

SUMMARY OF TRAINING PROGRAMMES AND STUDY DESIGNS

Training package	Study (name &/or location)	No. & level hospitals/ health facilities in study		LMIC / HIC	No. of articles in review	Study design	'Apex' question(s)	Kirkpatrick levels			
		Hospitals	Health centres					1	2	3	4
PROMPT	Bristol, UK ⁽¹⁻³⁾	1 TTH/RH	-	HIC	3	Before-after	Does training have an impact on patient outcome?			3c	4c
	SaFE trial, Southwest England ⁽⁴⁻¹³⁾	6 DH (L2&L3)	-	HIC	10	RCT	Which delivery method/s of training is/are more efficient?		2b,c	3b	
	NHS Foundation Trust, Liverpool, UK ^(14, 15)	-	-	HIC	1	Before-after	Does training+ have an impact on patient outcome?				4b,c
	Victoria, Australia ⁽¹⁶⁾	7	-	HIC	1	Before-after	Does training have an impact on patient outcome?	1	2a		4b,c
PRONTO	Mexico trial ^{(17, 18)*}	24 (10 I; 14 C)	-	LMIC	2	RCT	Is training effective with immediate benefits for providers? [Does training+ have an impact on patient outcome?]	1	2b,c		[4a,b,c]*
AIP	QUARITE, Senegal & Mali ⁽¹⁹⁾	46 RH (L1&L2) (23 I; 23 C)	-	LMIC	1	RCT	Does training+ have an impact on patient outcome?				4b,c
	Moi Teaching and Referral Hospital, Kenya ⁽²⁰⁾	1 TTH/RH	-	LMIC	1	Before-after	Does training have an impact on patient outcome?			3c	4c
ALSO	Kagera Regional Hospital, Tanzania ⁽²¹⁾	1 RH (L2)	-	LMIC	1	Before-after	Does training have an impact on patient outcome?				4b,c
LSTM-RCOG LSS-EOC and NC	AGOTA-NVOG, Tanzania ⁽²²⁾	-	-	LMIC	1	Before-after	Is training effective with immediate benefits for providers?	1	2b		
	Sub-Saharan Africa (7 countries) ⁽²³⁾	-	-	LMIC	1	Before-after	Is training effective with immediate benefits for providers?	1	2b,c		
	Somaliland, Somalia ⁽²⁴⁾	1 public 2 private	8 public	LMIC	1	Before-after	Does training have an organisational impact?	1	2b,c	3a	4b
	Making it Happen, Bangladesh & India ⁽²⁵⁾	4 DH (Bang) - (India)	4 MCWC 17 UHC (Bang) - (India)	LMIC	1	Before-after	Is training effective with immediate benefits for providers?	1	2a,b,c		

Training package	Study (name &/or location)	No. & level hospitals/ health facilities in study		LMIC / HIC	No. of articles in review	Study design	'Apex' question(s)	Kirkpatrick levels			
		Hospitals	Health centres					1	2	3	4
LSS-ACNM	Vietnam ⁽²⁶⁾	3 DH 3 FH	40	LMIC	1	Quasi-experimental	Is training efficient?			3c	
CRM-based	National study, US ⁽²⁷⁾	15 (7 I; 8 C) (6 military 7 civilian)	-	HIC	1	RCT	Does team training have an impact on patient outcome?				4c
	Beth Israel Deaconess Medical Center, US ⁽²⁸⁾	1 TTH	-	HIC	1	Before-after	Does team training have an impact on patient outcome?		2a		4b,c
	Perinatal Safety Initiative, US ⁽²⁹⁾	1 TH	-	HIC	1	Before-after	Does team training have an impact on patient outcome?			3a	4b,c
	Rhode Island Hospital, US ⁽³⁰⁾	1	-	HIC	1	Before-after	Does team training have an impact on patient outcome?				4b,c
	Geneva University Hospital, Switzerland ⁽³¹⁾	1 TTH	-	HIC	1	Before-after	Is team training efficient?	1	2a	3a	
	TeamSTEPPS, US ⁽³²⁾	3 CH	-	HIC	1	RCT	Which delivery method/s of training has/have a better impact on patient outcome?		2a		4c
	OBCTT, Southeast US ⁽³³⁾	1 TTH	-	HIC	1	Quasi-exp. before-after	Is a particular training approach effective with immediate benefits for providers?	1	2a,b,c		
OTHER	CEmONC, Tanzania ⁽³⁴⁾	1 DH		LMIC	1	Before-after	Is training efficient?			3c	
	Copenhagen University Hospital, Denmark ⁽³⁵⁾	1 TTH	-	HIC	1	Before-after	Does training have an organisational impact?	1	2a,b	3a	4b
	University of Oporto, Portugal ⁽³⁶⁾	1 TTH	-	HIC	1	Before-after	Is training efficient?	1	2b	3a	

KEY:

* In progress – abstracts not included^(37, 38)
 - = unsure, not mentioned or not applicable
 CH = community hospital
 FH = field hospital
 Training+ = training plus other integrated activities (e.g. protocols, audit & feedback, outreach) to improve obstetric care

DH = district hospital
 RH = referral hospital
 TH = tertiary hospital/medical centre
 TTH = tertiary and teaching hospital

MCWC = maternal and child welfare centre
 UHC = upazilla health complex
 L1 = level 1
 L2 = level 2 (secondary/regional)
 L3 = level 3 (tertiary)

	Only abstract available for analysis
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SUMMARY:

	Countries		Level of facilities		HIC/LMIC	# articles	Study design	1	2	3	4	
TOTALS	United Kingdom	3	No of studies:		HIC 13	35	RCT	10	a = 7	a = 5	a = 0	
	United States	6	TH/TTH	7	LMIC 10		Quasi-experimental		5	b = 9	b = 1	b = 10
	Europe	3	RH	2			Before-after		2	c = 6	c = 4	c = 11
	Australia	1	DH	4					16	Total	Total	Total
	Latin America	1	CH	1						Level 1 =	Level 2 =	Level 3 =
	Sub-Saharan Africa	7	FH	1						10	13	9
	Asia	2	Other	5								

Training package	Study (name &/or location)	No. & level hospitals/ health facilities in study		LMIC / HIC	No. of articles in review	Study design	Question(s)	Kirkpatrick levels			
		Hospitals	Health centres					1	2	3	4
Excluded – 2 scenarios	TOTSI, Netherlands ⁽³⁹⁾	24	-	HIC	1	RCT	Is team training efficient?			3b,c	
	Simulation vs. didactic, Lucille Packard Children’s Hospital, US ⁽⁴⁰⁾	1	-	HIC	1	RCT	Which delivery method/s of training is effective with immediate benefits for providers?		2b,c		

‘Apex’ questions:

KP	Questions around training per se:	Studies (n)	Questions around the delivery methods of training:	Studies (n)	TOTAL
2	Is training effective in providing immediate benefits to provider participants?	4	Is a particular training approach effective in providing immediate benefits to provider participants?	1	5
3	Is training efficient?	3	Which delivery method/s of training is/are more efficient? Is team training efficient?	1 1	5
4	Does training have an impact on patient outcome?	4	Which delivery method/s of training has/have a better impact on patient outcome?	1	13
	Does training+ have an impact on patient outcome?	2	Does team training have an impact on patient outcome?	4	
	Does training have an organisational impact?	2			
	Total	15	Total	8	23

