HEALTH SYSTEMS
RESEARCH UNIT

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Utilisation of lay/community health workers in Kwazulu Natal
An annotated bibliography

TASK

This annotated bibliography has been prepared for the Kwazulu-Natal Department of Health, as a first stage in further discussions towards a rapid evidence synthesis.

COMMISSIONERS

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SYNTHESIS TEAM

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Rapid review requested

What is the impact of community based health care services on primary health care facility utilisation?

Problem as identified by knowledge user

Ever since the Kwazulu-Natal Dept. of Health introduced community based services, there has been a significant drop in the number of patients who are seeking health services from formal clinics. However, the department cannot positively link this user drop to the use of community based services. This missing number of patients makes it difficult for the Kwazulu-Natal department of health to appropriately allocate health resources.

Background

KwaZulu-Natal is the second most populous province in South Africa. The province borders Eastern Cape in the South, Free State and Lesotho in the West and Swaziland and Mozambique in the North. According, to StatsSA (2012) 54% of the total provincial population lives in rural areas, and an estimated 10% of the urban population in under-developed informal settlements. Urbanization, especially relevant to the economic hubs, increased the population in informal settlements, which put additional unforeseen pressure on service delivery, including health services.

In 2013/14 the department of health in Kwazulu-Natal introduced Community-Based Services at the household level. Community based services were to alleviate the service backlog ,as the formal health system lacks the capacity to adequately deliver primary health care services to the whole population.

Community based services are delivered by lay health workers, they provide services such as the delivery of chronic medication, support for abuse, mental health, and chronic care. Upon the provision of these services, lay workers report back to the clinics, so that there is a record of the patients and the provided services. This information is merged into the central information system of primary healthcare services.

In PHC centers in Kwazulu-Natal there has been a significant decrease in the patient headcount since the introduction of Community-Based Services. According, to Ester Synman (Kwazulu-Natal Provincial Department of Health, Strategic Planner), there is approximately a 2 million headcount decrease in PHC utilization. However, Ms Synman does not contribute this decrease to the utilization of community-based services, because the decrease in PHC headcount is not accounted for by the number of patients seen by lay health workers. Furthermore, the disease burden of disease, unemployment and poverty continue to rise in Kwazulu-Natal. Thus, there is a significant number of people being lost and the department does not know where they are seeking healthcare services or if they are seeking any? Understanding this decrease in PHC headcount is essential for planning and resource allocation in for basic health services.

Global systematic and literature reviews on lay/community health workers

Glenton, C., et al. (2013). "Barriers and facilitators to the implementation of lay health worker programmes to improve access to maternal and child health: qualitative evidence synthesis." Cochrane Database Syst Rev(10): CD010414.

> BACKGROUND: Lay health workers (LHWs) perform functions related to healthcare delivery, receive some level of training, but have no formal professional or paraprofessional certificate or tertiary education degree. They provide care for a range of issues, including maternal and child health. For LHW programmes to be effective, we need a better understanding of the factors that influence their success and sustainability. This review addresses these issues through a synthesis of qualitative evidence and was carried out alongside the Cochrane review of the effectiveness of LHWs for maternal and child health.
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> OBJECTIVES: The overall aim of the review is to explore factors affecting the implementation of

