

## Supplementary Information

### SwasthGarbh: A smartphone App for improving the quality of antenatal care and ameliorating maternal-fetal health

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**Table S1:** Baseline characteristics of the patients included in the clinical trial.

	Test group (n=71)	Control group (n=72)
Age	28.69 ± 3.78	28.71 ± 4.28
POG at recruitment	9.92 ± 2.24	10.95 ± 2.45
Education		
Secondary or lower	26 (36.6%)	34 (47.2%)
Higher	45 (63.4%)	38 (52.8%)
Socio-economic Status		
Middle	49 (69.0%)	57 (79.2%)
Lower	22 (31.0%)	15 (20.8%)
Geographic Area		
Urban	56 (78.9%)	63 (87.5%)
Rural	15 (21.1%)	9 (12.5%)
Conception		
Spontaneous	51 (71.8%)	59 (81.9%)
Ovulation Induction, IVF	20 (28.2%)	13 (18.1%)
Gravidity		
1-2	47 (66.2%)	50 (69.4%)
>2	24 (33.8%)	22 (30.6%)
Abortions		
No abortions	37 (52.1%)	44 (61.1%)
At least one abortion	34 (47.9%)	28 (38.9%)

**Table S2:** Relationship of treatment and socio-demographic variables on the number of ANC visits by regression analysis.

	Regression coefficient			
	Unadjusted (95% CI)	P-value	Adjusted (95% CI)	P-value
Mean difference in ANC visits	1.29 (0.74, 1.84)	<0.001	1.36 (0.82, 1.90)	<0.001
Age (years)	0.05 (-0.24, 0.12)	0.19		
POG at recruitment	-0.004 (0.13, 0.12)	0.95		
Higher Education	1.00 (0.43, 1.58)	0.001	0.35 (-0.31, 1.01)	
Lower Socio-economic Status	-1.06 (-1.71, -0.40)	0.002	-1.01 (-1.75, -0.27)	
Urban Area	-0.08 (-0.87, 0.71)	0.84		
Induction/IVF Conception	-0.22 (-0.92, 0.48)	0.54		
Gravidity >2	-0.23 (-0.86, 0.40)	0.48		
≥1 Abortions	-0.19 (-0.79, 0.41)	0.53		