SORTED ACCORDING TO ‘APEX’ QUESTIONS:

Training package	Study (name &/or location)	Hospitals	Health centres	LMIC / HIC	No. of articles in review	Study design		‘Apex’ question(s)	1	2	3	4
Questions around training per se:												
PRONTO	Mexico trial ^{(17, 18)*}	24	-	LMIC	2	RCT	2	Is training effective with immediate benefits to providers? [Does training+ have an impact on patient outcome?]	1	2b,c		[4a,b,c]*
LSTM-RCOG LSS	AGOTA-NVOG, Tanzania ⁽²²⁾	-	-	LMIC	1	Before-after	2	Is training effective with immediate benefits to providers?	1	2b		
LSTM-RCOG LSS	Sub-Saharan Africa (7 countries) ⁽²³⁾	-	-	LMIC	1	Before-after	2	Is training effective with immediate benefits to providers?	1	2b,c		
LSTM-RCOG LSS	Making it Happen, Bangladesh & India ⁽²⁵⁾	4 DH (Bang) - (India)	21 (Bang) - (India)	LMIC	1	Before-after	2	Is training effective with immediate benefits to providers?	1	2a,b,c		
OTHER	CEmONC, Tanzania ⁽³⁴⁾	1 DH		LMIC	1	Before-after	3	Is training efficient?			3c	
LSS-ACNM	Vietnam ⁽²⁶⁾	3 DH 3 FH	40	LMIC	1	Quasi-experimental	3	Is training efficient?			3c	
OTHER	University of Oporto, Portugal ⁽³⁶⁾	1 TTH	-	HIC	1	Before-after	3	Is training efficient?	1	2b	3a	
PROMPT	Bristol, UK ⁽¹⁻³⁾	1 TTH/RH	-	HIC	3	Before-after	4.1	Does training have an impact?			3c	4c
PROMPT	Victoria, Australia ⁽¹⁶⁾	7	-	HIC	1	Before-after	4.1	Does training have an impact?	1	2a		4b,c
AIP	Moi Teaching and Referral Hospital, Kenya ⁽²⁰⁾	1 TTH/RH	-	LMIC	1	Before-after	4.1	Does training have an impact?			3c	4c
ALSO	Kagera Regional Hospital, Tanzania ⁽²¹⁾	1 RH (L2)	-	LMIC	1	Before-after	4.1	Does training have an impact?				4b,c
PROMPT	NHS Foundation Trust, Liverpool, UK ^(14, 15)	-	-	HIC	1	Before-after	4.2	Does training+ have an impact?				4b,c
AIP	QUARITE, Senegal & Mali ⁽¹⁹⁾	46 RH (L1&L2)	-	LMIC	1	RCT	4.2	Does training+ have an impact?				4b,c
LSTM-RCOG LSS	Somaliland, Somalia ⁽²⁴⁾	1 public 2 private	8 public	LMIC	1	Before-after	4.3	Does training have an organisational impact?	1	2b,c	3a	4b
OTHER	Copenhagen University Hospital, Denmark ⁽³⁵⁾	1 TTH	-	HIC	1	Before-after	4.3	Does training have an organisational impact?	1	2a,b	3a	4b

Training package	Study (name &/or location)	Hospitals	Health centres	LMIC / HIC	No. of articles in review	Study design		'Apex' question(s)	1	2	3	4
Questions around the delivery methods of training:												
CRM-based	OBCTT, Southeast US ⁽³³⁾	1 TTH	-	HIC	1	Quasi-exp. before-after	T2	Is a particular training approach effective with immediate benefits to provider participants?	1	2a,b,c		
PROMPT	SaFE trial, Southwest England ⁽⁴⁻¹³⁾	6 DH (L2&L3)	-	HIC	10	RCT	T3.1	Which delivery method/s of training is/are more efficient?		2b,c	3b	
CRM-based	Geneva University Hospital, Switzerland ⁽³¹⁾	1 TTH	-	HIC	1	Before-after	T3.2	Is team training efficient?	1	2a	3a	
CRM-based	TeamSTEPPS, US ⁽³²⁾	3 CH	-	HIC	1	RCT	T4.1	Which delivery method/s of training has/have a better impact on patient outcome?		2a		4c
CRM-based	National study, US ⁽²⁷⁾	15 (6 military 7 civilian)	-	HIC	1	RCT	T4.2	Does team training have an impact on patient outcome?				4c
CRM-based	Beth Israel Deaconess Medical Center, US ⁽²⁸⁾	1 TTH	-	HIC	1	Before-after	T4.2	Does team training have an impact on patient outcome?		2a		4b,c
CRM-based	Perinatal Safety Initiative, US ⁽²⁹⁾	1 TH	-	HIC	1	Before-after	T4.2	Does team training have an impact on patient outcome?			3a	4b,c
CRM-based	Rhode Island Hospital, US ⁽³⁰⁾	1	-	HIC	1	Before-after	T4.2	Does team training have an impact on patient outcome?				4b,c

SUMMARY OF TRAINING DELIVERY METHODS REPORTED IN PUBLICATIONS

According to teaching method/approach

Training package	Study (name &/or location)	Hospitals	Health centres	LMIC/ HIC	# articles	Design	Method	Simulation type	Place	Refreshers/ repeats	Team training	Follow up	Communi- cation	1	2	3	4
AIP	QUARITE, Senegal & Mali ⁽¹⁹⁾	46 RH (L1&L2)	-	LMIC	1	RCT	- (CI)	-	Off (+ On)	*	-	**	-				4b,c
AIP	Moi Teaching and Referral Hospital, Kenya ⁽²⁰⁾	1 TTH/RH	-	LMIC	1	Before-after	-	-	-	-	-	-	-			3c	4c
LSS-ACNM	Vietnam ⁽²⁶⁾	3 DH 3 FH	40	LMIC	1	Quasi-experimental	-	-	Off	-	-	-	-			3c	
OTHER	CEmONC, Tanzania ⁽³⁴⁾	1 DH		LMIC	1	Before-after	-	-	-	-	-	-	-			3c	
CRM-based	TeamSTEPS, US ⁽³²⁾	3 CH	-	HIC	1	RCT	D vs. ST	HF	On?	-	T	-	-		2a		4c
PROMPT	Victoria, Australia ⁽¹⁶⁾	7	-	HIC	1	Before-after	D + S	-	(Off +) On)	*	T	-	-	1	2a		4b,c
LSTM-RCOG LSS	AGOTA-NVOG, Tanzania ⁽²²⁾	-	-	LMIC	1	Before-after	D + S	LF	Off	-	-	-	-	1	2b		
LSTM-RCOG LSS	Somaliland, Somalia ⁽²⁴⁾	1 public 2 private	8 public	LMIC	1	Before-after	D + S	LF	Off	-	-	*	Y	1	2b,c	3a	4b
LSTM-RCOG LSS	Making it Happen, Bangladesh & India ⁽²⁵⁾	4 DH (Bang) - (India)	21 (Bang) - (India)	LMIC	1	Before-after	D + S	LF	Off	-	-	-	-	1	2a,b,c		
OTHER	Copenhagen University Hospital, Denmark ⁽³⁵⁾	1 TTH	-	HIC	1	Before-after	D + S	LF	On	*	-	-	-	1	2a,b	3a	4b
PROMPT	SaFE trial, Southwest England ⁽⁴⁻¹³⁾	6 DH (L2&L3)	-	HIC	10	RCT	D + ST	HF or LF + PA	Off or On	*	T	Y	Y		2b,c	3b	
CRM-based	Rhode Island Hospital, US ⁽³⁰⁾	1	-	HIC	1	Before-after	D + ST	HF	On	-	T	-	Y				4b,c
CRM-based	OBCTT, Southeast US ⁽³³⁾	1 TTH	-	HIC	1	Quasi-exp. before-after	D + ST	HF	Off	-	T	-	Y	1	2a,b,c		

