

Article title: Local Dynamics of Collaboration for Maternal, Newborn and Child Health: A Social Network Analysis of Healthcare Providers and Their Managers in Gert Sibande District, South Africa

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Supplementary file 2.

Table S1: Network metrics summary

Node metrics	Know other actors			Degree of Communication		
	District	Sub-district 1	Sub-district 2	District	Sub-district 1	Sub-district 2
*Highest betweenness	DPM1 (1540)	MO2 (374)	CEO3 (110)	DPM1 (2874)	MO5 (1210)	CEO3 (1403)
	DCST2 (584)	MO5 (324)	MOMM3 (83)	NUT1 (1534)	CEO2 (946)	NM1 (411)
	DCST1 (578)	CEO2 (258)	NM1 (53)	DCST1 (749)	OPM1 (369)	OMP1 (294)
	NUT1 (419)	CEO1 (192)	NUT2 (40)	DHIS1 (336)	NM4 (224)	NUT2 (243)
	DHIS1 (217)	PN19 (174)	OPM6 (36)	DCST2 (333)	MO3 (170)	MO14 (175)
*Highest in-degree	Degree of Communication**			Feedback		
	District	Sub-district 1	Sub-district 2	District	Sub-district 1	Sub-district 2
	DPM1 (228)	OPM1 (156)	CEO3 (186)	DCST1 (16)	DCST2 (12)	DPM11 (8)
	DCST1 (149)	CEO2 (135)	NM1 (117)	DCST2 (15)	DCST1 (12)	OPM8 (7)
	DHIS1 (134)	MO2 (135)	NUT2 (99)	DPM1 (14)	MOMM2 (10)	AD PHC (6)
	NUT1 (132)	MO5 (115)	OMP1 (63)	DPM11 (12)	MO3 (8)	NM1 (5)
	DCST2 (113)	MO3 (95)	MO14 (62)	DM (9)	MO11 (8)	OMP4 (5)
	Advice			Problem-solving		
	District	Sub-district 1	Sub-district 2	District	Sub-district 1	Sub-district 2
	DCST1 (17)	DCST1 (12)	OPM8 (5)	DCST1 (14)	DCST1 (10)	AD PHC (6)
	DCST2 (16)	DCST2 (10)	CEO3 (5)	DCST2 (13)	DCST2 (8)	OPM8 (5)
	DPM1 (14)	MOMM2 (7)	AD PHC (5)	DM (11)	MOMM2 (8)	DPM11 (5)
	DPM4 (8)	DPM1 (7)	NUT1 (4)	DPM1 (11)	NM2 (8)	OPM6 (4)
	DM (8)	NM2 (7)	DPM4 (4)	DPM11 (9)	MO12 (7)	CEO3 (4)
	Emotional support			Sharing new idea		
	District	Sub-district 1	Sub-district 2	District	Sub-district 1	Sub-district 2
	DPM1 (6)	NM2 (6)	OPM8 (3)	DCST1 (13)	DCST1 (10)	OPM8 (5)
DM (5)	MOMM2 (5)	NM1 (2)	DPM1 (11)	MOMM2 (6)	DPM11 (5)	
DCST1 (3)	MO11 (5)	AD PHC (2)	DM (8)	MO3 (6)	AD PHC (5)	
DCST3 (3)	MO2 (4)	NUT2 (1)	DCST2 (7)	DPM1 (6)	NM1 (3)	
DPM5 (2)	DM (4)	DPM4 (1)	DPM11 (7)	NM2 (6)	CEO3 (3)	

*Five actors (node code) with the highest metrics (in bracket) are reported. **Weighted degree

Abbreviations: CEO=Chief Executive Officer; DCST=District Clinical Specialist Team; DHIS=District health information system manager; DM=District manager; DPM=District programme manager; MO=Medical officer; MOMM=Medical manager; NM=Nursing services manager; NUT=Nutrition service manager; OMP=Operational manager primary healthcare facility; OPM=Operational manager hospital ward.

Table S2: Degree of communication by professional interface - Actors with highest betweenness centrality*

Cluster 1			Cluster 2			Cluster 3			Cluster 4		
Doctors	Nurses	Others	Doctors	Nurses	Others	Doctors	Nurses	Others	Doctors	Nurses	Others
DCST1 (749)	DPM1 (2874)	NUT1 (1534)	MO5 (1517)	NM4 (220)	-	MO3 (162)	CEO2 (782)	DHIS3 (71)	MO14 (175)	CEO3 (1403)	NUT2 (99)
DCST2 333)	DPM11 (241)	DHIS1 (336)	MOCS4 (18)	PN19 (135)	-	MO2 (150)	OPM1 (514)	NUT3 (0,8)	MOMM3 (15)	NM1 (411)	DHIS2 (20)
-	DPM2 (109)	DPM7 (4)	MO13 (10)	OPM2 (60)	-	MO20 (61)	PN16 (115)	-	MOMM4 (1)	OMP1 (294)	SW (9)
-	DM (94)	DPM3 (1)	MOCS1 (8)	Nurse (6)	-	MO18 (21)	PN15 (81)	-	-	Nurse (98)	NUT4 (9)
-	DCST3 (29)	-	MO12 (8)	CEO1 (1)	-	MOMM2 (8)	PN17 (13)	-	-	OPM6 (70)	NUT5 (9)

*Five actors (node code) with the highest betweenness centrality (in bracket) are reported.

Abbreviations: CEO=Chief Executive Officer; DCST=District Clinical Specialist Team; DHIS=District health information system manager; DM=District manager; DPM=District programme manager; MO=Medical officer; MOMM=Medical manager; NM=Nursing services manager; NUT=Nutrition service manager; OMP=Operational manager primary healthcare facility; OPM=Operational manager hospital ward; SW=Social worker.