Health focused community based agents: motivation and incentives

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DRAFT WORKING PAPER

inSCALE – Innovations at Scale for Community Access and Lasting Effects

The inSCALE programme, a collaboration between Malaria Consortium, London School of Hygiene and Tropical Medicine (LSHTM) and University College of London (UCL), aims to increase coverage of integrated community case management (ICCM) of children with diarrhoea, pneumonia and malaria in Uganda and Mozambique. inSCALE is funded by Bill & Melinda Gates Foundation and sets out to better understand community based agent (CBA) motivation and attrition, and to find feasible and acceptable solutions to CBA retention and performance which are vital for successful implementation of ICCM at scale.

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Introduction

Aim

To review the work motivation literature to identify concepts and strategies which can inform the design of innovative interventions to both increase coverage of integrated community case management (iCCM) and improve its quality through better performance and retention of health focussed community based agents (CBAs)[1].

Background

During the last decade child mortality has reduced significantly in a number of African countries. Scale up of appropriate management of diarrhoea, pneumonia and malaria was partly the reason behind the success. As a way of increasing access to treatment for sick children where health services are geographically and financially inaccessible, several African countries are currently investing in community based agents (CBAs) to deliver treatment. Uganda was one of the first to take this policy to scale through the Home Based Management of Fever (HBMF) strategy, which aimed to improve prompt and appropriate treatment of presumptive malaria using volunteering community medicine distributors (CMDs). Recently, the HBMF strategy was integrated into the more holistic Village Health Team (VHT) strategy. As part of the VHT, CMDs do not only provide health promotion / health education and treatment for malaria, but also treatment of diarrhoea and pneumonia – so called "integrated community case management" (iCCM). However, experiences from HBMF indicate that CMD supervision and motivation are critical constraints that limit coverage of community-based delivery of health care. It was also observed that proper collection, flow and use of data between CMDs and the health system is another major challenge that hinders optimal implementation.

In Mozambique, the use of CBAs dates back to 1978, where they were (and still are) known as Agentes Polivalentes Elementares (APEs), and were trained and operated under a national program, locally known as the APE program. Currently there is enthusiasm and government and partner commitment to a 'revitalisation' of the APE strategy. The enthusiasm and discussions date back to the early 2000s, and gained momentum in 2007, in a National Meeting on Community Involvement for health. The rationale for the revitalization of the APE program is that, the Ministry of Health argues that APEs are an important group to help in health promotion and disease prevention at the community level. In Mozambique, as in Uganda and other settings, supervision and motivation as well

[1] Health focussed CBAs in the context of this paper refer to Village Health Team (VHT) members in Uganda and Agentes Polivalentes Elementares (APES) in Mozambique. At present both are nominally voluntary though there is the intent in Mozambique to introduce a payment scheme. Across the literature, 'community health workers' (CHWs) is a commonly used term to describe what are here referred to as health focussed CBAs. CHWs as a term was avoided as in Uganda health workers are commonly understood to be facility based, professionally trained and employees of the Ministry of Health.

as the flow and use of data are key constraint areas to the impact of iCCM when implemented through CBAs.

Recently, Malaria Consortium was awarded a grant from Bill and Melinda Gates Foundation to better understand work motivation, attrition and use of data to find feasible and acceptable solutions to CBA retention and performance issues which are so critical for successful implementation of iCCM at scale. This program will complement a project funded by CIDA which Malaria Consortium is implementing in Uganda and Mozambique.

A key element of the project is to implement and measure new ideas or 'innovations' that may lead to increased levels of performance of CBAs. It is anticipated that a review of the work motivation literature may result in a rich bank of ideas.

Definition of 'innovations'

Innovations can mean different things in different contexts. For the InScale project it means an activity, approach or underlying concept which may contribute to the performance and retention of CBAs. Innovations may:

1. be promising in practice,
2. be promising theoretically,
3. have been used before in Uganda and Mozambique but either not in the way proposed or in the way originally designed,
4. have been used effectively in other geographic locations and / or sectors.

Approach and report structure

The delivery of primary health care services in the developing world relies on a number of factors but none more important than the quality of performance of CBAs. While resource availability and competency of workers are clearly critical factors, worker performance is also contingent on workers' willingness to come to work regularly, work diligently, be flexible and carry out the necessary tasks' (Franco et al. 2004). Thus retaining CBAs in role and motivating them to perform in this manner have been identified as key components in reducing mortality and morbidity in the context of iCCM.

The work motivation literature was purposively examined targeting meta analyses related to health worker and community health worker motivation as well as key theoretical papers to map out the key concepts (macro[2]) relating to the retention, performance and motivation of workers. These have been documented in section 1 even where examples do not offer an obvious rationale for their application across contexts (i.e. to InScale CBAs). In section 2 (and

[2] A macro concept is seen by the InScale team as an overarching approach which informs the development of micro activities. More than an ideology, it is a underlying principle which serves the purpose of guiding activities towards meeting program or organisational goals.

in Appendix 1) actual interventions / innovations (micro[3]) where incentive based activities have had a positive impact on worker or volunteer retention and performance and promising practice that perhaps does not yet have such an evidence base have been presented. Ideas based on theoretical premise have also been included. Using the key concepts generated as search terms PubMed searches were conducted for reports and journal articles presenting research evidence in these areas since 1990. Potential barriers and facilitators to feasibility, acceptability and scalability have also been highlighted.

Many reviews have identified a paucity of evidence for what motivates community health workers in various settings and countries (Bhattacharyya, 2001 321 /id;Mueller, 2005 324 /id;Chandler, 2009 341 /id;Campbell, 2009 331 /id). Through the twentieth century and into the twenty first several models of work motivation have been developed (Latham and Latham) and recently some have been applied to a developing world setting (Chandler et al. 2009;Latham 2007;Latham and Pinder 2005). These models have been examined as part of this review.

Section 1: Theoretical background for understanding health focussed CBA motivation

The first step in approaching the broad area of work motivation is to understand the terms used. The concepts of motivation and work satisfaction are explored [A] before utilising a framework presented by Latham (2005) to look at the range of factors that are theorised to influence satisfaction and motivation[4] in broad terms. First factors focussing on the individual [B] are considered before turning to the range of working as well as community, national and regional cultural and contextual, community and cultural factors which impact on these factors [C]. On a more practical level an examination of key activity areas to promote motivation is explored [D] and developments towards a theoretical framework for health focussed CBA motivation explored [E].

Important among individual factors are the response to perceived needs [Bi] and the role of personal traits [Bii], values [Biii] and emotions and moods [Biv] (Latham & Pinder 2005). The impact on satisfaction, motivation and performance when these individual factors interact with national culture [Ci], job design characteristics and norms [Cii], person context fit [Ciii] and social cognition [Civ] is also explored emphasising that an examination of the individual outside of context is nonsensical (Campbell and Jovchelovitch 2000;Crossley 2000). Finally

[3] A micro activity may be a single application of a macro concept or a stand alone approach. Either way this micro activity is a single intervention / innovation which aims to achieve or contribute to the achievement of program or organisational goals.

[4] Indeed Latham (2007) suggests that 'predicting, explaining and influencing employee motivation in the 21st century can now be done taking into account seven variables' – 1. Needs, 2. Personal traits, 3. Values. 4. Context including societal culture, job design and person context fit. 5. Cognition and goals. 6. Affect and 7. Incentives.

the impact of goal setting [Di], organisational justice [Dii] and incentives [Diii] will be examined.

A: Motivation and satisfaction

N.R.F. Maier (Maier 1955) argued for the importance of motivation in the workplace by proposing the equation; job performance = ability x motivation. According to Latham (2007) this equation explains why there has been such interest, often generated by productivity focussed employers, in theories of motivation. What complicates the equation is the interrelatedness of the variables. As will be seen, the nature of how individual attributes and ability combine with situational factors to influence the 'degree of willingness to exert and maintain an effort towards organisational goals' (Franco, 2002 34 /id - definition of motivation) has been conceptualised as dynamic and complex.

For Kanfer 'motivation is neither a property of the person or the situation but rather a consequence of the person-situation interface' (Kanfer, 1999 344 /id cited in Latham, 2007 39 /id). A key component of this interface has been proposed to be the degree to which a worker is either satisfied or dissatisfied – a factor commonly linked in the literature to the likelihood of their retention (Bhattacharyya et al. 2001;Latham 2007;Latham & Pinder 2005;Mueller et al. 2005). While continuity of tenure is essential for performance as it allows the retention of skills and experience within the system, the literature supports a more complex view of the function of satisfaction. For example, in the context of incentives, the power of a given incentive to exact an increased level of performance from a worker has been seen as function of both the degree to which the incentive is perceived to satisfy a worker's needs and how important the satisfaction of those needs is to the worker. Need satisfaction therefore plays a crucial role in work motivation and indeed the context based effectiveness of incentives.