Training package	Study (name &/or location)	Hospitals	Health centres	LMIC/ HIC	# articles	Design	Method	Simulation type	Place	Refreshers/ repeats	Team training	Follow up	Communi- cation	1	2	3	4
CRM-based	Geneva University Hospital, Switzerland ⁽³¹⁾	1 TTH	-	HIC	1	Before-after	DE	-	Off	-	T	Y	Y	1	2a	3a	
LSTM-RCOG LSS	Sub-Saharan Africa (7 countries) ⁽²³⁾	-	-	LMIC	1	Before-after	DE + S	LF	Off	-	-	-	-	1	2b,c		
PROMPT	Bristol, UK ⁽¹⁻³⁾	1 TTH/RH	-	HIC	3	Before-after	DE + ST	LF	On	*	T	**	Y			3c	4c
ALSO	Kagera Regional Hospital, Tanzania ⁽²¹⁾	1 RH (L2)	-	LMIC	1	Before-after	DE + ST	LF	Off	-	T	*	-				4b,c
CRM-based	National study, US ⁽²⁷⁾	15 (6 mil. 7 civ.)	-	HIC	1	RCT	DE + ST	LF?	On	-	T	-	Y				4c
CRM-based	Beth Israel Deaconess Medical Center, US ⁽²⁸⁾	1 TTH	-	HIC	1	Before-after	DE + ST	LF?	On	-	T	-	Y		2a		4b,c
OTHER	University of Oporto, Portugal ⁽³⁶⁾	1 TTH	-	HIC	1	Before-after	ST	HF + PA	On	-	-	-	-	1	2b	3a	
PRONTO	Mexico trial ^{(17, 18)*}	24	-	LMIC	2	RCT	ST	HF	Off	-	T	*	Y	1	2b,c		[4a,b,c]*
CRM-based	Perinatal Safety Initiative, US ⁽²⁹⁾	1 TH	-	HIC	1	Before-after	ST	-	On	Y	T	Y	Y			3a	4b,c
PROMPT	NHS Foundation Trust, Liverpool, UK ^(14, 15)	-	-	HIC	1	Before-after	ST (CI)	LF	On	*	T	*	Y				4b,c

According to simulation type

Training package	Study (name &/or location)	Hospitals	Health centres	LMIC/ HIC	# articles	Design	Method	Simulation type	Place	Refreshers/ repeats	Team training	Follow up	Communication	1	2	3	4
AIP	QUARITE, Senegal & Mali ⁽¹⁹⁾	46 RH (L1&L2)	-	LMIC	1	RCT	- (CI)	-	Off (+ On)	*	-	**	-				4b,c
PROMPT	Victoria, Australia ⁽¹⁶⁾	7	-	HIC	1	Before-after	D + S	-	(Off +) On)	*	T	-	-	1	2a		4b,c
AIP	Moi Teaching and Referral Hospital, Kenya ⁽²⁰⁾	1 TTH/RH	-	LMIC	1	Before-after	-	-	-	-	-	-	-			3c	4c
LSS-ACNM	Vietnam ⁽²⁶⁾	3 DH 3 FH	40	LMIC	1	Quasi-experimental	-	-	Off	-	-	-	-			3c	
CRM-based	Perinatal Safety Initiative, US ⁽²⁹⁾	1 TH	-	HIC	1	Before-after	ST	-	On	Y	T	Y	Y			3a	4b,c
CRM-based	Geneva University Hospital, Switzerland ⁽³¹⁾	1 TTH	-	HIC	1	Before-after	DE	-	Off	-	T	Y	Y	1	2a	3a	
OTHER	CEmONC, Tanzania ⁽³⁴⁾	1 DH		LMIC	1	Before-after	-	-	-	-	-	-	-			3c	
PROMPT	Mexico trial ^{(17, 18)*}	24	-	LMIC	2	RCT	ST	HF	Off	-	T	*	Y	1	2b,c		[4a,b,c]*
CRM-based	TeamSTEPS, US ⁽³²⁾	3 CH	-	HIC	1	RCT	D vs. ST	HF	On?	-	T	-	-		2a		4c
CRM-based	Rhode Island Hospital, US ⁽³⁰⁾	1	-	HIC	1	Before-after	D + ST	HF	On	-	T	-	Y				4b,c
CRM-based	OBCTT, Southeast US ⁽³³⁾	1 TTH	-	HIC	1	Quasi-exp. before-after	D + ST	HF	Off	-	T	-	Y	1	2a,b,c		
OTHER	University of Oporto, Portugal ⁽³⁶⁾	1 TTH	-	HIC	1	Before-after	ST	HF + PA	On	-	-	-	-	1	2b	3a	
PROMPT	Bristol, UK ⁽¹⁻³⁾	1 TTH/RH	-	HIC	3	Before-after	DE + ST	LF	On	*	T	**	Y			3c	4c
PROMPT	SaFE trial, Southwest England ⁽⁴⁻¹³⁾	6 DH (L2&L3)	-	HIC	10	RCT	D + ST	HF or LF + PA	Off or On	*	T	Y	Y		2b,c	3b	
PROMPT	NHS Foundation Trust, Liverpool, UK ^(14, 15)	-	-	HIC	1	Before-after	ST (CI)	LF	On	*	T	*	Y				4b,c

Training package	Study (name &/or location)	Hospitals	Health centres	LMIC/ HIC	# articles	Design	Method	Simulation type	Place	Refreshers/ repeats	Team training	Follow up	Communi- cation	1	2	3	4
ALSO	Kagera Regional Hospital, Tanzania ⁽²¹⁾	1 RH (L2)	-	LMIC	1	Before-after	DE + ST	LF	Off	-	T	*	-				4b,c
LSTM-RCOG LSS	AGOTA-NVOG, Tanzania ⁽²²⁾	-	-	LMIC	1	Before-after	D + S	LF	Off	-	-	-	-	1	2b		
LSTM-RCOG LSS	Sub-Saharan Africa (7 countries) ⁽²³⁾	-	-	LMIC	1	Before-after	DE + S	LF	Off	-	-	-	-	1	2b,c		
LSTM-RCOG LSS	Somaliland, Somalia ⁽²⁴⁾	1 public 2 private	8 public	LMIC	1	Before-after	D + S	LF	Off	-	-	*	Y	1	2b,c	3a	4b
LSTM-RCOG LSS	Making it Happen, Bangladesh & India ⁽²⁵⁾	4 DH (Bang) - (India)	21 (Bang) - (India)	LMIC	1	Before-after	D + S	LF	Off	-	-	-	-	1	2a,b,c		
OTHER	Copenhagen University Hospital, Denmark ⁽³⁵⁾	1 TTH	-	HIC	1	Before-after	D + S	LF	On	*	-	-	-	1	2a,b	3a	4b
CRM-based	National study, US ⁽²⁷⁾	15 (6 mil. 7 civ.)	-	HIC	1	RCT	DE + ST	LF?	On	-	T	-	Y				4c
CRM-based	Beth Israel Deaconess Medical Center, US ⁽²⁸⁾	1 TTH	-	HIC	1	Before-after	DE + ST	LF?	On	-	T	-	Y		2a		4b,c