LHW programmes for maternal and child health. SEARCH METHODS: We searched MEDLINE, OvidSP (searched 21 December 2011); MEDLINE Ovid In-Process & Other Non-Indexed Citations, OvidSP (searched 21 December 2011); CINAHL, EBSCO (searched 21 December 2011); British Nursing Index and Archive, OvidSP (searched 13 May 2011). We searched reference lists of included studies, contacted experts in the field, and included studies that were carried out alongside the trials from the LHW effectiveness review.
SELECTION CRITERIA: Studies that used qualitative methods for data collection and analysis and that focused on the experiences and attitudes of stakeholders regarding LHW programmes for maternal or child health in a primary or community healthcare setting.
DATA COLLECTION AND ANALYSIS: We identified barriers and facilitators to LHW programme implementation using the framework thematic synthesis approach. Two review authors independently assessed study quality using a standard tool. We assessed the certainty of the review findings using the CerQual approach, an approach that we developed alongside this and related qualitative syntheses. We integrated our findings with the outcome measures included in the review of LHW programme effectiveness in a logic model. Finally, we identified hypotheses for subgroup analyses in future updates of the review of effectiveness.
MAIN RESULTS: We included 53 studies primarily describing the experiences of LHWs, programme recipients, and other health workers. LHWs in high income countries mainly offered promotion, counselling and support. In low and middle income countries, LHWs offered similar services but sometimes also distributed supplements, contraceptives and other products, and diagnosed and treated children with common childhood diseases. Some LHWs were trained to manage uncomplicated labour and to refer women with pregnancy or labour complications. Many of the findings were based on studies from multiple settings, but with some methodological limitations. These findings were assessed as being of moderate certainty. Some findings were based on one or two studies and had some methodological limitations. These were assessed have low certainty. Barriers and facilitators were mainly tied to programme acceptability, appropriateness and credibility; and health system constraints. Programme recipients were generally positive to the programmes, appreciating the LHWs' skills and the similarities they saw between themselves and the LHWs. However, some recipients were concerned about confidentiality when receiving home visits. Others saw LHW services as not relevant or not sufficient, particularly when LHWs only offered promotional services. LHWs and recipients emphasised the importance of trust, respect, kindness and empathy. However, LHWs sometimes found it difficult to manage emotional relationships and boundaries with recipients. Some LHWs feared blame if care was not successful. Others felt demotivated when their services were not appreciated. Support from health systems and community leaders could give LHWs credibility, at least if the health systems and community leaders had authority and respect. Active support from family members was also important. Health professionals often appreciated the LHWs' contributions in reducing their workload and for their communication skills and commitment. However, some health professionals thought that LHWs added to their workload and feared a loss of authority. LHWs were motivated by factors including altruism, social recognition, knowledge gain and career development. Some unsalaried LHWs wanted regular payment, while others were concerned that payment might threaten their social status or lead recipients to question their motives. Some salaried LHWs were dissatisfied with their pay levels. Others were frustrated when payment differed across regions or institutions. Some LHWs stated that they had few opportunities to voice complaints. LHWs described insufficient, poor quality, irrelevant and inflexible training programmes, calling for more training in counselling and communication and in topics outside their current role, including common health problems and domestic problems. LHWs and supervisors complained about supervisors' lack of skills, time

and transportation. Some LHWs appreciated the opportunity to share experiences with fellow LHWs.In some studies, LHWs were traditional birth attendants who had received additional training. Some health professionals were concerned that these LHWs were over-confident about their ability to manage danger signs. LHWs and recipients pointed to other problems, including women's reluctance to be referred after bad experiences with health professionals, fear of caesarean sections, lack of transport, and cost. Some LHWs were reluctant to refer women on because of poor co-operation with health professionals.We organised these findings and the outcome measures included in the review of LHW programme effectiveness in a logic model. Here we proposed six chains of events where specific programme components lead to specific intermediate or long-term outcomes, and where specific moderators positively or negatively affect this process. We suggest how future updates of the LHW effectiveness review could explore whether the presence of these components influences programme success. AUTHORS' CONCLUSIONS: Rather than being seen as a lesser trained health worker, LHWs may represent a different and sometimes preferred type of health worker. The close relationship between LHWs and recipients is a programme strength. However, programme planners must consider how to achieve the benefits of closeness while minimizing the potential drawbacks. Other important facilitators may include the development of services that recipients perceive as relevant; regular and visible support from the health system and the community; and appropriate training, supervision and incentives.

Kok, M. C., et al. (2015). "Which intervention design factors influence performance of community health workers in low- and middle-income countries? A systematic review." Health Policy Plan **30**(9): 1207-1227.

Community health workers (CHWs) are increasingly recognized as an integral component of the health workforce needed to achieve public health goals in low- and middle-income countries (LMICs). Many factors influence CHW performance. A systematic review was conducted to identify intervention design related factors influencing performance of CHWs. We systematically searched six databases for quantitative and qualitative studies that included CHWs working in promotional, preventive or curative primary health services in LMICs. One hundred and forty studies met the inclusion criteria, were quality assessed and double read to extract data relevant to the design of CHW programmes. A preliminary framework containing factors influencing CHW performance and characteristics of CHW performance (such as motivation and competencies) guided the literature search and review.A mix of financial and non-financial incentives, predictable for the CHWs, was found to be an effective strategy to enhance performance, especially of those CHWs with multiple tasks. Performance-based financial incentives sometimes resulted in neglect of unpaid tasks. Intervention designs which involved frequent supervision and continuous training led to better CHW performance in certain settings. Supervision and training were often mentioned as facilitating factors, but few studies tested which approach worked best or how these were best implemented. Embedment of CHWs in community and health systems was found to diminish workload and increase CHW credibility. Clearly defined CHW roles and introduction of clear processes for communication among different levels of the health system could strengthen CHW performance.When designing community-based health programmes, factors that increased CHW performance in comparable settings should be taken into account. Additional intervention research to develop a better evidence base for the most effective training and supervision mechanisms and qualitative research to inform policymakers in development of CHW interventions are needed.