Herzberg's two factor theory makes the distinction between factors leading to satisfaction and those linked to motivation. He suggested that while certain elements must be provided within a working environment in order to retain staff, these factors are not necessarily linked to increased performance (Herzberg et al. 1959). There is little evidence that 'a satisfied worker actually works harder', but rather that they are simply more likely to remain in role (Sadri and Robertson 1993). In other words, taking a perspective influenced by Maslow, their minimum needs have been satisfied (see needs section below). Interestingly in this respect, Herzberg concluded that satisfaction and dissatisfaction of workers are not on the same continuum. That is, they are not opposites of each other and if a worker is not dissatisfied it does not necessarily mean that they are satisfied. A logical conclusion to draw is that interventions aimed at both reducing worker dissatisfaction as well as increasing satisfaction are required. These latter interventions could also be conceptualised as focussing on worker motivation as the dynamic relationship between the variables of satisfaction and motivation indicate that one is not possible without the other. These motivating and satisfying factors were seen by Herzberg as being products of the

work environment and intrinsically motivating in the absence of extrinsic rewards (Franco et al. 2002) (see intrinsic and extrinsic motivation section below).

Mueller et al have nevertheless usefully divided interventions into those that are likely to meet the base needs of workers and therefore satisfy them (according to Herzberg what is referred to here as 'satisfaction' is actually the absence of dissatisfaction) and those which will motivate the desired level of performance. These will be explored in greater detail in section 2.

B: Individual factors

Determining what is inside and outside the influence of program managers when designing approaches aiming to influence the motivation of workers has been identified as a key concern. Some suggest that 'distal' factors (i.e. those believed to be more removed from direct influence) lie beyond the scope certainly of a Human Resource Management perspective (Mathauer and Imhoff 2006). Included among distal factors are commonly cultural norms and values and personality. For others it is necessary to consider all factors and a holistic model of motivation is necessary for sustainability at the community level (Campbell & Jovchelovitch 2000).

Bi: Needs and their satisfaction

The identification of worker satisfaction as a key influence on whether a health worker stays in their role emerged in response to Maslow's theory of hierarchical (Mueller, Kurowski, & Mills 2005). Maslow suggests that in order for an individual to address higher order needs, their lower order needs must first be seen to – i.e. ones physical needs need to be addressed before social or 'self actualisation' ones. Aldefer built on Maslow's theory by suggesting that individuals prioritise needs based on their circumstances and their varying levels of need which, unlike Maslow, acknowledged that needs prioritisation was a dynamic, context based process (Mueller, Kurowski, & Mills 2005). Latham (2007) argues that there is now widespread acceptance of the practical significance of Maslow's hierarchy. This, for Latham, is particularly apparent in developing countries where lower order physiological needs more obviously take precedence over higher order needs.

Kyaddondo and Whyte (Kyaddondo and Whyte 2003) argue that in the Ugandan context a decentralized health system has lead to a real (in terms of being acted upon) and / or perceived (as reported qualitatively) lack of faith in the health system to provide adequately for basic needs leading to the adoption of alternative 'survival strategies' or money generating enterprises. What is most 'salient' to these workers is the need to provide for themselves and their families. The pursuit of this need negates to some degree the possibility of them performing their role (unless of course this is compatible with generating sufficient income). The pursuit of 'survival strategies' decrease retention levels and highlight the necessity of interventions designed to 'satisfy' workers' basic needs and keep them in their role.

The salience of needs has been explored by Haslam et al through Social Identity Theory (Haslam et al. 2000). In the context of work motivation Haslam et al argue that when thinking about needs prioritisation one must look at the hierarchical aspirations individuals have for themselves. When personal identity is most salient, needs focus on individual advancement and actualisation while when group or social identity is most salient needs focus on enhancing group based self esteem through the pursuit of group goals and a sense of relatedness, respect and belonging (Haslam, Powell, & Turner 2000;Latham & Pinder 2005). Needs and goals therefore are more likely to be pursued when their attainment is compatible with individual and group identity (Latham & Pinder 2005). In the context of health focussed CBAs it would follow that when a supervisor and supervisee share the same or similar social identities, consensus around the pursuit of shared needs and goals is more likely. Within organisations McGregor's theory X and theory Y assumptions are relevant here. For McGregor it is the obligation of the organisation to establish and maintain a work environment that will promote the salience of needs for employees most conducive to productive output. He termed this Theory Y. The absence of such a structure he termed Theory X (Latham 2007).

Latham suggests that while theories based on need are useful for explaining the motivation to act they are less reliable when it comes to explaining why certain actions are taken in certain situations (Latham & Pinder 2005). This is the reason he puts forward for a contemporary increase in the focus on individual differences. While McGregor's theory in the 1960s initiated a focus on the creation of an enabling work environment, the relationship between this environment and the response of the individual has led to greater exploration of the impact of personality traits (Latham 2007).

Bii: Personal (or personality) traits

The role played in work motivation by individual personality traits is contentious (Latham 2007). Indeed through much of the 20th century traits were not considered worthy of examination – a position maintained by the social cognition perspective (as explored below). Nevertheless the pursuit of personality as a domain of research that can predict, explain and influence employee motivation has been maintained. Latham suggests that this has been in part due to the demands of employers who seek tangible identifiers of individuals they would like to employ, in part because traits have been shown to be tangible in this regard and that both personality and actions can be described in terms of traits. When tested on personality questionnaires and categorised into traits people have been found to test highly on behaviours (such as dominance) when they test highly for that trait (Glomb, 2005 349 /id cited in Latham, 2007 39 /id). A great deal of time and resources have been expended – particularly in the fields of human resource management and recruitment – to link personality traits of those screened for employment with desirable work behaviours. The widespread screening of health focussed CBAs with personality questionnaires validated to the context is most likely beyond the resource capacity of the InScale project however. The challenge and cost of validating such personality testing tools typically designed for an

American workplace to Uganda and Mozambique is prohibitive. Further examination of the relative merits of different personality measures will therefore not be undertaken here. Some key points relating to personality that maybe relevant however are (Stewart, 2004 348 /id cited in Latham, 2007 39 /id):

- Traits tend to predict behaviour only when the working context demands or creates the conditions for the expression of that behaviour. Therefore using a personality questionnaire to prioritise employees who are extroverted will only result in those employees performing well if the role demands extroversion. This raises the issue of what the desirable traits are for CBAs and whether screening for these traits could be in any way feasible.
- When it is clear what is expected in a given work situation the traits desired and required in that situation are more likely to be expressed by employees. This was seen to have two key impacts on the use of personality measures in the workplace:
    i. Firstly, setting out clear objectives and expectations - typically through goal setting - can minimise and potentially control for individual personality differences.
    ii. Secondly, personality measures will be more predictive of performance when employees are left to their own devices or allowed a high degree of autonomy and individual expression in the design of their roles. Personality measures may therefore be usefully employed to explain different approaches to similar work situations in the absence of clear and structured guidelines. This indicates that clear expectations and guidelines can avoid personality driven interpretations of the work role.
- People are likely to choose work environments that allow them to express their traits in the pursuit of organisational goals. Therefore if the expectations of the role are clear there is likely to be a degree of self selection in terms of those nominating, or agreeing to be nominated, for the role possessing the traits necessary for successful operation.

Notwithstanding the resource constraints that would limit the likelihood of widespread personality testing for the InScale project, it is unlikely this would be the best use of project resources anyway. Apart from the relatively low cost of heeding the recommendations of Stewart and Barrick (above), from a social cognition perspective, the key drivers of motivation in a work setting appear to be goals (and their relationship to needs) and task specific self efficacy beliefs (Latham 2007;Mueller, Kurowski, & Mills 2005). Furthermore, specific, work focussed self efficacy or the perception that the job is possible, under control and in the interests of the worker to pursue, appear possible for the employer to stimulate through engendering a sense of competence by providing clarity of expectations and feedback on areas for improvement (Franco, Bennett, Kanfer, & Stubblebine 2004).

Biii: Values

If needs are a function of circumstances or the context one finds oneself in from birth, values have been conceptualised as a construct acquired through experience. From a social

cognition perspective values are the bridge between needs and goals. From this perspective goals are the actions that stem from values which have their basis in needs (Latham 2007). The mitigating influence of emotions moods and context on the formulation, persistence and achievement of goals is relevant here. Values will be discussed further in the section on goals.

Biv. Emotions and moods

Moods and emotions mediate the attainment of long term goals especially with regard to task persistence according Latham (Latham 2007). The optimum mood state for the achievement of work related goals and the maintenance of effort is less clear and considered largely dependent on contextual variables. Organisational culture has been proposed as a key mediator between moods and emotions and the achievement of work related goals (Latham & Pinder 2005). Recognition and rewards are suggested to be key in shaping appropriate and productive emotional responses (Latham 2007).

C: Contextual factors

Ci: National and community level

The study of how local and national cultures and identity impact on work behaviour and especially motivation is contentious and has been acknowledged as underdeveloped (Latham 2007). Cross cultural psychology generally and within the area of work motivation specifically is a key site on which ideological differences in beliefs about the fundamental drivers of human behaviour are played out. From a psychological perspective following the American tradition and with a focus on the individual, useful concepts such as collectivism / individualism and power / distance have emerged. From a more European psychological perspective in the tradition of social constructionism the focus has been more on understanding alternative rationalities and local 'common sense' thinking. The degree to which, if at all, both approaches follow alternate pathways to the same or similar conclusion is a moot point but is nevertheless argued here.