According to place of simulation (offsite or onsite)

Training package	Study (name &/or location)	Hospitals	Health centres	LMIC/ HIC	# articles	Design	Method	Simulation type	Place	Refreshers/ repeats	Team training	Follow up	Communi- cation	1	2	3	4
AIP	Moi Teaching and Referral Hospital, Kenya ⁽²⁰⁾	1 TTH/RH	-	LMIC	1	Before-after	-	-	-	-	-	-	-			3c	4c
OTHER	CEmONC, Tanzania ⁽³⁴⁾	1 DH		LMIC	1	Before-after	-	-	-	-	-	-	-			3c	
PRONTO	Mexico trial ^{(17, 18)*}	24	-	LMIC	2	RCT	ST	HF	Off	-	T	*	Y	1	2b,c		[4a,b,c]*
ALSO	Kagera Regional Hospital, Tanzania ⁽²¹⁾	1 RH (L2)	-	LMIC	1	Before-after	DE + ST	LF	Off	-	T	*	-				4b,c
LSTM-RCOG LSS	AGOTA-NVOG, Tanzania ⁽²²⁾	-	-	LMIC	1	Before-after	D + S	LF	Off	-	-	-	-	1	2b		
LSTM-RCOG LSS	Sub-Saharan Africa (7 countries) ⁽²³⁾	-	-	LMIC	1	Before-after	DE + S	LF	Off	-	-	-	-	1	2b,c		
LSTM-RCOG LSS	Somaliland, Somalia ⁽²⁴⁾	1 public 2 private	8 public	LMIC	1	Before-after	D + S	LF	Off	-	-	*	Y	1	2b,c	3a	4b
LSTM-RCOG LSS	Making it Happen, Bangladesh & India ⁽²⁵⁾	4 DH (Bang) - (India)	21 (Bang) - (India)	LMIC	1	Before-after	D + S	LF	Off	-	-	-	-	1	2a,b,c		
LSS-ACNM	Vietnam ⁽²⁶⁾	3 DH 3 FH	40	LMIC	1	Quasi-experimental	-	-	Off	-	-	-	-			3c	
CRM-based	OBCTT, Southeast US ⁽³³⁾	1 TTH	-	HIC	1	Quasi-exp. before-after	D + ST	HF	Off	-	T	-	Y	1	2a,b,c		
CRM-based	Geneva University Hospital, Switzerland ⁽³¹⁾	1 TTH	-	HIC	1	Before-after	DE	-	Off	-	T	Y	Y	1	2a	3a	
PROMPT	SaFE trial, Southwest England ⁽⁴⁻¹³⁾	6 DH (L2&L3)	-	HIC	10	RCT	D + ST	HF or LF + PA	Off or On	*	T	Y	Y		2b,c	3b	
PROMPT	Victoria, Australia ⁽¹⁶⁾	7	-	HIC	1	Before-after	D + S	-	(Off +) On	*	T	-	-	1	2a		4b,c
AIP	QUARITE, Senegal & Mali ⁽¹⁹⁾	46 RH (L1&L2)	-	LMIC	1	RCT	- (CI)	-	Off (+ On)	*	-	**	-				4b,c
PROMPT	Bristol, UK ⁽¹⁻³⁾	1 TTH/RH	-	HIC	3	Before-after	DE + ST	LF	On	*	T	**	Y			3c	4c

Training package	Study (name &/or location)	Hospitals	Health centres	LMIC/HIC	# articles	Design	Method	Simulation type	Place	Refreshers/repeats	Team training	Follow up	Communication	1	2	3	4
PROMPT	NHS Foundation Trust, Liverpool, UK ^(14, 15)	-	-	HIC	1	Before-after	ST (CI)	LF	On	*	T	*	Y				4b,c
CRM-based	National study, US ⁽²⁷⁾	15 (6 mil. 7 civ.)	-	HIC	1	RCT	DE + ST	LF?	On	-	T	-	Y				4c
CRM-based	Beth Israel Deaconess Medical Center, US ⁽²⁸⁾	1 TTH	-	HIC	1	Before-after	DE + ST	LF?	On	-	T	-	Y		2a		4b,c
CRM-based	Rhode Island Hospital, US ⁽³⁰⁾	1	-	HIC	1	Before-after	D + ST	HF	On	-	T	-	Y				4b,c
CRM-based	Perinatal Safety Initiative, US ⁽²⁹⁾	1 TH	-	HIC	1	Before-after	ST	-	On	Y	T	Y	Y			3a	4b,c
CRM-based	TeamSTEPPS, US ⁽³²⁾	3 CH	-	HIC	1	RCT	D vs. ST	HF	On?	-	T	-	-		2a		4c
OTHER	Copenhagen University Hospital, Denmark ⁽³⁵⁾	1 TTH	-	HIC	1	Before-after	D + S	LF	On	*	-	-	-	1	2a,b	3a	4b
OTHER	University of Oporto, Portugal ⁽³⁶⁾	1 TTH	-	HIC	1	Before-after	ST	HF + PA	On	-	-	-	-	1	2b	3a	