Lewin, S., et al. (2010). "Lay health workers in primary and community health care for maternal and child

health and the management of infectious diseases." Cochrane Database Syst Rev(3): CD004015.

BACKGROUND: Lay health workers (LHWs) are widely used to provide care for a broad range of health issues. Little is known, however, about the effectiveness of LHW interventions.
OBJECTIVES: To assess the effects of LHW interventions in primary and community health care on maternal and child health and the management of infectious diseases.
SEARCH STRATEGY: For the current version of this review we searched The Cochrane Central Register of Controlled Trials (including citations uploaded from the EPOC and the CCRG registers) (The Cochrane Library 2009, Issue 1 Online) (searched 18 February 2009); MEDLINE, Ovid (1950 to February Week 1 2009) (searched 17 February 2009); MEDLINE In-Process & Other Non-Indexed Citations, Ovid (February 13 2009) (searched 17 February 2009); EMBASE, Ovid (1980 to 2009 Week 05) (searched 18 February 2009); AMED, Ovid (1985 to February 2009) (searched 19 February 2009); British Nursing Index and Archive, Ovid (1985 to February 2009) (searched 17 February 2009); CINAHL, Ebsco 1981 to present (searched 07 February 2010); POPLINE (searched 25 February 2009); WHOLIS (searched 16 April 2009); Science Citation Index and Social Sciences Citation Index (ISI Web of Science) (1975 to present) (searched 10 August 2006 and 10 February 2010). We also searched the reference lists of all included papers and relevant reviews, and contacted study authors and researchers in the field for additional papers.
SELECTION CRITERIA: Randomised controlled trials of any intervention delivered by LHWs (paid or voluntary) in primary or community health care and intended to improve maternal or child health or the management of infectious diseases. A 'lay health worker' was defined as any health worker carrying out functions related to healthcare delivery, trained in some way in the context of the intervention, and having no formal professional or paraprofessional certificate or tertiary education degree. There were no restrictions on care recipients.
DATA COLLECTION AND ANALYSIS: Two review authors independently extracted data using a standard form and assessed risk of bias. Studies that compared broadly similar types of interventions were grouped together. Where feasible, the study results were combined and an overall estimate of effect obtained.
MAIN RESULTS: Eighty-two studies met the inclusion criteria. These showed considerable diversity in the targeted health issue and the aims, content, and outcomes of interventions. The majority were conducted in high income countries (n = 55) but many of these focused on low income and minority populations. The diversity of included studies limited meta-analysis to outcomes for four study groups. These analyses found evidence of moderate quality of the effectiveness of LHWs in promoting immunisation childhood uptake (RR 1.22, 95% CI 1.10 to 1.37; P = 0.0004); promoting initiation of breastfeeding (RR = 1.36, 95% CI 1.14 to 1.61; P < 0.00001), any breastfeeding (RR 1.24, 95% CI 1.10 to 1.39; P = 0.0004), and exclusive breastfeeding (RR 2.78, 95% CI 1.74 to 4.44; P <0.0001); and improving pulmonary TB cure rates (RR 1.22 (95% CI 1.13 to 1.31) P <0.0001), when compared to usual care. There was moderate quality evidence that LHW support had little or no effect on TB preventive treatment completion (RR 1.00, 95% CI 0.92 to 1.09; P = 0.99). There was also low quality evidence that LHWs may reduce child morbidity (RR 0.86, 95% CI 0.75 to 0.99; P = 0.03) and child (RR 0.75, 95% CI 0.55 to 1.03; P = 0.07) and neonatal (RR 0.76, 95% CI 0.57 to 1.02; P = 0.07) mortality, and increase the likelihood of seeking care for childhood illness (RR 1.33, 95% CI 0.86 to 2.05; P = 0.20). For other health issues, the evidence is insufficient to draw conclusions regarding effectiveness, or to enable the identification of specific LHW training or intervention strategies likely to be most effective.
AUTHORS' CONCLUSIONS: LHWs provide promising benefits in promoting immunisation uptake and breastfeeding, improving TB treatment outcomes, and reducing child morbidity and mortality when compared to usual care. For other health issues, evidence is insufficient to draw

conclusions about the effects of LHWs.

Liu, A., et al. (2011). "Community Health Workers in Global Health: Scale and Scalability." Mount Sinai Journal of Medicine: A Journal of Translational and Personalized Medicine **78**(3): 419-435.