Geert Hodstede's research into cross cultural psychology has been extremely influential (Latham 2007). Hofstede proposes four key dimensions in which national cultures can be graded and which he has suggested are critical for employers to understand about their country of operation. These are power distance [1], individualism [2], masculinity (alternatively known as quantity vs quality of life) [3] and uncertainty avoidance [4] (Hofstede 2001). Each dimension is a scale and represents the degree to which a country's inhabitants are likely to accept and consider inequality in power as normal[5] [1], the degree to which an individual promotes their own as opposed to group interests [2], whether traits such as assertiveness, ambitiousness and competition as opposed to quality of life, interpersonal relationships and fairness and equality for the disadvantaged are valued[3],

[5] This would denote a country classified as high power distance and be characterised, according to Hofstede, by acceptance of authority and the status quo.

and the degree to which people feel comfortable with lack of structure, clarity and predictability [4].

Erez's 'model of self representation' is useful when approaching Hofstede's dimensions with a particular focus on the individualism collectivism and low vs high power distance scales (Erez 2000). She proposes that from a human resource management perspective designing incentive based employee motivation structures in a cross cultural setting it is advantageous to consider three key dimensions:

1. Identify the cultural characteristics of your country of operation according to the individualism *vs.* collectivism and power distance scales[6].
2. Program designers should understand the features of their own country of origin on individualism *vs.* collectivism and power distance scales.
3. Understand the meaning of the various management and organisational strategies proposed within the country of origin. Erez suggests these should include supervision and the flow of information.

Erez argued that if instead of incorporating into operational practice lessons from local enquiry into the three dimensions, values from another culture form the basis, there is a high likelihood of dysfunctional outcomes in terms of motivations, communication and performance. Erez thus stresses the need for understanding the local drivers of behaviour and believes Hofstede's dimensions provide a useful framework for this undertaking.

While critics of Hofstede's national classifications suggest that it is informed by an assumption of stable and uniform national characteristics which are likely to be more dynamic, Hofstede has argued instead that it is the durability of cultures, as represented by scores on his dimensions, in the face of societal change that are of interest (Hofstede 2005). Jovchelovitch and Gervais have explored how it is possible to simultaneously maintain different cultural frameworks and value systems in their exploration of the concept of 'cognitive polyphasia' among migrant Chinese populations in the United Kingdom (Jovchelovitch and Gervais 1998). According to this theory it is possible to simultaneously draw on separate and often contradictory sets of knowledge (in this case Chinese and western biomedical knowledge) depending upon the context of the required behaviour. It seems likely that individuals are influenced therefore by more than one value system particularly in contexts of displaced and re-locating communities as is the case in northern Uganda. It is also probable that this value system will be linked to a group or groups with which an individual feels associated or part of and which forms part of their social identity whether this be as a Ugandan, a Bugandan[7] or a Village Health Team (VHT – Uganda's health focussed CBAs) member. The key point is that these communities or groups are likely to constitute units far smaller than a nation as Hofstede proposes and individuals may be

[6] This data was not readily available for Uganda and Mozambique.

[7] The Buganda kingdom is the largest cultural group in the district of Kampala in Uganda. Their language is Lugandan.

influenced by a range of different groups with which they identify. This is likely to drive behaviours in different ways depending upon the context. Understanding these 'alternative rationalities' therefore becomes important to any understanding of the behaviours they may drive (Crossley 2000).

As has been explored in the section relating to needs (above), according to social identity theory people are motivated to behave in a way that maintains either positive individual or group identity depending on which is salient at a given time. What is more, there is evidence to support an approach which prioritises feedback and rewards from the community over the health system as they have a greater influence on work performance (defined as degree of perceived goal attainment on job tasks) (Robinson and Larsen 1990).

The absence of a specific focus on the role of community in the success of health programs seeking to utilise CBAs has been the subject of recent enquiry (Campbell and Scott 2009). In fact the specific neglect of the need for CBAs to be sufficiently 'embedded' in their communities to perform the preventative and curative tasks assigned to them has been attributed to 'a broader global public health trend away from community-focused primary healthcare towards biomedically focused selective healthcare'. It is argued that many tasks of CBAs are socially rather than medically based and more effectively performed by someone who is respected and considered a member of the community (Bhattacharyya, Winch, LeBan, & Tien 2001;Campbell & Scott 2009). Closely working with communities is also considered essential in understanding the often complex power dynamics at play and to safeguard against the potential manipulation of CBAs by local people of influence (Bhattacharyya, Winch, LeBan, & Tien 2001;Campbell & Scott 2009;Haines et al. 2007). One of the key conclusions of Campbell and Scott's report was that greater community 'embeddedness' (Schneider et al. 2008) of CBAs is required to ensure their acceptability and sustainability as well as to contribute to their motivation.

What is apparent is that even if specific interventions designed to promote community 'embeddedness' are not implemented, a focus on understanding community identity, its impact on work approach and the meaning of and potential alignment with work objectives is critical. From an alternative perspective within social psychology, and in the tradition of social constructionism, it is social rather than individual knowledge that informs how individuals make sense of their environment and construct strategies to navigate it. One useful theory for conceptualising this process is social representations theory which argues that beliefs, values and subsequent behaviours are constructed against a backdrop of 'constant social interactions and negotiations, where allegiances to social identity, group norms and cultural traditions play a major role' (Jovchelovitch & Gervais 1998). Social representations theory may provide a useful method for understanding the collective meanings that drive work behaviours in diverse settings especially during periods of change (such as health sector reform – see section E). Regardless of whether social representations

of Hofstede's dimensions are used as the basis for the enquiry, it is apparent that the cultural and contextual drivers of motivation need to be understood.

Cii: Job characteristics and norms

Work context is seen as a major influence on motivation and a key site for interventions designed to influence it (Latham 2007). A key thrust is the push for finding opportunities to make employees autonomous as this encourages taking responsibility for task outcomes which in turn is proposed to lead to increased job satisfaction. This challenge needs to be offset by creating clear guidelines and expectations for workers so their level of individual interpretations (possibly personality driven – see section above) of their role fall within an acceptable range (Latham 2007).

A further issue is the changing nature of the working context. As noted earlier, in Uganda there has been structural reform in the health system involving decentralisation of coordination and management (Kyaddondo & Whyte 2003). Sseengooba et al (Ssengooba et al. 2007) argue that there are several key points to consider in such a state of change. Namely:

1. Objectives need to be re-worked to ensure they encourage positive responses among workers.
2. The role of context has been underestimated and it is necessary to address broader systemic problems before initiating reform processes.
3. Reform programs need to incorporate active monitoring of implementation during a state of change in order to learn the contextual dynamics and responses. There also needs to be the capacity to alter the implementation in response to these factors.
4. Workers are key stakeholders in any reform process and should participate at all stages.
5. Some effects of reforms on the health workforce operate indirectly through levels of satisfaction voiced by communities utilising the services. These need to be understood.

Franco et al (2002) have also proposed a model for health worker motivation in the context of sector wide reform and change which is discussed below in the section on theoretical models.

Ciii: Person environment fit

'Goodness-of-fit models' are common in human resources management and are proposed by Latham to simultaneously consider individual differences and organisational outcomes as mediated by context (Latham & Pinder 2005). They do he contends appear to view the organisational context as a stable variable and downplay the impact of workers in influencing their work environment as it does them (Bandura 2001). Worthy of greater emphasis would appear to be the correspondence between work expectations and organisational values and the expectations and values – especially with regard to motivation and performance – of the worker (Latham 2007).

Civ: Social cognitive theory

Social cognitive theory has been the dominant social psychological theory, certainly in the United States, since the 1970s when introduced by Albert Bandura (Latham 2007;Latham & Pinder 2005). The previously dominant theory of behaviourism eschewed psychological enquiry beyond examining how specific stimuli resulted in certain behavioural responses. Social cognition theory argues that the response to a given stimulus is instead mediated by two key variables – outcome expectancies and self efficacy. Outcome expectancies refer to the expectation that behaving in a specific way will result in a specific, related response. Self efficacy refers to an individual's belief that they can perform the specific behaviour that will elicit this response (Latham 2007;Winstanley 2006). Latham (2007) goes so far as to argue that belief in one's ability to perform a task (i.e. self efficacy) is more important than ability when it comes to performance (Latham 2007). Latham explains Bandura's differentiation between self esteem and self efficacy thus:

> *Note too that self efficacy and self esteem are not interchangeable concepts. Self esteem is a trait, and hence is trans-situational. How much I like myself in Seattle is pretty much the same as how I like myself in Toronto. Self-efficacy is a cognitive judgement of how well I can perform a specific task. I can have high self esteem and low self efficacy regarding repairing the engine in my car; conversely I can have low self-esteem and high self-efficacy that I can give a lecture on motivation.*
> (Latham, 2007. P. 73)

Bandura argued that people regulate their behaviour in anticipation of the outcome of reaching goals. He suggested that over time their behaviour evolves through the pursuit of positive outcomes and the avoidance of negative ones. Critically, he argued that the degree to which someone will pursue a given positive outcome depends upon their belief as to whether they can produce the performance they think will result in that outcome and that it is worthwhile and of benefit to them. It follows that providing a strong incentive to reach a work target will only result in a worker mobilising extra effort to achieve the goal if they believe it is attainable through their endeavours and is worth pursuing in the first place (see 'goal setting theory and practice' and 'incentives' section below for further elaboration').