Team training mentioned specifically

Training package	Study (name &/or location)	Hospitals	Health centres	LMIC/ HIC	# articles	Design	Method	Simulation type	Place	Refreshers/ repeats	Team training	Follow up	Communi- cation	1	2	3	4
AIP	QUARITE, Senegal & Mali ⁽¹⁹⁾	46 RH (L1&L2)	-	LMIC	1	RCT	- (CI)	-	Off (+ On)	*	-	**	-				4b,c
AIP	Moi Teaching and Referral Hospital, Kenya ⁽²⁰⁾	1 TTH/RH	-	LMIC	1	Before-after	-	-	-	-	-	-	-			3c	4c
LSTM-RCOG LSS	AGOTA-NVOG, Tanzania ⁽²²⁾	-	-	LMIC	1	Before-after	D + S	LF	Off	-	-	-	-	1	2b		
LSTM-RCOG LSS	Sub-Saharan Africa (7 countries) ⁽²³⁾	-	-	LMIC	1	Before-after	DE + S	LF	Off	-	-	-	-	1	2b,c		
LSTM-RCOG LSS	Somaliland, Somalia ⁽²⁴⁾	1 public 2 private	8 public	LMIC	1	Before-after	D + S	LF	Off	-	-	*	Y	1	2b,c	3a	4b
LSTM-RCOG LSS	Making it Happen, Bangladesh & India ⁽²⁵⁾	4 DH (Bang) - (India)	21 (Bang) - (India)	LMIC	1	Before-after	D + S	LF	Off	-	-	-	-	1	2a,b,c		
LSS-ACNM	Vietnam ⁽²⁶⁾	3 DH 3 FH	40	LMIC	1	Quasi-experimental	-	-	Off	-	-	-	-			3c	
OTHER	CEmONC, Tanzania ⁽³⁴⁾	1 DH		LMIC	1	Before-after	-	-	-	-	-	-	-			3c	
OTHER	Copenhagen University Hospital, Denmark ⁽³⁵⁾	1 TTH	-	HIC	1	Before-after	D + S	LF	On	*	-	-	-	1	2a,b	3a	4b
OTHER	University of Oporto, Portugal ⁽³⁶⁾	1 TTH	-	HIC	1	Before-after	ST	HF + PA	On	-	-	-	-	1	2b	3a	
PROMPT	Bristol, UK ⁽¹⁻³⁾	1 TTH/RH	-	HIC	3	Before-after	DE + ST	LF	On	*	T	**	Y			3c	4c
PROMPT	SaFE trial, Southwest England ⁽⁴⁻¹³⁾	6 DH (L2&L3)	-	HIC	10	RCT	D + ST	HF or LF + PA	Off or On	*	T	Y	Y		2b,c	3b	
PROMPT	NHS Foundation Trust, Liverpool, UK ^(14, 15)	-	-	HIC	1	Before-after	ST (CI)	LF	On	*	T	*	Y				4b,c
PROMPT	Victoria, Australia ⁽¹⁶⁾	7	-	HIC	1	Before-after	D + S	-	(Off +) On)	*	T	-	-	1	2a		4b,c

Training package	Study (name &/or location)	Hospitals	Health centres	LMIC/ HIC	# articles	Design	Method	Simulation type	Place	Refreshers/ repeats	Team training	Follow up	Communi- cation	1	2	3	4
PRONTO	Mexico trial ^{(17, 18)*}	24	-	LMIC	2	RCT	ST	HF	Off	-	T	*	Y	1	2b,c		[4a,b,c]*
ALSO	Kagera Regional Hospital, Tanzania ⁽²¹⁾	1 RH (L2)	-	LMIC	1	Before-after	DE + ST	LF	Off	-	T	*	-				4b,c
CRM-based	National study, US ⁽²⁷⁾	15 (6 mil. 7 civ.)	-	HIC	1	RCT	DE + ST	LF?	On	-	T	-	Y				4c
CRM-based	Beth Israel Deaconess Medical Center, US ⁽²⁸⁾	1 TTH	-	HIC	1	Before-after	DE + ST	LF?	On	-	T	-	Y		2a		4b,c
CRM-based	Perinatal Safety Initiative, US ⁽²⁹⁾	1 TH	-	HIC	1	Before-after	ST	-	On	Y	T	Y	Y			3a	4b,c
CRM-based	Rhode Island Hospital, US ⁽³⁰⁾	1	-	HIC	1	Before-after	D + ST	HF	On	-	T	-	Y				4b,c
CRM-based	Geneva University Hospital, Switzerland ⁽³¹⁾	1 TTH	-	HIC	1	Before-after	DE	-	Off	-	T	Y	Y	1	2a	3a	
CRM-based	TeamSTEPS, US ⁽³²⁾	3 CH	-	HIC	1	RCT	D vs. ST	HF	On?	-	T	-	-		2a		4c
CRM-based	OBCTT, Southeast US ⁽³³⁾	1 TTH	-	HIC	1	Quasi-exp. before-after	D + ST	HF	Off	-	T	-	Y	1	2a,b,c		

Communication mentioned specifically

Training package	Study (name &/or location)	Hospitals	Health centres	LMIC/ HIC	# articles	Design	Method	Simulation type	Place	Refreshers/ repeats	Team training	Follow up	Communi- cation	1	2	3	4
PROMPT	Victoria, Australia ⁽¹⁶⁾	7	-	HIC	1	Before-after	D + S	-	(Off +) On)	*	T	-	-	1	2a		4b,c
AIP	QUARITE, Senegal & Mali ⁽¹⁹⁾	46 RH (L1&L2)	-	LMIC	1	RCT	- (CI)	-	Off (+ On)	*	-	**	-				4b,c
AIP	Moi Teaching and Referral Hospital, Kenya ⁽²⁰⁾	1 TTH/RH	-	LMIC	1	Before-after	-	-	-	-	-	-	-			3c	4c
ALSO	Kagera Regional Hospital, Tanzania ⁽²¹⁾	1 RH (L2)	-	LMIC	1	Before-after	DE + ST	LF	Off	-	T	*	-				4b,c
LSTM-RCOG LSS	AGOTA-NVOG, Tanzania ⁽²²⁾	-	-	LMIC	1	Before-after	D + S	LF	Off	-	-	-	-	1	2b		
LSTM-RCOG LSS	Making it Happen, Bangladesh & India ⁽²⁵⁾	4 DH (Bang) - (India)	21 (Bang) - (India)	LMIC	1	Before-after	D + S	LF	Off	-	-	-	-	1	2a,b,c		
LSTM-RCOG LSS	Sub-Saharan Africa (7 countries) ⁽²³⁾	-	-	LMIC	1	Before-after	DE + S	LF	Off	-	-	-	-	1	2b,c		
LSS-ACNM	Vietnam ⁽²⁶⁾	3 DH 3 FH	40	LMIC	1	Quasi-experimental	-	-	Off	-	-	-	-			3c	
CRM-based	TeamSTEPS, US ⁽³²⁾	3 CH	-	HIC	1	RCT	D vs. ST	HF	On?	-	T	-	-		2a		4c
OTHER	CEmONC, Tanzania ⁽³⁴⁾	1 DH	-	LMIC	1	Before-after	-	-	-	-	-	-	-			3c	
OTHER	Copenhagen University Hospital, Denmark ⁽³⁵⁾	1 TTH	-	HIC	1	Before-after	D + S	LF	On	*	-	-	-	1	2a,b	3a	4b
OTHER	University of Oporto, Portugal ⁽³⁶⁾	1 TTH	-	HIC	1	Before-after	ST	HF + PA	On	-	-	-	-	1	2b	3a	
PROMPT	Bristol, UK ⁽¹⁻³⁾	1 TTH/RH	-	HIC	3	Before-after	DE + ST	LF	On	*	T	**	Y			3c	4c
PROMPT	SaFE trial, Southwest England ⁽⁴⁻¹³⁾	6 DH (L2&L3)	-	HIC	10	RCT	D + ST	HF or LF + PA	Off or On	*	T	Y	Y		2b,c	3b	

