which would lead to possible stenosis?	Y	N	3	RESPECT
46	Has the proximal part of the homograft been anastomosed to the RVOT?	Y	N	4	FLUENCY
47	Has the suture commenced posteriorly and included the autograft muscle skirt?	Y	N	3	KNOWLEDGE
48	Has the posterior suture line bites been superficial to avoid possible injury to the septal perforator branch?	Y	N	4	RESPECT
49	Has the anterior part of the homograft been anastomosed with the RV free wall?	Y	N	3	FLUENCY
50	Have the LAD and conal branch been avoided?	Y	N	5	RESPECT
Suture assessment:					
51	i) Are all the sutures evenly spaced from one another WITH a gap of 2-3mm between suture bites	Y	N	3	FLUENCY
52	ii) Are all the sutures an adequate distance from the edge (2-3mm)?	Y	N	3	FLUENCY
9	Anastomosis of the ascending aorta and reimplantation of RIGHT coronary button to autograft				
53	Has the pulmonary autograft been anastomosed to the distal ascending aorta?	Y	N	3	KNOWLEDGE
54	Has the suture commenced along the posterior wall?	Y	N	3	FLUENCY
55	After two-thirds of the suture line have been completed has the right coronary artery been re-implanted?	Y	N	3	KNOWLEDGE
RIGHT coronary button incision					
56	i) In the correct position for the technique of choice?	Y	N	5	KNOWLEDGE
57	ii) Adequate sized incision for technique of choice? (i.e. Closed technique: incision is slightly smaller than button [4-6mm])	Y	N	4	RESPECT
Is the RIGHT coronary artery					
58	i) In the 'best lie' position? (i.e. high enough to avoid kinking)	Y	N	5	KNOWLEDGE
59	ii) Kinked or twisted?	N	Y	5	RESPECT
Suture assessment:					
60	i) Are all the sutures evenly spaced from one another WITH a gap of 1-2mm between suture bites?	Y	N	3	FLUENCY
61	ii) Are all the sutures an adequate distance from the edge (1-2mm)?	Y	N	3	FLUENCY
62	Has the coronary button been trimmed appropriately?	Y	N	3	KNOWLEDGE
63	Is the coronary still intact by the end of anastomosis (i.e. not avulsed)?	Y	N	5	RESPECT
64	Has the anterior wall of the distal autograft and ascending aorta anastomosis been completed?	Y	N	3	FLUENCY
TOTAL SCORE				226	