D: Key activity areas designed to increase worker motivation

Di: Goal setting theory and practice

What Bandura was able to demonstrate is that people are motivated by both the anticipation of, as well as the reaction to, the achievement of goals. When a goal is set, the focus becomes on attaining it and resources that the individual can mobilise in its pursuit are called upon (Latham & Pinder 2005). The theory follows that upon goal achievement those with high levels of self efficacy set higher goals. When goals are not achieved Bandura suggests that the level of commitment to the goal, combined with self efficacy, determines the response – renewed effort, apathy or despondency (Bandura 2001). Several meta-analyses have demonstrated that self efficacy influences motivation and performance (Sadri

& Robertson 1993;Stajkovic and Luthans 1998) though there is some evidence that belief in the efficacy of the tools required for the a work task can be as motivating as self efficacy (Eden 2001). Bandura nevertheless maintains that self efficacy is a task specific construct that varies along with outcome expectancies of specific goals. He suggests that it is a cognitive judgement formed while considering the task and it has motivational consequences (Bandura, 1997).

Goal setting theory rests on the premise that based on a person's needs, their values and their contextual influences; they set goals and develop strategies for achieving them. Furthermore, through the process of goal achievement, they develop assumptions about themselves, their context and their identity (Latham 2007). Latham suggests that goals influence action in three ways:

1. They influence the information people choose to act on – in other words they act as a filter for undesirable information.
2. Depending on the importance of goal achievement to a person they influence the intensity of actions in pursuit of the goal
3. They influence the level of persistence.

Goal effects are theorised as an internal process that only occurs in a context where there is the requisite knowledge and ability to make goal attainment possible. Goals in the absence of knowledge and knowledge in the absence of goals are proposed as equally ineffectual. Feedback is seen as a key component in goal setting theory as it leads to knowledge regarding the features of goal achievement. This knowledge is linked by the theory to an increase in levels of performance over time through the setting of new 'high goals' as well as the maintenance of performance through self regulation (Latham 2007).

According to Locke (cited in Latham, 2007 39 /id p. 259) goals and self efficacy are the 'motivational hub' because they are, in most instances, the direct, conscious, motivational determinants of an employee's performance.

Dii: Organisational justice

Theories of organisational justice are said by Latham to follow from Adam's equity theory (Latham 2007). This theory argues that over time employees develop beliefs about their input and the corresponding output they receive through comparison with others (i.e. colleagues or workers in same or similar sectors). Theories of organisational justice suggest that employee acceptance of organisational aims and outcomes are enhanced by their perception of fairness and equality in the workplace (Latham & Pinder 2005). It seems that when people perceive they have been treated unfairly whether it is 'distributive' (perceived fairness of tangible outcomes of any dispute) 'procedural' (perceived fairness of any policies, procedures and criteria used by an organisation or authorities to arrive at an outcome following a dispute) or 'interactional' (manner in which people are treated during a dispute) justice by classification (Blodgett et al. 1997), adverse emotions (such as low levels

of commitment) and behaviour (lower tangible work output) are likely to result (Latham & Pinder 2005).

Historically theories of equity have focussed on tangible rewards and matching incentives. More recently equity has been considered from the organisational standpoint leading to more transparent and participatory approaches such as collaboration between managers and workers when setting goals (Robbins and Judge 2007).

Diii: Incentives.

Building on Franco et al's (2002) definition of work motivation, Mathauer and Imhoff (2006) define an incentive as 'an available means applied with the intention to influence the willingness of .. (workers) .. to exert and maintain an effort towards attaining organisational goals'.

Intrinsic vs extrinsic motivation

Traditional understandings of the distinction between intrinsic and extrinsic motivating influences suggest there is a split between those aspects which are external (i.e. outcomes coming from outside the person) and those that are internal (i.e. are a function of an individual's values and relate to interest in and enjoyment of the work itself). Early suggestions also proposed a difference between the value and influence of the two modes of motivating forces. As we have seen, values are influenced by community so it is once again critical to understand these influences and social identities. It was felt that when internally motivated to perform a task then persistence in achieving it would be maintained for longer than when an external, extrinsic motivator was introduced (Deci 1975). It was suggested that this was due to a feeling of control over their behaviour and resulting feelings of competence and self determination which drive persistence. This perspective rests on the assumption that there is some inherent perceived value in the tasks performed in a work setting above and beyond any external reward that may be available for its attainment (Grant 2008).

Bandura later questioned the distinction between intrinsic and extrinsic motivators suggesting that all situations contain both internal and external inducements and that behaviour is a product of an interaction between personal and situational influences (Latham 2007). Bandura also suggested that it is not enough to simply look materially at the incentive offered. Instead the way it is communicated is likely to have an impact on the value attributed to the task for which it is offered. An incentive for instance can be introduced as an implied threat (you will only receive it if you perform), a recognition for what has been achieved or as a statement of what the service provided means to the supplier of the incentive (Latham 2007). Both the method of communication and the incentive itself appear likely to influence the degree of intrinsic motivation elicited.

Financial incentives

In the industrial and organisational (IO) as well as the human resources management literature there is a long tradition of equating the existence of financial incentives in the

form of remuneration with worker satisfaction, performance and motivation. The precise relationship, especially relating to causality, between these three variables has however been subject to considerable research and debate (Latham 2007). Latham charts the progression in academic thinking relating to the use of financial incentives by employers through the twentieth century. He suggests that early assumptions that money was the 'primary incentive for engaging in efficient and effective behaviour' (p. 99) were later deconstructed through the extensive use of attitude surveys which indicated that the pursuit of money was but one of many worker motives. More recently again Herzberg argued that there was a complex interplay of factors which influence outcomes from the various remuneration strategies that have been employed. Latham proposes the theories of 'equity' (see section on organisational justice) and 'expectancy' as most useful in understanding this interplay (Latham 2007).

For Lawler according to Latham, the effectiveness of a financial incentive in achieving a said behavioural outcome (worker performance in this instance) is a function of the degree to which this incentive is perceived to satisfy a worker's needs and how important the satisfaction of those needs is to a worker (Latham 2007;Lawler 1971). For instance, if a worker strongly desires autonomy and perceives the terms (amount and timing) of a payment as likely to satisfy this need, then the payment is likely to motivate the worker to perform. If this performance leads to more acceptable terms of payment the worker is likely to become increasingly satisfied resulting in ongoing motivation to perform. Lawler thus proposed that worker satisfaction can be both cause and outcome of worker performance and motivation is a function of equitable terms and the expectation of the outcome.

Providing an external incentive such as financial reward for the pursuit and / or effective performance of a task thought to be inherently meaningful has been criticised on the grounds that it may in fact 'dilute' motivation. Deci argues that the ability to determine one's own course of action is critical in the motivation to pursue that action and that if an external reward is applied then there will be a shift in the identification of the causality of one's own behaviour from self to others (Deci 1975). This shift, Deci argued in his theory of 'self determination', would most likely result in decreased satisfaction and motivation to perform over time (Latham 2007).

In practical terms Latham proposes that employers should emphasise demonstrating the link between performance and reward in order to motivate employees. He suggests that if no relationship exists between worker satisfaction and performance or there is a negative one, then clearly an ineffective system of rewards and incentives is in place. This will most likely result in low employee motivation due to the poor link between performance and reward (Latham 2007). For Lawler, issues and approaches around the payment of employees fall into the broad category of incentives and speak directly to the relationship between job satisfaction and job performance.

Non-financial incentives

Non-financial incentives have also been proposed as critical components of any package of interventions designed to motivate and retain health focussed CBAs (Bhattacharyya, Winch, LeBan, & Tien 2001;Mathauer & Imhoff 2006). Franco et al (2004) have argued that while workers often state that financial incentives are the key to improving motivation, there are a number of non-financial interventions and incentives that may represent more effective means of increasing motivational levels and performance. Franco et al suggest these interventions and incentives are successful because they make actual changes to the work environment and improve communication so that organisational strategies and policies are clear. Examples include providing greater links to the community to foster increased community esteem and worker pride, rewarding workers for creating these links and improving communication links so that all workers can articulate the goals of the program (Franco, Bennett, Kanfer, & Stubblebine 2004). See section 2 and Appendix 1 for further elaboration of financial and non-financial incentives.

As previously discussed in reference to Herzberg's theories, it is likely that non-salary motivators will only have an effect where minimum material requirements are satisfied and the opportunity cost of time spent as a CBA is acceptable and doesn't require the employment of alternative 'survival strategies' (Chandler, Chonya, Mtei, Reyburn, & Whitty 2009;Kyaddondo & Whyte 2003).

Incentives and goals

The impact of goals is not exclusively an external process according to the social cognition perspective (Bandura, 1989 cited in Latham 2007). Instead, the outcome of goals such as financial incentives for performance, are mediated by the worker's perception of the emotional as well as external outcomes of achieving the said goal. From this perspective an exclusive focus on financial rewards ignores a worker's process of anticipation of any positive self evaluation that may come as a result of goal achievement. Such affects may slow or prevent the achievement of performance targets when an outcome perceived as undesirable potentially accompanies a financial reward or is likely to occur anyway. For instance if workers fear being dismissed and believe this to be a probable outcome, performance may not reach the levels they otherwise would when a financial incentive is in place. The key is that task performance is directly linked to a positive outcome that is meaningful to the worker. The financial reward for task achievement is offset by the probability or inevitability of losing their job in the example.