Training package	Study (name &/or location)	Hospitals	Health centres	LMIC/ HIC	# articles	Design	Method	Simulation type	Place	Refreshers/ repeats	Team training	Follow up	Communi- cation	1	2	3	4
PROMPT	NHS Foundation Trust, Liverpool, UK ^(14, 15)	-	-	HIC	1	Before-after	ST (CI)	LF	On	*	T	*	Y				4b,c
PRONTO	Mexico trial ^{(17, 18)*}	24	-	LMIC	2	RCT	ST	HF	Off	-	T	*	Y	1	2b,c		[4a,b,c]*
LSTM-RCOG LSS	Somaliland, Somalia ⁽²⁴⁾	1 public 2 private	8 public	LMIC	1	Before-after	D + S	LF	Off	-	-	*	Y	1	2b,c	3a	4b
CRM-based	National study, US ⁽²⁷⁾	15 (6 mil. 7 civ.)	-	HIC	1	RCT	DE + ST	LF?	On	-	T	-	Y				4c
CRM-based	Beth Israel Deaconess Medical Center, US ⁽²⁸⁾	1 TTH	-	HIC	1	Before-after	DE + ST	LF?	On	-	T	-	Y		2a		4b,c
CRM-based	Perinatal Safety Initiative, US ⁽²⁹⁾	1 TH	-	HIC	1	Before-after	ST	-	On	Y	T	Y	Y			3a	4b,c
CRM-based	Rhode Island Hospital, US ⁽³⁰⁾	1	-	HIC	1	Before-after	D + ST	HF	On	-	T	-	Y				4b,c
CRM-based	Geneva University Hospital, Switzerland ⁽³¹⁾	1 TTH	-	HIC	1	Before-after	DE	-	Off	-	T	Y	Y	1	2a	3a	
CRM-based	OBCTT, Southeast US ⁽³³⁾	1 TTH	-	HIC	1	Quasi-exp. before-after	D + ST	HF	Off	-	T	-	Y	1	2a,b,c		

Inclusion of refreshers / repeats and follow up specifically mentioned

Training package	Study (name &/or location)	Training	Method	Simulation type	Place	Refreshers/ repeats	Team training	Follow up	Communi- cation	Remarks	Kirkpatrick levels			
											1	2	3	4
PROMPT	Bristol, UK ⁽¹⁻³⁾	<ul style="list-style-type: none"> • Infrastructural changes (protocols, props to help adherence to guidelines, practical solutions) • Regular in-house clinical drills for all staff⁽¹⁵⁾ • 1-day obstetric emergency course • Format of course: <ul style="list-style-type: none"> - CTG interpretation – workbook, lectures, small group care discussions, documentation - 6 scenarios for obstetric emergency drills – also use of PAs • Course materials: developed 'in house' 	DE + ST	LF	On	*	T	**	Y	*1 day/2 months ** Mandatory annual attendance			3c	4c
PROMPT	SaFE trial, Southwest England ⁽⁴⁻¹³⁾	<ul style="list-style-type: none"> • 4 multi-professional groups • Training sites: <ul style="list-style-type: none"> - Hospital – 1 day without team without teamwork theory & 2 days with teamwork - Simulation centre (1 or 2days with/without team theory) • All trainers: <ul style="list-style-type: none"> - Attended TOT course & session on teamwork training - Received trainer's manual with slide presentations & lecture notes • All participants: manual on management of obstetric emergencies • All groups: <ul style="list-style-type: none"> - Lectures plus - Simulated drills (scenarios): eclampsia, PPH, cord shoulder dystocia, cord prolapse etc, with feedback • Baseline assessment 1-3 weeks before & post-training assessment 1-3 weeks: <ul style="list-style-type: none"> - MCQs to test knowledge - Drills video-recorded – reviewed by 2 assessors – teamwork also assessed - PAs scored respect, safety, communication 	D + ST	HF or LF + PA	Off or On	*	T	Y	Y	*Annual updating for proficient performers supported and recommended by study * Additional training after 3 weeks for non-performers & more frequent rehearsals ** Team training for 2 groups Eclampsia: Administration of drug as valid surrogate of team efficiency and patient outcome		2b,c	3b	

Training package	Study (name &/or location)	Training	Method	Simulation type	Place	Refreshers/ repeats	Team training	Follow up	Communi- cation	Remarks	Kirkpatrick levels			
											1	2	3	4
PROMPT	NHS Foundation Trust, Liverpool, UK ^(14, 15)	<ul style="list-style-type: none"> Mandatory multidisciplinary training following the Southmead (Bristol) model Other components: <ul style="list-style-type: none"> - Integrated risk management - Patient involvement - Regular team briefings - Regular fire-drills - Infrastructural improvements 	ST (CI)	LF	On	*	T	*	Y	* Annual updating required				4b,c
PROMPT	Victoria, Australia ⁽¹⁶⁾	<ul style="list-style-type: none"> TOT model (4 participants/hospital) Lectures & scenario-based drills 	D + S	-	(Off +) On)	*	T	-	-	* Trainer to repeat training in individual hospitals	1	2a		4b,c
PRONTO	Mexico trial ^{(17, 18)*}	<ul style="list-style-type: none"> Two-step training with 3-month each (5 community hospitals): <ul style="list-style-type: none"> - Module I (16 hours) (obstetric haemorrhage, neonatal resuscitation, teamwork) - Module II (8 hours) (pre-eclampsia/eclampsia & dystocia) Training activities: <ul style="list-style-type: none"> - Skills stations & other activities - 8 simulations with PartoPants simulator - Immediate guided debriefing after each scenario - Team-training activities with TeamSTEPPS curriculum - Outcomes measured at Module II? 	ST	HF	Off	-	T	*	Y	Time of outcome measurement < 6 months after training * 3 months period between Modules I and II	1	2b,c		[4a,b,c]*
AIP	QUARITE, Senegal & Mali ⁽¹⁹⁾	<ul style="list-style-type: none"> 46 hospitals randomised to control and intervention groups Initial 6-day interactive workshop (1 nurse & 1 doctor/hospital) <ul style="list-style-type: none"> - Best practices EOC (3 days) - Maternal death review (1 day) - Awareness training (1 day) - Adult education (1 day) Quarterly outreach visits (focus maternal death reviews and best practice implementation) 4-8 on-site training sessions in intervention period 	- (CI)	-	Off (+ On)	*	-	**	-	* Recertification once / year ** 2 year follow-up – regular outreach visits				4b,c

Training package	Study (name &/or location)	Training	Method	Simulation type	Place	Refreshers/ repeats	Team training	Follow up	Communi- cation	Remarks	Kirkpatrick levels			
											1	2	3	4
ALSO	Kagera Regional Hospital, Tanzania ⁽²¹⁾	<ul style="list-style-type: none"> • 2-day provider course (1 hospital) • Hands-on and teamwork training • Mannequins in simulated emergency situations • Lectures, workshops, case discussions • Data sources for assessment: <ul style="list-style-type: none"> - measured post-partum blood loss - observations on management - case reports - structured interviews 	DE + ST	LF	Off	-	T	*	-	* One-year follow-up data collection abandoned				4b,c
LSTM-RCOG LSS	Somaliland, Somalia ⁽²⁴⁾	<ul style="list-style-type: none"> • Short classes, alternating between theoretical and practical sessions / simulation of obstetric emergency • Post-training assessment <ul style="list-style-type: none"> - Immediately after: knowledge & skills (quant) - 3 and 6 months after: change in behaviour (qual) & signal functions (quant) 	D + S	LF	Off	-	-	*	Y	* Facility visits before training and 3 and 6 months post-training	1	2b,c	3a	4b
CRM-based	Perinatal Safety Initiative, US ⁽²⁹⁾	<ul style="list-style-type: none"> • Incremental introduction of a comprehensive perinatal safety initiative (PSI) over 2 years • Components: <ul style="list-style-type: none"> - Team STEPPS - Electronic foetal monitoring (EFM) course and exam (online) - Multidisciplinary teaching rounds daily - Obstetrical emergency simulation – multidisciplinary drills - Introduction evidence-based protocols • Assessment: modified AOI (MAOI) 	ST	-	On	Y	T	Y	Y				3a	4b,c
CRM-based	Rhode Island Hospital, US ⁽³⁰⁾	<ul style="list-style-type: none"> • Didactic portion (4 hrs) • 4-hour high-fidelity simulation (video-taped) • Debriefing session • Assessment: data 6 quarters post-CRM 	D + ST	HF	On	-	T	-	Y					4b,c
CRM-based	Geneva University Hospital, Switzerland ⁽³¹⁾	<ul style="list-style-type: none"> • 2-day CRM-based training programme /seminar designed to improve teamwork & communication skills • Film, discussions, interactive sessions, role plays, workshops • Assessment: <ul style="list-style-type: none"> - Course evaluation (satisfaction, learning before & after, safety attitude) - Over a period of 1 year later: repeat patient safety questionnaire 	DE	-	Off	-	T	Y	Y	<i>Assumption emergency obstetric skills are in place (good track record of clinical performance) – not clear how much obstetric content</i>	1	2a	3a	