**Table S3: Details of patients registered on SwasthGarbh (SG) App.**

Patient's ID	Disease	ANC1 Hb	ANC1 BP	Delivery Hb	Delivery BP	Obstetric Complications	Medical Complications
SG_1	Hypothyroidism, Anemia	9.5	110/72	11.1	122/75		
SG_2	Hypothyroidism	13.7	118/76	11.4	123/77	ICP	
SG_3		12.5	121/70	13.0	110/74	PPROM, GDM (on metformin)	
SG_4		12.0	118/76	12.0	108/68		
SG_5	Hypothyroidism, Beta thalassemia trait	10.6	104/76	9.6	108/68	Stage 1 FGR, GDM	Moderate anemia
SG_6		12.3	104/68	9.2	110/70		Moderate anemia
SG_7		12.0	111/74	12.0	122/70	PTL, GDM, ICP	
SG_8	Hypothyroidism	13.5	99/60	13.4	108/66		
SG_9	Retropositive	12.3	126/81	12.0	118/74	Stage 1 FGR	
SG_10		11.3	112/78	11.3	138/80	Stage 1 FGR	
SG_11	RHD post MVR+ ASD closure, Seizure disorder	11.0	110/76	12.1	100/74	Stage 1 FGR, ICP	
SG_12	APLA	11.8	110/70	9.1	122/66		Moderate anemia
SG_13		9.9	121/53	10.9	106/80	Stage 1 FGR	Mild anemia
SG_14	Hypothyroidism	12.0	104/66	12.7	104/70		Recurrent UTI
SG_15		11.4	130/81	12.2	120/80		
SG_16	Fibroid	12.3	107/64	12.7	122/72	GDM A1, ICP	
SG_17		8.1	106/66	10.5	120/80	IUD in 1 twin, FGR in other, PTL	Mild anemia
SG_18	H/o uterine prolapse	11.7	120/76	13.3	134/90	Gestational hypertension, ICP, SFGR in one twin	
SG_19	Hypothyroidism	13.3	118/77	9.1	110/70	ICP	Moderate anemia
SG_20		9.7	108/78	10.3	90/60		Mild anemia
SG_21		13.7	127/80	14.8	110/70	Oligohydramnios	
SG_22		13.0	104/68	14.6	90/60	Rhisoimmunized pregnancy	
SG_23		11.1	128/76	9.5	128/80	PPROM	Moderate anemia
SG_24		13.4	122/80	12.4	113/78		
SG_25		10.7	111/62	12.5	108/66	Stage 1 FGR	
SG_26	Chronic hypertension	12.8	140/93	12.6	130/90	GDM, ICP	
SG_27	Chronic hypertension, APLA	10.9	106/73	11.3	136/92	PTL	Chronic hypertension
SG_28	DM, Hypothyroidism	10.1	118/74	10.8	132/80		Mild anemia
SG_29		9.4	109/79	10.4	125/70	Stage 1 FGR	Mild anemia
SG_30		11.7	107/63	11.9	110/70	PPROM	
SG_31		8.4	135/82	8.6	126/85	PTL	Moderate anemia
SG_32		11.9	111/61	13.2	116/70		
SG_33		10.8	112/68	11.4	100/62	Stage 1 FGR	
SG_34		11.1	118/76	13.0	124/80		
SG_35	Hypothyroidism	12.1	122/81	10.6	116/70		Mild anemia
SG_36	Type 1 DM, Hypothyroidism	10.8	131/88	12.3	138/83		
SG_37	H/o fibroid uterus	10.3	126/77	11.0	130/80		
SG_38		10.5	101/75	10.2	110/70		Mild anemia
SG_39		11.9	104/76	9.4	112/88		Moderate anemia
SG_40	Hypothyroidism	12.6	90/60	13.5	110/70		
SG_41		10.2	118/72	11.5	134/84	Low lying placenta	
SG_42	ITP, Hypothyroidism	13.0	131/82	13.5	126/85		
SG_43	H/o septate uterus	12.1	112/68	12.1	136/92	Gestational hypertension, ICP, PPRM	
SG_44		13.3	102/62	11.2	125/84	ICP, Placenta previa	
SG_45	Hypothyroidism, H/o fibroid uterus	6.8	120/76	8.9	112/66	Stage 1 FGR	Moderate anemia
SG_46		13.8	104/70	11.5	112/70	Stage 1 FGR	
SG_47		10.8	107/69	11.5	124/88		
SG_48	HIV	9.1	110/69	12.4	136/88		
SG_49		13.2	122/76	11.8	112/68	GDM	
SG_50		12.5	118/83	12.7	140/92	Stage 1 FGR	Chronic hypertension
SG_51	Klippel Feil syndrome, Hypothyroidism	13.1	124/82	12.5	138/75		
SG_52		12.9	120/88	13.4	142/92		
SG_53		10.1	108/78	11.3	112/76		
SG_54	Hyperthyroidism	11.3	125/86	10.4	120/84		Mild anemia
SG_55		11.5	116/80	8.6	122/78		Moderate anemia
SG_56		9.7	100/66	11.0	112/70		
SG_57	Hypothyroidism	12.6	113/68	11.7	100/64	Stage 1 FGR	
SG_58		10.7	104/70	10.6	107/71		Mild anemia
SG_59		11.6	118/70	13.3	130/84	GDM, Stage 1 FGR	
SG_60	H/o appendicitis	11.5	125/76	12.0	118/70	Stage 1 FGR	
SG_61		12.2	104/66	11.4	108/68		
SG_62	RHD with severe MR, mild AR	9.1	108/73	11.2	122/70	GDM, ICP	
SG_63	LNTB, Hyperprolactinemia	12.4	112/76	11.7	104/78		
SG_64	RHD with mild MR	11.6	102/63	10.0	118/72		Mild anemia
SG_65		8.5	96/64	9.8	130/88		Moderate anemia
SG_66		11.2	118/68	12.9	130/80		
SG_67		9.6	119/73	10.0	118/80	GDM, Stage 1 FGR	Mild anemia
SG_68		10.0	134/82	10.4	130/86	GDM, ICP	Mild anemia
SG_69	RHD post PTMC, Hypothyroidism	10.9	102/66	10.8	118/68	GDM	Mild anemia
SG_70		8.4	122/80	10.3	120/70		Mild anemia
SG_71		11.8	124/72	11.1	130/80	Stage 1 FGR	