E: A theoretical model of health focussed CBA motivation

In 2002 Franco and colleagues developed what they felt was a 'holistic' model for health worker motivation that acknowledged the complex relationship of contributing influences (Franco, Bennett, & Kanfer 2002). They adopted an interdisciplinary approach drawing on sources from diverse fields such as economics, psychology, organisational development, human resource management and sociology. They aimed to create an effective package which acknowledged that there was more to motivating a worker than providing a financial

incentive. They broke down the determinants of health worker motivation into three layers: individual level determinants, work context / organisational determinants and determinants resulting from broader societal culture. An overarching influence was the impact of various health sector reforms which the authors noted had an impact on work culture, tasks, management, accountability as well as the nature of interpersonal interactions required in the course of expected duties. The overall aim of the model developed by Franco et al was to achieve greater 'goal congruence' between workers and employers and improved motivation while considering organisational and cultural values, levels of leadership and impact at different levels of the system during a time of sector reform.

The first level of Franco et al's model concerns the individual 'self' determinants of motivation which they saw as being influenced by three key internal variables:

1. Goals, motives and values. While acknowledging individual variability and fluctuations in salience of these variables at different points in time, Franco et al propose that these internal variables divide into lower and higher level needs. Lower level needs such as safety and job security which lead to the absence of dissatisfaction, and higher level needs such as self determination and equity which lead to satisfaction and motivation. Using Herzberg's theories as a basis (as discussed in section A above) Franco et al propose that while meeting lower level needs alone is unlikely to lead to motivation, it is unlikely that motivation can occur if workers are dissatisfied. Absence of dissatisfaction (termed 'satisfaction' in some of the literature) has also been proposed as a key indicator for the retention of workers in role (Mueller, Kurowski, & Mills 2005).
2. Self concept and self efficacy. Franco et al saw notions of self as the key determinants of task interest and persistence. In line with Bandura's position, self efficacy was considered to be task specific rather than general and self concept similar to self esteem – i.e. evaluation of own competencies in specific domains. Positive self concepts and job self efficacy were seen as enhancing work motivation by providing a personal incentive to complete work tasks and attain work related goals once these goals have been internalised. The incentive is the maintenance of positive, work identity.
3. Cognitive expectations. As explored above in the section on social cognitive theory, this relates to the expectation that a certain effort will lead to a certain, positive outcome and is therefore worthy of pursuing. This effort has been proposed by social cognitive theorists to depend on the workers sense of whether the goal is achievable and whether the pursuit of this goal, as desired by their employer, has value to them. Really it is this point that constitutes Franco et al's definition of motivation – that workers firstly accept and agree the goals of their employer and secondly, mobilise their resources to achieve what are now shared goals between employee and employer. This process does not occur in a vacuum however. This process is subject to a number of organisational, cultural and other contextual influences which Franco et al attempt to address in their second and third levels of the model.

The second level of the model concerns organisational factors such as structures, available resources, processes and work culture. This incorporates methods to improve capability (training, supervision and feedback) by highlighting the consequences, both positive and negative, related to performance. Key aspects concern the clarity of communicating organisational goals to the employee, the mechanism for transmitting these messages and organisational norms, as well as the value workers place on the method and message communicated through manager feedback and supervision, ensuring the tools of the trade are consistently available, and ensuring accountability and management structures are clear and functional.

The third level of the model is concerned with the influence of culture and community. In Franco's original model the example of health sector reform is used to demonstrate the impact on individual, employee motivation. Culture and community are seen as a pervasive influence on all variables in the framework and a key source of explanatory material for variations in individual and organisational factors.

More recent reviews of CBA motivation suggest that the influence of community on motivation and retention runs a little deeper than simply providing an explanatory framework for the functionality of organisational dynamics. Campbell and Scott (Campbell & Scott 2009) for instance argue that models such as Franco's underemphasise the need for motivation focussed programs in the developing world to be 'embedded' in the community. They point to a recent trend of moving away from the Alma Ata conference's emphasis on the importance of community participation in all aspects of lay health worker performance because it is too difficult. They argue for a return to greater levels of input from local communities in the design and running of health focussed CBA programs and suggest that the perceived interests and needs of communities will be more closely met as a result.

The figure below displays a motivation framework developed from Franco et al (Franco, Bennett, & Kanfer 2002) and the reviews and studies cited above. The box shaded red contains the areas in which inSCALE program activities and approaches can be implemented. The orange and green boxes are key outcome areas that inSCALE is seeking to influence; namely performance and retention.

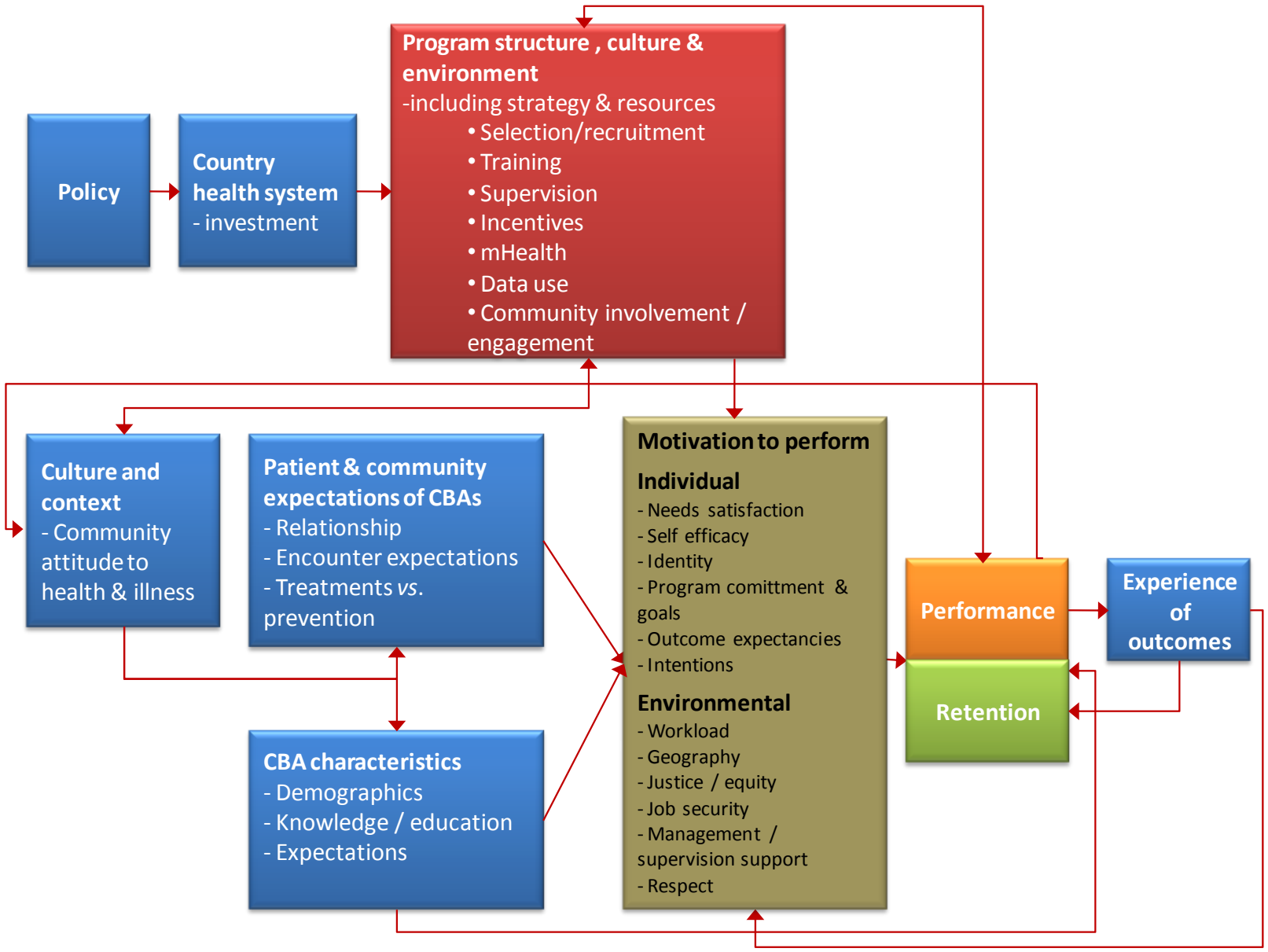

Figure 1: motivation framework

Section 2: Incentives supported by evidence that may positively impact on CBA motivation and retention

The motivation and attrition of health focussed CBAs is subject to a complex interplay of individual, group, workplace, cultural and societal influences that have been explored in section 1. It is unlikely there will be an optimum package of incentives that is transferable across contexts. Indeed the package of effective incentives is likely to differ markedly across communities depending on the existence of competing job opportunities and the economic situation (Bhattacharyya, Winch, LeBan, & Tien 2001). It is seemingly not sufficient to address skills and resources and to expect motivation to follow (Chandler, Chonya, Mtei, Reyburn, & Whitty 2009). It has also been emphasised that motivational theory lacks empirical evidence when applied in low income country health care contexts and that there is little available information on the links between incentives and other influences on intrinsic and extrinsic motivation (Franco, Bennett, Kanfer, & Stubblebine 2004;Moore 2010). In this context a number of key recommendations have been made:

1. That packages of incentives be put together in a coordinated way to ensure they are complimentary to work goals and any possible, negative effects can be more effectively anticipated and counteracted (Franco, Bennett, & Kanfer 2002). Further, that these coordinated packages of incentives aim to stimulate both intrinsic motivation (i.e. engendering a sense that the task is worthwhile in and of itself) and extrinsic motivation (that the task is worth pursuing due to the reward that task attainment will bring) of CBAs (Bhattacharyya, Winch, LeBan, & Tien 2001).
2. That the focus should be on designing the optimum, overall package of acceptable rewards for the role and not just financial rewards (Bhattacharyya, Winch, LeBan, & Tien 2001;Glenton et al. 2010;Strachan and Benton 2010). The key aspect is aligning the expectations of workers and program managers and ensuring the reliable delivery of incentives – both financial and non financial (Glenton, Scheel, Pradhan, Lewin, Hodgins, & Shrestha 2010).
3. That the introduction of an incentive needs to take account of raised expectations and the risks associated with withdrawing this incentive at a later date. This is particularly so in the case of financial incentives and is discussed in some further detail below (Bhattacharyya, Winch, LeBan, & Tien 2001;Strachan & Benton 2010).
4. That CBAs are members of the community and are subject to the same cultural and societal influences as other community members. Who they are and their identity in this context influences their motivation and retention. Their status and respect in the community is likely to influence the demand for their services and the value placed on their work by their peers. This is likely to engender a higher regard for their tasks through the receipt of valued and positive feedback and, according to Latham (2007), increase the probability of setting high goals and striving to reach them. This process is likely to be mediated by the worker's unwritten expectations of the role - the 'psychological

contract' they feel they have entered into - and the degree to which they feel it is being fairly managed (Gilliland and Chan 2001). Such community affirmation as well as positive feedback through supervision and peer support mechanisms is thought to increase the self perception of being able to do a good job and complete their duties – i.e. self efficacy (Mathauer & Imhoff 2006).

5. A key factor in the success of an incentive over time is the worker's perception of the equity of any benefit.

For inSCALE it is therefore important that any package of incentives aiming to contribute to the retention and ongoing performance of CBAs in the delivery of iCCM is acceptable to both CBAs and their communities. Monitoring the workload of CBAs has also been stressed. This has been conceptualised as a balance between understanding the competing interests in the local area (i.e. the opportunities for CBAs to maximise their earning through other work opportunities) and the views of the CBAs in terms of the demands on their time (especially in the context of introducing additional or added tasks) and the rewards they receive. Understanding this issue involves addressing questions of; the community's reaction to the CBAs, the demands made by community members of CBAs, the perception CBAs hold of their treatment by supervisors and facility based health workers, whether they have the resources (including job aides and other tools) to perform their tasks properly, as well as their views on what sort of monetary and non-monetary incentives would increase their levels of motivation to perform.

Financial incentives

There are a number of key challenges to using financial incentives to motivate health focussed CBAs. Namely:

1. That the introduction of payments for tasks that were being performed (or anticipated as being required) already may alter feelings of self determination, intrinsic motivation and task persistence (see section 1). From the theory, the key appears to be alignment of worker and employer goals so that there is an explicit correspondence between worker performance and a reward that is needed, comes to be expected as it reliably follows task completion, is valued and considered fair.
2. That introducing financial rewards may alter the community (and hence CBA) perception, social standing and respect for the CBA role (Glenton, Scheel, Pradhan, Lewin, Hodgins, & Shrestha 2010). Linking performance and reward or even the perception that this is the case, may not be in tune with the values of the country the program is operating in (Glenton, Scheel, Pradhan, Lewin, Hodgins, & Shrestha 2010;Mueller, Kurowski, & Mills 2005).
3. That the maintenance of funding for the payment of financial incentives may be irregular or stop altogether. In addition, the amounts paid may not be considered sufficient (Glenton, Scheel, Pradhan, Lewin, Hodgins, & Shrestha 2010).

4. That financial incentives alone are not considered likely to lead to retention of CBAs (Glenton, Scheel, Pradhan, Lewin, Hodgins, & Shrestha 2010;Strachan & Benton 2010). Rather due consideration should be given to the CBA expectations and a suitable package of both financial and non - financial incentives should be put together (Strachan & Benton 2010).

Pitched against these factors are:

1. Recent guidelines from WHO that suggest payment is necessary for the long term sustainability of health programs which utilise CBAs (Glenton, Scheel, Pradhan, Lewin, Hodgins, & Shrestha 2010;WHO 2008) to avoid the need for CBAs to engage in alternative revenue generating activities (Kyaddondo & Whyte 2003).
2. That there is a moral argument for providing CBAs with financial compensation for their labour and if they are not, a rationale should be developed and communicated (Strachan & Benton 2010).
3. There is increasing demand for payment from CBAs (Miambo 2010).

Worthy of note too is that a systematic review of the literature available on the determinants of 'worker motivation and satisfaction' concludes that 'in all papers reviewed, this determinant (Mathauer & Imhoff 2006) was seen as a satisfier/dis-satisfier and in only a few cases a motivator' (Mueller, Kurowski, & Mills 2005). A key aspect of this was considered to be the reliability of any remuneration on offer. The recommendation from these papers therefore was that the emphasis should be on the reliability of income stream rather than the amount or the design of remuneration system (Huang and Van de Vliert 2003;Mueller, Kurowski, & Mills 2005).

There have been a number of suggested methods for financially incentivising CBAs. These have been divided into pay for performance (P4P), salaries, alternative earning opportunities and task related allowances or compensation.

Pay for performance

Pay for performance (P4P) refers to the 'transfer of money or material goods conditional on taking a measurable action or achieving a predetermined performance target' (Moore 2010). A separate review has been conducted on P4P interventions and therefore it will only briefly be addressed here. This review broadened to health workers in low income countries as there was little available material on P4P programs targeting community health workers alone (health focussed CBAs) (Moore 2010). Another systematic review indicated there was also a dearth of information on the unintended consequences of P4P programs though it does note that some unintended consequences for non-incentivised areas may be positive such as positive spill over effects on non-incentivised health conditions (Van Herck et al. 2010). The limited evidence available indicates that when properly designed and implemented P4P can have a positive effect on health outcomes (Moore 2010).

Key issues related to the design and implementation include (Moore 2010).:

- Understanding how the introduction of a P4P initiative will be received by workers and the community including other workers in similar roles
- That financing is best managed by local government structures as is the case in decentralised Uganda and Mozambique
- Slow implementation and piloting recommended ahead of national scale up
- Success hinges on accurate validation processes and HMIS as well as timely payments
- Strategy should be consistent with national plan to ensure 'buy in' for scale up
- Performance measures and targets should be developed in consultation with health workers and be in areas they have a high degree of control over. They should be set at a level that is achievable with reasonable effort and is equitable across workers and regions
- Distribution of payments to be transparent

A recent international systematic review in high income countries found that 'in general there was about 5% improvement due to P4P use, but with a lot of variation, depending on the measure and program' (p.4) (Van Herck, De, Annemans, Remmen, Rosenthal, & Sermeus 2010). In low income countries a recent review found that to capture lessons from the review fee for service (FFS) approaches needed to be included and even then there was little available evidence (Moore 2010). CBAs were paid for specific services and were viewed as having had a positive impact on health outcomes. Specifically:

- In Bangladesh BRAC increased women receiving ANC from 79 to 94% and PNC from 21 to 79% over two years by providing FFS on specific maternal and child health indicators monitored by supervisors from self report. The reviewer notes that the CHWs targeted were well integrated and accepted in communities (NB: this was the only approach identified which directly targeted CHWs – others included CHWs with facility based health workers).
- Other programs used FFS for health teams that did not include CHWs except for the Second Women's Health and Safe Motherhood Project in the Philippines which focussed on facility based deliveries (FBDs). FBDs increased from 18 to 35% in one region and from 30 to 42% in another with delivery numbers verified by Ministry of Health regional records, household surveys and an independent verification agent.

Moore notes that 'gaming of the system' did on occasions occur though Van Herck et al's review (2010) shows minimal impact of gaming.

Van Herck also notes that the high degree of voluntary participation in P4P studies may skew the results as these individuals have less room for improvement which may lead to an underestimation of effect. Also that P4P approaches are often implemented in conjunction with other financial incentives which may also have an impact resulting in the overestimation of the impact of P4P (Van Herck, De, Annemans, Remmen, Rosenthal, & Sermeus 2010).

Salaries

The key advantage to providing a salary to CBAs would appear to be the likelihood that they will remain in role for longer (Bhattacharyya, Winch, LeBan, & Tien 2001). It has been recognised that additional incentives will likely be required in order to stimulate motivation (Chandler, Chonya, Mtei, Reyburn, & Whitty 2009). Furthermore, determining the appropriate combination, including the amount to be paid (), is best established in consultation with CBAs and the community (). Equity of payment is seen as an important factor and a particular challenge in countries such as Uganda and Mozambique where the management of health budgets has been decentralised and there is therefore potential for pay discrepancies (Kyaddondo & Whyte 2003;Mueller, Kurowski, & Mills 2005).