Training package	Study (name &/or location)	Training	Method	Simulation type	Place	Refreshers/ repeats	Team training	Follow up	Communi- cation	Remarks	Kirkpatrick levels			
											1	2	3	4
OTHER	Copenhagen University Hospital, Denmark ⁽³⁵⁾	<ul style="list-style-type: none"> • Mandatory for all staff -multiprofessional • Own training material developed • 2 (?) training sessions (2½ hours each) over a 3-year period [2-step training] • 12 participants per session • Each session with lectures followed by training workshop 	D + S	LF	On	*	-	-	-	*Catch-up training sessions for new staff	1	2a,b	3a	4b

Description of training and other remarks

Training package	Study (name &/or location)	Training	Method	Simulation type	Place	Refreshers/ repeats	Team training	Follow up	Communi- cation	Remarks	Kirkpatrick levels			
											1	2	3	4
PROMPT	Bristol, UK ⁽¹⁻³⁾	<ul style="list-style-type: none"> • Infrastructural changes (protocols, props to help adherence to guidelines, practical solutions) • Regular in-house clinical drills for all staff⁽¹⁵⁾ • 1-day obstetric emergency course • Format of course: <ul style="list-style-type: none"> - CTG interpretation – workbook, lectures, small group care discussions, documentation - 6 scenarios for obstetric emergency drills – also use of PAs • Course materials: developed ‘in house’ 	DE + ST	LF	On	*	T	**	Y	*1 day/2 months ** Mandatory annual attendance			3c	4c
PROMPT	SaFE trial, Southwest England ⁽⁴⁻¹³⁾	<ul style="list-style-type: none"> • 4 multi-professional groups • Training sites: <ul style="list-style-type: none"> - Hospital – 1 day without team without teamwork theory & 2 days with teamwork - Simulation centre (1 or 2days with/without team theory) • All trainers: <ul style="list-style-type: none"> - Attended TOT course & session on teamwork training - Received trainer’s manual with slide presentations & lecture notes • All participants: manual on management of obstetric emergencies • All groups: <ul style="list-style-type: none"> - Lectures plus - Simulated drills (scenarios): eclampsia, PPH, cord shoulder dystocia, cord prolapse etc, with feedback • Baseline assessment 1-3 weeks before & post-training assessment 1-3 weeks: <ul style="list-style-type: none"> - MCQs to test knowledge - Drills video-recorded – reviewed by 2 assessors – teamwork also assessed - PAs scored respect, safety, communication 	D + ST	HF or LF + PA	Off or On	*	T	Y	Y	*Annual updating for proficient performers supported and recommended by study * Additional training after 3 weeks for non-performers & more frequent rehearsals ** Team training for 2 groups Eclampsia: Administration of drug as valid surrogate of team efficiency and patient outcome		2b,c	3b	

Training package	Study (name &/or location)	Training	Method	Simulation type	Place	Refreshers/ repeats	Team training	Follow up	Communi- cation	Remarks	Kirkpatrick levels			
											1	2	3	4
PROMPT	NHS Foundation Trust, Liverpool, UK ^(14, 15)	<ul style="list-style-type: none"> Mandatory multidisciplinary training following the Southmead (Bristol) model Other components: <ul style="list-style-type: none"> - Integrated risk management - Patient involvement - Regular team briefings - Regular fire-drills - Infrastructural improvements 	ST (CI)	LF	On	*	T	*	Y	* Annual updating required				4b,c
PROMPT	Victoria, Australia ⁽¹⁶⁾	<ul style="list-style-type: none"> TOT model (4 participants/hospital) Lectures & scenario-based drills 	D + S	-	(Off +) On	*	T	-	-	* Trainer to repeat training in individual hospitals	1	2a		4b,c
PRONTO	Mexico trial ^{(17, 18)*}	<ul style="list-style-type: none"> Two-step training with 3-month each (5 community hospitals): <ul style="list-style-type: none"> - Module I (16 hours) (obstetric haemorrhage, neonatal resuscitation, teamwork) - Module II (8 hours) (pre-eclampsia/eclampsia & dystocia) Training activities: <ul style="list-style-type: none"> - Skills stations & other activities - 8 simulations with PartoPants simulator - Immediate guided debriefing after each scenario - Team-training activities with TeamSTEPPS curriculum - Outcomes measured at Module II? 	ST	HF	Off	-	T	*	Y	Time of outcome measurement < 6 months after training * 3 months period between Modules I and II	1	2b,c		
AIP	QUARITE, Senegal & Mali ⁽¹⁹⁾	<ul style="list-style-type: none"> 46 hospitals randomised to control and intervention groups Initial 6-day interactive workshop (1 nurse & 1 doctor/hospital) <ul style="list-style-type: none"> - Best practices EOC (3 days) - Maternal death review (1 day) - Awareness training (1 day) - Adult education (1 day) Quarterly outreach visits (focus maternal death reviews and best practice implementation) 4-8 on-site training sessions in intervention period 	- (CI)	-	Off (+) On	*	-	**	-	* Recertification once / year ** 2 year follow-up – regular outreach visits				4b,c
AIP	Moi Teaching and Referral Hospital, Kenya ⁽²⁰⁾	<ul style="list-style-type: none"> 5-day multiprofessional course Topics: <ul style="list-style-type: none"> - Main causes of maternal death (obstructed labour, haemorrhage, sepsis, hypertensive disorders, complications unsafe abortion) - Neonatal resuscitation & care - Sensitisation social, economic, cultural, and legal factors impeding access RH services & social justice. M&E methodologies Framework = sexual & reproductive rights 	-	-	-	-	-	-	-	Training approach & methods not discussed			3c	4b,c