Community health worker programs have emerged as one of the most effective strategies to address human resources for health shortages while improving access to and quality of primary healthcare. Many developing countries have succeeded in deploying community health worker programs in recognition of the potential of community health workers to identify, refer, and in many cases treat illnesses at the household level. However, challenges in program design and sustainability are expanded when such programs are expanded at scale, particularly with regard to systems management and integration with primary health facilities. Several nongovernmental organizations provide cases of innovation on management of community health worker programs that could support a sustainable system that is capable of being expanded without being stressed in its functionality nor effectiveness—therefore, providing for stronger scalability. This paper explores community health worker programs that have been deployed at national scale, as well as scalable innovations found in successful nongovernmental organization–run community health worker programs. In exploration of strategies to ensure sustainable community health worker programs at scale, we reconcile scaling constraints and scalable innovations by mapping strengths of nongovernmental organizations' community health worker programs to the challenges faced by programs currently deployed at national scale. Mt Sinai J Med 78:419–435, 2011 © 2011 Mount Sinai School of Medicine

Perry, H. B., et al. (2014). "Community health workers in low-, middle-, and high-income countries: an overview of their history, recent evolution, and current effectiveness." Annu Rev Public Health **35**: 399-421.

Over the past half-century, community health workers (CHWs) have been a growing force for extending health care and improving the health of populations. Following their introduction in the 1970s, many large-scale CHW programs declined during the 1980s, but CHW programs throughout the world more recently have seen marked growth. Research and evaluations conducted predominantly during the past two decades offer compelling evidence that CHWs are critical for helping health systems achieve their potential, regardless of a country's level of development. In low-income countries, CHWs can make major improvements in health priority areas, including reducing childhood undernutrition, improving maternal and child health, expanding access to family-planning services, and contributing to the control of HIV, malaria, and tuberculosis infections. In many middle-income countries, most notably Brazil, CHWs are key members of the health team and essential for the provision of primary health care and health promotion. In the United States, evidence indicates that CHWs can contribute to reducing the disease burden by participating in the management of hypertension, in the reduction of cardiovascular risk factors, in diabetes control, in the management of HIV infection, and in cancer screening, particularly with hard-to-reach subpopulations. This review highlights the history of CHW programs around the world and their growing importance in achieving health for all.

Primary studies conducted in South Africa, focusing on Ward Based Outreach Teams

Khuzwayo, L. S. and M. Moshabela (2017). "The perceived role of ward-based primary healthcare outreach teams in rural KwaZulu-Natal, South Africa." Afr J Prim Health Care Fam Med **9**(1): e1-e5.

> BACKGROUND: The aim of ward-based outreach teams (WBOTs) is to improve access to primary healthcare (PHC) services including health promotion and disease prevention in South Africa. Limited information is available in South Africa on user perceptions of services provided by WBOTs in rural households. AIM: The study aimed to explore community awareness and perception of WBOTs, as well people's motivation to engage and use WBOT services.
> SETTING: The study was conducted between July and September 2015 in iLembe district, KwaZulu-Natal.
> METHODS: This was exploratory-descriptive qualitative research. Purposive sampling technique was used in this study. A total of 16 key informant interviews and 4 focus group discussions were conducted. The voice recordings were transcribed in isiZulu and translated into English.
> RESULTS: Four themes emerged from the data analysis, namely bringing services closer, organising services, expanding services and forming bridges. Respondents demonstrated insightful knowledge and understanding of services provided by WBOTs. They expressed an appreciation of the way WBOT services brought healthcare closer to people and serve to bridge the gap between the community and local healthcare facilities. Respondents identified unclear WBOT work schedules and the failure to carry medication other than vitamin A as the main challenges. However, WBOTs did deliver medication for controlled chronic patients in their households.
> CONCLUSION: The study suggests that WBOTs provide a commendable service, but need to expand their service package to further increase access to PHC services and cater for community health needs.

Marcus, T. S., et al. (2017). "Which primary care model? A qualitative analysis of ward-based outreach teams in South Africa." Afr J Prim Health Care Fam Med **9**(1): e1-e8.