Alternative earning opportunities and task related allowances or compensation

In the context of CBA retention addressing the opportunity cost of engaging in CBA duties is important. If CBAs can be compensated for their time spent, especially through the provision of allowances and attendance fees when they are required to travel and or attend meetings, then it has been argued they can be appropriately compensated for their time while retaining their voluntary status (Glenton, Scheel, Pradhan, Lewin, Hodgins, & Shrestha 2010).

Non-financial incentives

Community based incentives

Bhattacharyya et al (2001) emphatically stress that 'the effectiveness of a community health worker (CBA) comes down to his or her relationship with the community. Programs must do everything they can to strengthen and support this relationship' (p. X). There is however little evidence based data on community level interventions and their impact on CBA performance. Campbell and Scott's review (2009) focuses on the WHO report on 'task shifting to tackle health worker shortages' (WHO 2008) where less specialised health tasks are delegated in a cascade from physicians down to CBAs (Campbell & Scott 2009). They provide a strong case for the inclusion in any motivation model of an emphasis on generating local support and ownership to avoid attrition and maintain levels of motivation among CBAs. Indeed they emphasise the need for CBAs to be 'embedded' in the communities they serve.

In terms of specific strategies for fostering community involvement and the 'embeddedness' of CBAs in the community, the following have been proposed (Bhattacharyya, Winch, LeBan, & Tien 2001;Campbell & Scott 2009;Haines, Sanders, Lehmann, Rowe, Lawn, Jan, Walker, & Bhutta 2007):

- Involving the community in CBA selection, goal setting and management as well as identifying and providing the optimum package of incentives (Bhattacharyya, Winch, LeBan, & Tien 2001;Campbell & Scott 2009;Haines, Sanders, Lehmann, Rowe, Lawn, Jan, Walker, & Bhutta 2007;Strachan & Benton 2010).

- Promoting high status of CBAs in the community with visible symbols such as uniforms and badges (Bhattacharyya, Winch, LeBan, & Tien 2001;Campbell & Scott 2009;Chandler, Chonya, Mtei, Reyburn, & Whitty 2009;Haines, Sanders, Lehmann, Rowe, Lawn, Jan, Walker, & Bhutta 2007)
- Fostering links between CBAs and established groups in the community such as youth groups or churches (Bhattacharyya, Winch, LeBan, & Tien 2001;Campbell & Scott 2009;Haines, Sanders, Lehmann, Rowe, Lawn, Jan, Walker, & Bhutta 2007)
- Utilising the health information collected by CBAs to promote the role of the CBA and the effectiveness of their activities (Strachan & Benton 2010).

Career progression and advancement

A recent consultation of international stakeholders with experience working with CBAs suggested that offering CBAs the opportunity to either have an exchange visit to another setting, shadow a health facility worker or even attain a supervisory position in exchange for exceptional performance would be a powerful performance incentive (Strachan & Benton 2010). The degree to which these career development options are likely to appeal to CBAs and therefore act as an incentive is most likely to be a function of the value placed by CBAs on such an experience and their belief that their input may genuinely result in such an opportunity. Understanding the working aspirations of CBAs therefore becomes of paramount performance before such incentives can be put in place with a reasonable expectation that they will lead to increased performance.

A number of programs have facilitated the establishment of committees or associations of CBAs (Bhattacharyya, Winch, LeBan, & Tien 2001) as well as representation of CBAs on local health committees (Glenton, Scheel, Pradhan, Lewin, Hodgins, & Shrestha 2010). On other occasions CBAs have taken it upon themselves to establish their own representative groups (Wibulpolprasert and Pengpaibon 2003). Such groups not only represent an opportunity for peer support, recognition and skills sharing, but they also encourage the development of a collective identity. The maintenance of a positive collective identity can be a powerful motivating force. Such CBA collectives therefore represent an opportunity for the development and reinforcement of positive practices and approaches which may be adopted over time by CBAs as affirming of their identity.

Role clarity and communication

From the theory, understanding the aspirations of the organisation or program allows a worker to align their expectations and goals. Clear role descriptions have been used with beneficial impact on self reported worker confidence in Indonesia (Dolea and Zurn 2004). Developing a scope of work or an understanding of requirements and expectations of the role in collaboration with the community has been proposed (Bhattacharyya, Winch, LeBan, & Tien 2001;Campbell & Scott 2009;Glenton, Scheel, Pradhan, Lewin, Hodgins, & Shrestha 2010;Strachan & Benton 2010) as has facilitating health facility staff to interact with CBAs in

a way that acknowledges their specific skills, experience, value and potential (Bhattacharyya, Winch, LeBan, & Tien 2001;Campbell & Scott 2009).

Refresher training

Continuous or ongoing skills development and training has been cited as a key pillar on which effective CBA programs are based (Bhattacharyya, Winch, LeBan, & Tien 2001). New skills can be acquired but the value of interacting with peers has been emphasised or work interesting and maintaining levels of motivation. A recent consultation of international stakeholders with experience working with CBAs recommended refresher training consider 'off target' content (i.e. not health based content but instead topics with the potential to lead to revenue generating activities such as language or agricultural skills) for CBAs (Strachan & Benton 2010). This would appear to represent an opportunity for CBAs to add to their skills and increase their earning potential while engaged in a voluntary role.

Appendix 1 Incentives tried and suggested

Non financial incentives

Community based incentives

Category	Innovation	Source	Methodology			Issues which may impact feasibility, acceptability and scalability	Moderators of impact
			Approach	Tools	Evidence		
Engagement	Engage with CBAs and the community at the outset to understand and manage expectations of the CBA role and the amount and type of work (including time commitment) required and the prioritisation of tasks. If possible, agree a package of incentives with the worker, community and program that are tailored to the context and the relevant issues and needs of the CBA to ensure the sustainability of the CBA's time commitment. Suggested that the most sustainable model is where the community plans and plays a role in the incentives (especially in-kind payments such as working on CBA land)	(Bhattacharyya, Winch, LeBan, & Tien 2001;Franco, Bennett, Kanfer, & Stubblebine 2004;Strachan & Benton 2010)					
Engagement	Establish community health committees comprised of traditional leaders and other community members including CBAs to oversee the program from the community perspective.	(Strachan & Benton 2010)					

Engagement	Initiate a community meeting upon commencement, facilitated by the CBA supervisor, where the project is introduced and community ownership is encouraged.	(Strachan & Benton 2010)					
Engagement	Hold periodic community level meetings (at least annually) where the CBA presents an account of activities, shares their challenges and successes and community feedback is sought.	(Strachan & Benton 2010)					
Engagement	Establish a daily gathering at community level where togetherness in the pursuit of common health goals is promoted.	(Strachan & Benton 2010)					
Engagement	Adopt the 'partnership defined quality' methodology to increase the quality of the relationship between CBAs, the community and the health facility and as a means of engaging with different members of the community for a constructive outcome.	(Strachan & Benton 2010)					
Engagement	Implement a data management approach such as the CBHIS that ensures data collected and analysed at community level is considered of value and useful at that level as well as health facility and centrally.	(Strachan & Benton 2010)					Has the potential to hold CBAs accountable to their community, educate the community as to the role of the CBA and perhaps generate respect and increased

							status, as well as potentially drive up the demand for services.
Promoting credibility of CBA as part of health system	Implement a strategy for advocating to health facility workers the benefits of the CBA understanding the purpose of the data they are collecting.	(Strachan & Benton 2010)					
Promoting credibility of CBA as part of health system	Display data collected at the community level in an accessible way – perhaps using blackboards – at both community and health facility level.	(Strachan & Benton 2010)					
Promoting credibility of CBA as part of health system	Promote a broader understanding of the role of the CBA with a particular focus on health promotion and referral in the context of a sporadic drug supply And Work towards ensuring a reliable supply of drugs	(Strachan & Benton 2010)					Link between effort expended and goal achievement considered crucial in the motivation theory. Credibility and esteem of CBAs considered to hinge on whether they can supply drugs according to international stakeholders.

Promoting credibility of CBA as part of health system	Promote the links between CBAs and the national health system starting with the local health facility through visible and consistent branding.	(Strachan & Benton 2010)					If branding of different elements of the health system is inconsistent it may undermine the credibility of the CBA
Promoting credibility of CBA as part of health system	Provide CBAs with some signifier of their role (e.g. t-shirt or badge) or tangible indicator of appreciation (e.g. thank you letter from the health facility). Ensure that there is consistency of branding across the whole program.	(Strachan & Benton 2010)					Degree of respect any signifiers of role are likely afford CBAs a product of the esteem the program is held in.
Promoting credibility of CBA as part of health system	Promote early successes achieved by CBAs to CBAs themselves and to the wider community.	(Strachan & Benton 2010)					The degree to which the successes resonate with the community and are likely to result in increased demand for services
Promoting credibility of CBA as part of health system	Establish a national day for community based healthy volunteers where, through multiple media channels including radio, awareness of their role is raised and appreciation encouraged.	(Strachan & Benton 2010)					