Training package	Study (name &/or location)	Training	Method	Simulation type	Place	Refreshers/ repeats	Team training	Follow up	Communi- cation	Remarks	Kirkpatrick levels			
											1	2	3	4
ALSO	Kagera Regional Hospital, Tanzania ⁽²¹⁾	<ul style="list-style-type: none"> • 2-day provider course (1 hospital) • Hands-on and teamwork training • Mannequins in simulated emergency situations • Lectures, workshops, case discussions • Data sources for assessment: <ul style="list-style-type: none"> - measured post-partum blood loss - observations on management - case reports - structured interviews 	DE + ST	LF	Off	-	T	*	-	* One-year follow-up data collection abandoned				4b,c
LSTM-RCOG LSS	AGOTA-NVOG, Tanzania ⁽²²⁾	<ul style="list-style-type: none"> • Short classes, alternating between theoretical and practical sessions / simulation of obstetric emergency 	D + S	LF	Off	-	-	-	-		1	2b		
LSTM-RCOG LSS	Sub-Saharan Africa (7 countries) ⁽²³⁾	<p>Mixture of methods including:</p> <ul style="list-style-type: none"> • Lectures • Scenario teaching • Skills teaching • Demonstration • Workshops/Breakout sessions 	DE + S	LF	Off	-	-	-	-		1	2b,c		
LSTM-RCOG LSS	Somaliland, Somalia ⁽²⁴⁾	<ul style="list-style-type: none"> • Short classes, alternating between theoretical and practical sessions / simulation of obstetric emergency • Post-training assessment <ul style="list-style-type: none"> - Immediately after: knowledge & skills (quant) - 3 and 6 months after: change in behaviour (qual) & signal functions (quant) 	D + S	LF	Off	-	-	*	Y	* Facility visits before training and 3 and 6 months post-training	1	2b,c	3a	4b
LSTM-RCOG LSS	Making it Happen, Bangladesh & India ⁽²⁵⁾	<ul style="list-style-type: none"> • Content of training based on main causes of maternal deaths and EOC&NC signal functions 	D + S	LF	Off	-	-	-	-	Also reported in Grady et al	1	2a,b,c		
LSS-ACNM	Vietnam ⁽²⁶⁾	<ul style="list-style-type: none"> • 3 groups (hospital only, hospitals & clinics, comparison group) • Competency-based training • Accompanied by improvement of facility readiness 	-	-	Off	-	-	-	-	Compare with Riley et al's RCT			3c	
CRM-based	National study, US ⁽²⁷⁾	<p>National study:</p> <ul style="list-style-type: none"> • Intervention group = 7 hospitals; control group = 8 hospitals • Standardised teamwork training (CRM): <ul style="list-style-type: none"> - Didactic lessons (4 hrs) - Video scenarios - Interactive training (team structure & processes, planning & problem solving; communication, workload management, team skills, implementation) 	DE + ST	LF?	On	-	T	-	Y	<i>Assumption emergency obstetric skills are in place (good track record of clinical performance) – not clear how much obstetric content</i>				4c

Training package	Study (name &/or location)	Training	Method	Simulation type	Place	Refreshers/repeats	Team training	Follow up	Communication	Remarks	Kirkpatrick levels			
											1	2	3	4
CRM-based	Beth Israel Deaconess Medical Center, US ⁽²⁸⁾	<p>One hospital not included in national study reported in Nielsen et al⁽²⁷⁾</p> <ul style="list-style-type: none"> • 4 teamwork modules for all staff (communication, situation monitoring, mutual support, leadership) (4 hrs) • Timeline for introduction of one CRM concept every 1-2 weeks • Debriefings, improved handover • Protocol development • Selected clinical drills 	DE + ST	LF?	On	-	T	-	Y	<i>Assumption emergency obstetric skills are in place (good track record of clinical performance) – not clear how much obstetric content</i>		2a		4b,c
CRM-based	Perinatal Safety Initiative, US ⁽²⁹⁾	<ul style="list-style-type: none"> • Incremental introduction of a comprehensive perinatal safety initiative (PSI) over 2 years • Components: <ul style="list-style-type: none"> - Team STEPPS - Electronic foetal monitoring (EFM) course and exam (online) - Multidisciplinary teaching rounds daily - Obstetrical emergency simulation – multidisciplinary drills - Introduction evidence-based protocols • Assessment: modified AOI (MAOI) 	ST	-	On	Y	T	Y	Y				3a	4b,c
CRM-based	Rhode Island Hospital, US ⁽³⁰⁾	<ul style="list-style-type: none"> • Didactic portion (4 hrs) • 4-hour high-fidelity simulation (video-taped) • Debriefing session • Assessment: data 6 quarters post-CRM 	D + ST	HF	On	-	T	-	Y					4b,c
CRM-based	Geneva University Hospital, Switzerland ⁽³¹⁾	<ul style="list-style-type: none"> • 2-day CRM-based training programme /seminar designed to improve teamwork & communication skills • Film, discussions, interactive sessions, role plays, workshops • Assessment: <ul style="list-style-type: none"> - Course evaluation (satisfaction, learning before & after, safety attitude) - Over a period of 1 year later: repeat patient safety questionnaire 	DE	-	Off	-	T	Y	Y	<i>Assumption emergency obstetric skills are in place (good track record of clinical performance) – not clear how much obstetric content</i>	1	2a	3a	

Training package	Study (name &/or location)	Training	Method	Simulation type	Place	Refreshers/ repeats	Team training	Follow up	Communi- cation	Remarks	Kirkpatrick levels			
											1	2	3	4
CRM-based	TeamSTEPPS, US ⁽³²⁾	<ul style="list-style-type: none"> 3 hospitals: TeamSTEPPS didactic training programme, TeamSTEPPS plus in situ simulation training exercises, control hospital 	D vs. ST	HF	On?	-	T	-	-	Compare with Sloan et al's quasi-experimental study Must still receive full text		2a		4c
CRM-based	OBCTT, Southeast US ⁽³³⁾	<ul style="list-style-type: none"> Online module to study before attendance 4-hour training session: <ul style="list-style-type: none"> - Brief didactic slide presentation - 4 standardised simulated crisis scenarios (video recorded) - Debriefings after each simulation Variety assessment tools 	D + ST	HF	Off	-	T	-	Y		1	2a,b,c		
OTHER	CEmONC, Tanzania ⁽³⁴⁾	<ul style="list-style-type: none"> District hospital without CEmOC skilled personnel Local manpower and resources Hospital staff trained on CEmOC – included = use of partograph and management common obstetric emergencies Essential equipment purchased via district management Monitoring: weekly visit by project manager 	-	-	-	-	-	-	-	Must still receive full text			3c	
OTHER	Copenhagen University Hospital, Denmark ⁽³⁵⁾	<ul style="list-style-type: none"> Mandatory for all staff – multiprofessional Own training material developed 2 (?) training sessions (2½ hours each) over a 3-year period [2-step training] 12 participants per session Each session with lectures followed by training workshop 	D + S	LF	On	*	-	-	-	*Catch-up training sessions for new staff	1	2a,b	3a	4b
OTHER	University of Oporto, Portugal ⁽³⁶⁾	<ul style="list-style-type: none"> Simulation-based training course (4 hours) Management of 4 emergencies (acute foetal hypoxia; SD; PPH; eclampsia) Scenarios done 2x – debriefing after 2nd resolution Assessment: 1 year after training (statements to indicate improvement) 	ST	HF + PA	On	-	-	-	-		1	2b	3a	

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