APLA: Antiphospholipid antibody syndrome; AR: Aortic regurgitation; ASD: Atrial septal defect; DM: Diabetes mellitus; FGR: Fetal growth restriction; GDM A1: Gestational diabetes mellitus - on diet; HIV: Human Immunodeficiency Virus; ICP: Intrahepatic cholestasis of pregnancy; ITP: Immune thrombocytopenic purpura; IUD: Intrauterine death; LNTB: Lymph node tuberculosis; MR: Mitral regurgitation; MVR: Mitral valve replacement; PPRM: Preterm prelabor rupture of membranes; PTL: Preterm labor; PTMC: Percutaneous transvenous mitral commissurotomy; RHD: Rheumatic heart disease; SFGR: Selective fetal growth restriction; UTI: Urinary tract infection.

**Table S4: Details of control (C) patients.**

Patient's ID	Disease	ANC1 Hb	ANC1 BP	Delivery Hb	Delivery BP	Obstetric Complications	Medical Complications
C_1		13.1	104/72	12.1	112/74	Rhisoimmunised pregnancy, PPROM	
C_2		11.1	120/74	10.8	126/78		Mild anemia
C_3	Takayasu's arteritis, Renovascular hypertension	9.8	138/84	12.0	160/108	Preeclampsia, GDM A1, ICP	
C_4	Beta thalassemia trait	8.6	102/68	7.4	110/80		Moderate anemia
C_5	Hypothyroidism	11.2	118/68	10.8	108/66		Mild anemia
C_6		14.2	108/74	13.1	128/80		
C_7		11.1	108/62	10.6	110/84	Gestational hypertension, ICP	Mild anemia
C_8	Chronic hypertension	10.9	144/76	10.5	136/92	Preeclampsia, Stage 1 FGR	Mild anemia
C_9	RHD with severe MS with severe PAH, post DVR	8.8	100/66	10.8	104/70	Stage 1 FGR	Mild anemia
C_10	Polio	12.6	122/68	12.9	118/74		
C_11	Epilepsy	12.1	118/72	12.0	124/84	GDM A1	
C_12	RHD with moderate MS	13.6	98/64	11.9	106/66	ICP	
C_13		12.4	122/76	12.0	112/60		
C_14	Sjogren's syndrome	11.2	..	10.9	..		Mild anemia
C_15	Genital TB	11.0	108/68	12.9	122/60		
C_16		11.3	104/66	11.5	132/90	Gestational hypertension	
C_17		13.2	128/88	10.4	140/90	GDM A1	Mild anemia
C_18		12.5	116/70	9.8	130/86	Low lying placenta	Moderate anemia
C_19		11.3	108/66	8.0	136/80		Moderate anemia
C_20		10.2	122/80	10.6	104/70	Stage 1 FGR	Mild anemia
C_21		14.2	120/88	12.5	100/70		
C_22		10.5	124/88	10.8	130/80	GDM A1	Mild anemia
C_23		11.2	130/80	9.2	132/86	ICP	Moderate anemia
C_24		11.5	136/88	10.2	176/120	Severe preeclampsia, Stage 1 FGR, Oligohydramnios	Mild anemia
C_25	Chronic hypertension	11.5	130/88	10.3	135/95	Superimposed preeclampsia	Chronic hypertension, Mild anemia
C_26		12.2	118/68	12.0	130/80		
C_27	ASD closure	8.9	100/66	7.9	120/72		Moderate anemia
C_28		12.5	124/76	11.6	140/92	GDM A1, Stage 1 FGR, Gestational hypertension	
C_29		12.2	119/96	12.7	144/90	Stage 1 FGR	Chronic hypertension
C_30		12.7	119/88	11.9	104/68	Oligohydramnios	
C_31		8.7	116/86	7.0	138/88		Moderate anemia
C_32	H/o PCOS	10.1	109/76	10.0	110/74		Mild anemia