Career progression and advancement

Innovation	Source	Methodology			Issues which may impact feasibility, acceptability and scalability	Moderators of impact
		Approach	Tools	Evidence		
Create a professional pathway (perhaps to supervisor) for CBAs as an incentive to perform in their role. Where not possible, formalise the recognition of the development and application of CBA skills.	(Strachan & Benton 2010)					The degree to which these opportunities act as an incentive likely to be a function of (i) the value placed by CBAs of such an experience and (ii) CBAs belief that their performance may actually result in them being afforded such an opportunity.
Establish an exchange program between CBAs and their (most likely facility based) supervisors.	(Strachan & Benton 2010)					
Establish a routine where CBAs spend a day shadowing health facility workers as they collect their monthly supplies and deliver their reports.	(Strachan & Benton 2010)					
CBA representation on local health committees. This was seen as a way of empowering and motivating CBAs as well as strengthening ties between CBAs and the community (NB:	(Glenton, Scheel, Pradhan, Lewin, Hodgins, & Shrestha 2010)	Interviews with purposively sampled stakeholders as well as Female Community	Semi structured interview guide	Qualitative from thematic analysis using the 'framework approach'		

this innovation could fit in the community engagement section)		Health Volunteers in Nepal				
Creation of association of CBAs with or without a code of conduct Theoretical premise – creating and / or affirming positive personal and social identities	(Wibulpolprasert & Pengpaibon 2003) Talked about in (WHO 2006)	Charts the success of the Rural Doctor Society formed in Thailand in 1978 in response to mounting pressure on rural doctors management, organisational and logistical skills.		Cites their successes including developing training tools and guides as well as innovative activities to support rural district hospital doctors (e.g. newsletters, public recognition and awards for extraordinary performance, visits to rural hospitals by senior doctors for morale and support). Their activities was viewed as boosting spirit and pride in belonging.		Takes a long time to establish and develop influence but may provide a short term focus for harnessing positive aspects of social identity

Role clarity and communication

Innovation	Source	Methodology			Issues which may impact feasibility, acceptability and scalability	Moderators of impact
		Approach	Tools	Evidence		
Develop a scope of work or volunteer contract in consultation with CBAs and community members for the CBA role	(Bhattacharyya, Winch, LeBan, & Tien 2001;Glenton, Scheel, Pradhan, Lewin, Hodgins, & Shrestha 2010;Strachan & Benton 2010)					
Job design and task specification • Clearly defined roles • Limited series of specific tasks	(Haines, Sanders, Lehmann, Rowe, Lawn, Jan, Walker, & Bhutta 2007;Latham 2007)					
Clarity of job descriptions through the development of a 'Clinical Performance Development Management System' which created clear job descriptions	(Dolea & Zurn 2004)	Indonesia Pre-intervention survey of 856 nurses in five provinces Post intervention	1. Survey 2. Interviews	1. Pre-intervention: 47% of nurses without job descriptions and 40% engaged in	Feasibility and scalability – cost and quality control issues putting in place a large scale monitoring system	

that outlined responsibilities and accountability, provided in-service training consisting primarily of reflective case discussions, and put in place a performance monitoring system. Theoretical premise – goal congruence and outcome expectancy.		staff and hospital reports		work other than nursing care or midwifery. 2. Post intervention: worker self reported increased levels of confidence in their roles and responsibilities. Hospitals reported program helped ensure quality.		
Encouraging health facility staff to interact with CBAs in a way that acknowledges their specific skills, experience, value and potential. Training on the importance of treating CBAs in this way perhaps with some specific strategies that can be used. Perhaps can be incorporated into supervisor training.	(Campbell & Scott 2009) Look at (Schneider, Hlophe, & van 2008) for details					

Refresher training

Innovation	Source	Methodology			Issues which may impact feasibility, acceptability and scalability	Moderators of impact
		Approach	Tools	Evidence		
Incorporate 'off target' training (i.e. in agriculture, livelihoods, literacy or other relevant areas) in content areas identified by CBAs into refresher training curriculum	(Strachan & Benton 2010)					The degree to which this approach is likely to satisfy CBAs is likely to be a function of how relevant it is to them, matches their goals and interests and can lead to the generation of income.
Design refresher training curriculum at least in part addressing areas of content identified by CBAs as relevant and important and / or targeting skills that CBAs identify as required	(Strachan & Benton 2010)					

Financial incentives

Pay for performance

Innovation	Source	Methodology			Issues which may impact feasibility, acceptability and scalability	Moderators of impact
		Approach	Tools	Evidence		
Pay for performance	(Franco, Bennett, Kanfer, & Stubblebine 2004)	A. Contextual analysis B. 360-degree assessment C. In-depth analysis	A. Qual interviews and document review with MoH B. Qual and quant questionnaire with managers, workers, supervisors and patients at two public hospitals in Georgia (small samples) C. Questionnaire for workers (large sample – approx n=500 – stratified by professional category	• 3.3% of variance in general job satisfaction due to financial rewards / salary. Negligible difference on organisational commitment and cognitive motivation.		Task or performance related rewards may guide workers to specific types of work outputs with unanticipated consequences for other tasks

Salary

Innovation	Source	Methodology			Issues which may impact feasibility, acceptability and scalability	Moderators of impact
		Approach	Tools	Evidence		
Providing a regular salary for performing duties required of the CBA role	(Franco, Bennett, Kanfer, & Stubblebine 2004)	D. Contextual analysis E. 360-degree assessment F. In-depth analysis	D. Qual interviews and document review with MoH E. Qual and quant questionnaire with managers, workers, supervisors and patients at two public hospitals in Georgia (small samples) F. Questionnaire for workers (large sample – approx n=500 – stratified by professional category	• 3.3% of variance in general job satisfaction due to financial rewards / salary. Negligible difference on organisational commitment and cognitive motivation.		Impact likely on retention rather than performance which requires multiple further interventions.
	(Mueller, Kurowski, & Mills 2005)	Review of organisational behaviour textbooks and articles on satisfaction and			May oblige employee to work longer hours	

		motivation generated key search terms which yielded 80 articles which were screened with 25 included which provided empirical evidence for determinants of motivation and satisfaction.				
	(Strachan & Benton 2010)	Depth interviews with academics and program staff with theoretical and applied experience in health focussed CBA programs			May lead to perceptions of being government employee rather than member of the community.	
	(Bhattacharyya, Winch, LeBan, & Tien 2001)	Systematic literature review and interviews with program staff with experience with CBAs		Higher salaries led to greater employment duration (Gray and Ciroma, 1987)		Source of funds may affect the role and allegiance of CBAs

Alternative earning opportunities and task related allowances or compensation

Innovation	Source	Methodology			Issues which may impact feasibility, acceptability and scalability	Moderators of impact
		Approach	Tools	Evidence		
Engage in community consultation to establish the type and structure of financial incentives most likely to motivate and retain CBAs. Consultation to include an assessment of community acceptability of the CBA role when voluntary vs. remunerated and to benchmark rates against other comparable programs.	(Strachan & Benton 2010)					International stakeholders recommended that Ensuring consistency of payments should be a primary concern of any move to remunerate a formerly voluntary workforce.
Introduce drug revolving funds to collectives of CBAs.	(Strachan & Benton 2010)					
Implement a flat fee per service system of payment	(Strachan & Benton 2010)					Demand for services needs to be such that CBAs have enough of an incentive to replenish their drug stocks.
Facilitate the community or health facility workers to assist CBAs to take advantage	(Strachan & Benton 2010)					Dependent on opportunities available in the CBAs

of revenue generating activities their CBA role may make them eligible for.						area of operation
Assist CBAs to establish their own business in a way that is manageable alongside their CBA duties.	(Strachan & Benton 2010)					
Initiate the formation of a self managed, collective fund for groups of CBAs with the purpose of providing financial support in times of need.	(Strachan & Benton 2010)					
Introduce a micro credit strategy for CBAs with accompanying access to competitively priced goods. Female Community Health Volunteers enjoy access to micro-credit finds (Glenton, Scheel, Pradhan, Lewin, Hodgins, & Shrestha 2010).	(Strachan & Benton 2010)					
In-kind payments planned and implemented by the community such as families who have benefited from CBA services taking it in turns to work on the CBAs land	(Bhattacharyya, Winch, LeBan, & Tien 2001)					
Preferential treatment such as a loan to start a business	(Bhattacharyya, Winch, LeBan, &					

	Tien 2001)					
Preferential treatment such issuing CBAs with ID cards which allow them to be seen quickly at health centres	(Bhattacharyya, Winch, LeBan, & Tien 2001)					

Appendix 2 Incentives tried and suggested - excluded

Innovation	Source	Methodology			Issues which may impact feasibility, acceptability and scalability	Moderators of impact
		Approach	Tools	Evidence		
Personality testing for desirable traits during recruitment Though maybe Franco (2004) suggests that self efficacy testing may do the trick...	(Latham 2007),2007) See Myers – Briggs model for an example				EXCLUDED Cost of purchasing tools, validating them in the operating context and the implementing them to scale are prohibitive.	
Remuneration by capitation (i.e. where the CBA provides services to a certain amount of people for a certain amount of time for a certain amount of money and where the CBA is liable for any additional costs incurred)	(Mueller, Kurowski, & Mills 2005)				EXCLUDED Thought likely to encourage competition between CBAs with adverse consequences for users.	
Recruiting CBAs from the community they serve, who are trusted by the community, plan to stay in the community and reflect the 'linguistic and cultural diversity of the population served'(Campbell & Scott 2009).	(Bhattacharyya, Winch, LeBan, & Tien 2001;Campbell & Scott 2009)				EXCLUDED Recruitment processes already established	

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