> Globally, models of extending universal health coverage through primary care are influenced by country-specific systems of health care and disease management. In 2015 a rapid assessment of the ward-based outreach component of primary care reengineering was commissioned to understand implementation and rollout challenges. AIM: This article aims to describe middle- and lower-level managers' understanding of ward-based outreach teams (WBOTs) and the problems of authority, jurisdiction and practical functioning that arise from the way the model is constructed and has been operationalised.
> SETTING: Data are drawn from a rapid assessment of National Health Insurance (NHI) pilot sites in seven provinces.
> METHODS: The study used a modified version of CASCADE. Peer-review teams of public health researchers and district/sub-district managers collected data in two sites per province between March and July 2015.
> RESULTS: Respondents unequivocally support the strategy to extend primary health care services to people in their homes and communities both because it is responsive to the family context of individual health and because it reaches marginal people. They, however, identify critical issues that arise from basing WBOTs in facilities, including unspecific team leadership, inadequate supervision, poorly constituted teams, limited community reach and serious

infrastructural and material under-provision.
CONCLUSION: Many of the shortcomings of a facility-based extension model can be addressed by an independently resourced, geographic, community-based model of fully constituted teams that are clinically and organisationally supported in an integrated district health system. However, a community-oriented primary care approach will still have to grapple with overarching framework problems.

Moosa, S., et al. (2017). "Insights of health district managers on the implementation of primary health care outreach teams in Johannesburg, South Africa: a descriptive study with focus group discussions." Hum Resour Health **15**(1): 7.
BACKGROUND: Primary health care (PHC) outreach teams are part of a policy of PHC re-engineering in South Africa. It attempts to move the deployment of community health workers (CHWs) from vertical programmes into an integrated generalised team-based approach to care for defined populations in municipal wards. There has little evaluation of PHC outreach teams. Managers' insights are anecdotal.
METHODS: This is descriptive qualitative study with focus group discussions with health district managers of Johannesburg, the largest city in South Africa. This was conducted in a sequence of three meetings with questions around implementation, human resources, and integrated PHC teamwork. There was a thematic content analysis of validated transcripts using the framework method.
RESULTS: There were two major themes: leadership-management challenges and human resource challenges. Whilst there was some positive sentiment, leadership-management challenges loomed large: poor leadership and planning with an under-resourced centralised approach, poor communications both within the service and with community, concerns with its impact on current services and resistance to change, and poor integration, both with other streams of PHC re-engineering and current district programmes. Discussion by managers on human resources was mostly on the plight of CHWs and calls for formalisation of CHWs functioning and training and nurse challenges with inappropriate planning and deployment of the team structure, with brief mention of the extended team.
CONCLUSIONS: Whilst there is positive sentiment towards intent of the PHC outreach team, programme managers in Johannesburg were critical of management of the programme in their health district. Whilst the objective of PHC reform is people-centred health care, its implementation struggles with a centralising tendency amongst managers in the health service in South Africa. Managers in Johannesburg advocated for decentralisation. The implementation of PHC outreach teams is also limited by difficulties with formalisation and training of CHWs and appropriate task shifting to nurses. Change management is required to create true integrate PHC teamwork. Policy review requires addressing these issues.

Schneider, H. and N. Nxumalo (2017). "Leadership and governance of community health worker programmes at scale: a cross case analysis of provincial implementation in South Africa." Int J Equity Health **16**(1): 72.
BACKGROUND: National community health worker (CHW) programmes are returning to favour as an integral part of primary health care systems, often on the back of pre-existing community based initiatives. There are significant challenges to the integration and support of such programmes, and they require coordination and stewardship at all levels of the health system. This paper explores the leadership and governance tasks of large-scale CHW programmes at sub-national level, through the case of national reforms to South Africa's community based sector, referred to as the Ward Based Outreach Team (WBOT) strategy.

METHODS: A cross case analysis of leadership and governance roles, drawing on three case studies of adoption and implementation of the WBOTs strategy at provincial level (Western Cape, North West and Gauteng) was conducted. The primary case studies mapped system components and assessed implementation processes and contexts. They involved teams of researchers and over 200 interviews with stakeholders from senior to frontline, document reviews and analyses of routine data. The secondary, cross case analysis specifically focused on the issues and challenges facing, and strategies adopted by provincial and district policy makers and managers, as they engaged with the new national mandate. From this key sub-national leadership and governance roles were formulated.
RESULTS: Four key roles are identified and discussed: 1. Negotiating a fit between national mandates and provincial and district histories and strategies of community based services 2. Defining new organisational and accountability relationships between CHWs, local health services, communities and NGOs 3. Revising and developing new aligned and integrated planning, human resource, financing and information systems 4. Leading change by building new collective visions, mobilising political, including budgetary, support and designing implementation strategies.
CONCLUSIONS: This analysis, from real-life systems, adds to understanding of the processes involved in developing CHW programmes at scale, and specifically the negotiated and multilevel nature of leadership and governance in such programmes, spanning analytic, managerial, technical and political roles.

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