C_33	H/o intestinal obstruction	12.8	122/72	12.2	116/76	Stage 1 FGR	
C_34		13.8	118/66	14.0	112/70	Stage 1 FGR	
C_35		12.3	112/88	7.9	120/80	ICP, Oligohydramnios	Moderate anemia
C_36		12.0	115/78	10.7	100/60		Mild anemia
C_37	Hypothyroidism	11.5	122/74	9.3	130/80	ICP, GDM A1	Moderate anemia
C_38		11.8	124/72	11.1	130/80	Stage 1 FGR	
C_39		12.6	134/82	10.5	110/80	ICP	Mild anemia
C_40		12.0	126/83	12.4	112/70	Oligohydramnios	
C_41		10.7	107/70	10.0	104/70	Stage 1 FGR	Mild anemia
C_42		13.1	110/77	11.8	120/80	Stage 1 FGR	
C_43		12.0	100/66	11.5	108/70		
C_44		8.5	104/68	9.6	110/76		Moderate anemia
C_45	Hypothyroidism	9.4	124/80	12.8	120/88	Stage 1 FGR	
C_46	Hypothyroidism	12.7	109/70	11.6	120/60	GDM, Stage 1 FGR	
C_47		11.5	109/78	12.8	120/86		
C_48	H/o appendicitis	12.4	110/66	11.8	118/78	Stage 1 FGR	
C_49		12.4	122/85	11.1	138/90		
C_50	Seizure disorder	12.0	108/68	10.1	120/84		Mild anemia
C_51		11.2	112/68	11.7	110/74	Stage 1 FGR	
C_52		12.2	101/66	11.4	133/74	GDM	
C_53		12.6	124/78	11.1	130/70		
C_54	Hypothyroidism	11.7	110/72	11.0	130/66	GDM, Stage 1 FGR, ICP	
C_55		12.0	108/60	10.4	112/80		Mild anemia
C_56	H/o ectopic pregnancy	14.0	113/81	13.8	128/98	Stage 1 FGR	Chronic hypertension
C_57		10.2	112/63	9.5	120/84		Moderate anemia
C_58		12.7	140/88	8.8	130/94	GDM	Moderate anemia
C_59	H/o cholelithiasis	11.2	122/76	10.0	130/80	ICP	Mild anemia
C_60		10.9	105/65	10.5	122/80		Mild anemia
C_61	Beta thalassemia trait, Chronic hypertension	12.8	135/96	11.1	132/88	Stage 1 FGR	Chronic hypertension
C_62		12.0	112/66	11.8	136/80		
C_63	Chronic hypertension. Asthma	10.2	121/84	9.9	140/88	Stage 1 FGR	Chronic hypertension, Moderate anemia
C_64		12.0	110/78	10.1	130/82	GDM, ICP	Mild anemia
C_65	DVT	10.7	108/64	12.5	112/78	Stage 1 FGR	
C_66		11.3	100/66	10.9	110/70		Mild anemia
C_67	Hypothyroidism, H/o infertility	11.8	124/74	10.0	154/98	ICP	Chronic hypertension, Mild anemia
C_68	Breast cancer, H/o MRM	9.9	112/70	12.0	114/76	Stage 1 FGR	
C_69	HbE heterozygous, H/o fibroid uterus	11.1	124/80	9.9	120/90		Chronic hypertension, Moderate anemia
C_70		11.3	112/64	12.3	130/84	GDM	
C_71		12.2	116/77	10.3	124/80		Mild anemia
C_72		10.3	110/78	10.8	130/80		Mild anemia

ASD: Atrial septal defect; DVR: Double valve replacement; DVT: Deep vein thrombosis; FGR: Fetal growth restriction; GDM A1: Gestational diabetes mellitus - on diet; HbE: Hemoglobin E; ICP: Intrahepatic cholestasis of pregnancy; MRM: Modified radical mastectomy; MS: Mitral stenosis; PAH: Pulmonary arterial hypertension; PCOS: Polycystic ovary syndrome; PPROM: Preterm prelabor rupture of membranes; RHD: Rheumatic heart disease; TB: Tuberculosis.