

Evidence assessment: Summary of a systematic review

Who is this summary for?

This summary is for policy makers, district health managers, non-governmental associations and community based associations.

Lay health workers in primary and community health care for maternal and child health and the management of infectious diseases

Key findings

Lay health workers (LHWs) are helpful in the domain of mother and child health by promoting breast feeding and immunization uptake.

Their work reduces child morbidity and mortality.

They also help in improving outcomes on patients receiving treatment for tuberculosis.

These findings come from less wealthy settings in developed countries and from developing countries.

Background

LHWs are people who have received some training to perform health promotion or to carry out other health services, but are not health care professionals. They play an important role in health care especially when there are insufficient human resources.

LHW have been part of health systems, but little is known about how effective they are.

LHWs in Cameroon: The endorsement of the Primary Health Care model in Cameroon was followed by a growth in the number of LHWs. They can be identified as social mobilizers, community relay agents, and traditional birth attendants; and also within Community Based Organisations. They are important players in immunization campaigns, health promotion, case identification and home based care.

Question

Are lay health workers in primary and community care effective in improving maternal and child health; and the management of infectious diseases?

Tableau 1: Summary of the systematic review

	What the review authors searched for	What the review authors found
Studies	Randomized controlled trials	82 RCT's were included in the review
Participants	Any health worker who: <ul style="list-style-type: none"> performed functions related to healthcare delivery, was trained in some way in the context of the intervention, but had received no formal professional or paraprofessional certificate or tertiary education degree. 	Their numbers ranged from 2-150, information on their selection, training or level of education was not always reported. Data on training varied from 0.4-146 days.
Interventions*	Any intervention delivered by LHWs and intended to improve maternal or child health (MCH) or the management of infectious diseases.	A wide range of interventions were found. Those that were similar enough to group were: <ul style="list-style-type: none"> Promotion of immunization uptake (8 studies) Reduction of morbidity and mortality in under fives (fourteen studies) Promotion of breast feeding (18 studies) Support to mothers of sick children (8 studies) Prevention of child abuse (8 studies) Promoting parent child interaction or health promotion (5 studies) Supporting women with high risk of low birth weight babies or other poor pregnancy outcomes (10 studies) Improving TB treatment and prophylaxis outcomes (8 studies)
Controls	No controls specified	Usual care; other forms of adherence support
Outcomes	Health behaviours, such as the type of care plan agreed, and adherence to care plans (medication, dietary advice etc.) Healthcare outcomes as assessed by a variety of measures. These included mortality; physiological measures (e.g. vitamin C levels); and participants' self reports of symptom resolution, quality of life, or patient self-esteem. Harms or adverse effects Utilisation of services Consultation processes, such as how healthcare providers interacted with healthcare users; or how often patients were managed correctly according to	Specific outcomes that were similar enough to pool are reported below: In children: Immunization uptake, mortality among children under five years, neonatal mortality, child morbidity. In mothers: care-seeking behavior, initiation of breastfeeding, any breastfeeding up to 12 months post partum, exclusive breastfeeding up to six months post partum. In patients with TB: TB cure rates, treatment completion rate, completed preventive therapy Not assigned to any groups: reducing dental caries in children, improving health and social outcomes for substance using mothers and their children, providing information and support for the enrollment of uninsured Latino children in a state insurance programme, reducing




	guidelines Recipient satisfaction with care Costs Social development measures, such as the creation of support groups for the promotion of other community activities	childhood agricultural injuries on farms, enhancing parents' home safety practices to reduce child injuries, improving childhood asthma through reducing household environmental triggers, improving home safety to reduce child injuries, nutrition counseling to reduce growth retardation.
Date of the most recent search: April 2009		
Limitations: This is a good quality systematic review with some limitations worth noting. LHW trials are poorly indexed in data bases and some studies may have been missed. Since there is no widely accepted definition for LHW the inclusion criteria may be disputed.		
Review citation: Lewin S, Munabi-Babigumira S, Glenton C, Daniels K, Bosch-Capblanch X, van Wyk BE, Odgaard-Jensen J, Johansen M, Aja GN, Zwarenstein M, Scheel IB. Lay health workers in primary and community health care for maternal and child health and the management of infectious diseases. Cochrane Database of Systematic Reviews 2010, Issue 3. Art. No.: CD004015. DOI:10.1002/14651858.CD004015.pub3.		

*Most studies reported multiple effect measures and many did not specify a primary outcome. Relevant outcomes were extracted and categorized by the author

Summary of Findings table

Table 2 summarizes the findings of the effects of LHW contributions to mother and child health and infectious diseases

Patient or population: children under two years whose vaccination is not up to date					
Settings: USA (3studies), Ireland (1)					
Intervention: LHWs					
Comparison: usual care					
Outcomes	Illustrative comparative risks (95% CI)		Relative effect (95% CI)	No of participants (studies)	Quality of the evidence (GRADE)
	Control	Intervention			
Immunization schedule up to date	High risk population		RR 1.22 (1.1-1.37)	3568 (4studies)	[?] [?] [?] [?] moderate
	660 per 1000	818 per 1000 (726 to 917)			
Exclusive breastfeeding	High risk population		RR 2.78 (1.74 to 4.44)	4334 (10 studies)	[?] [?] [?] [?] moderate
	250 per	695 per 1000			

	1000	(435 to 1000)			
Patient or population: children under 5 Settings: Bangladesh (3studies), Ethiopia, Tanzania, Nepal, Ghana, Thailand, Viet Nam, India, Burkina Faso Intervention: LHWs Comparison: usual care					
Mortality among children less than 5 years	Study population		RR 0.75 (0.55 to 1.03)	56378 (3 studies)	 low
	74 per 1000	56 per 1000 (41 to 76)			
	Medium risk population				
	50 per 1000	38 per 1000 (28-51)			
Neonatal Mortality	45 per 1000	34 per 1000 (26 to 46)	RR 0.76 (0.57 to 1.02)	29217 (4 studies)	 low
Patient or population: patients receiving TB treatment Settings: USA (4studies); south Africa (2studies); Tanzania (1study); Iraq (1 study) Intervention: LHW support Comparison: without LHW support					
Cure for smear positive TB patients	526 per 1000	642 per 1000 (594 to 689)	RR 1.22 (1.13 to 1.31)	1203 (4 studies)	 moderate

Applicability

Of the 82 studies included in this review, 55 studies (67%) were conducted in six high income countries: Australia, Canada, Ireland, New Zealand, the UK, and the USA. Forty-one of the 82 studies were conducted in the USA. Twelve studies (14.6%) were conducted in eight middle income countries (Brazil, China, India, Mexico, Philippines, Thailand, Turkey, and South Africa). Fifteen trials (18.3%) were from 10 low income countries (Bangladesh, Burkina Faso, Ethiopia, Ghana, Iraq, Jamaica, Nepal, Pakistan, Tanzania, and Vietnam). These findings can be applied in similar settings.

Conclusions

There is moderate to low quality evidence attesting to the effectiveness of LHW in some mother and child health interventions; and management of tuberculosis. They can help to promote immunization uptake; increase breastfeeding; improve TB cure rates; reduce child

morbidity; child and neonatal mortality; and increasing the likelihood of seeking care for childhood illness. Health planners should consider including LHW interventions in these domains.

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