FEASIBILITY STUDY FOR NON-CONTRIBUTORY MATERNITY INCOME PROTECTION AND HEALTH PROTECTION PACKAGE IN ZAMBIA

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ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
ARV	Antiretroviral Drugs
BEmOC	Basic Emergency Obstetric Care
CEmOC	Comprehensive Emergency Obstetric Care
CCT	Conditional Cash Transfer
DHS	Demographic and Health Survey
EmOC	Emergency Obstetric Care
FANC	Focused Antenatal Care
GDP	Gross Domestic Product
GGHE	General Government Health Expenditure
GRZ	Government of the Republic of Zambia
HCW	Health Care Workers
HIC	High Income Country
HIV	Human Immunodeficiency Virus
HRH	Human Resources for Health
ILO	International Labour Organization
IMR	Infant Mortality Rate
IPT	Intermittent Preventive Treatment
ITN	Insecticide-treated Net
LMIC	Low- and Middle-Income Country
MCH	Maternal and Child Health
MDG	Millennium Development Goals
MMEIG	UN Maternal Mortality Estimation Group
MMR	Maternal Mortality Ratio
MCDSS	Ministry of Community Development and Social Services *(Now MCDMCH)*
MCDMCH	Ministry of Community Development, Mother and Child Health *(Previously MCDSS)*
MOH	Ministry of Health
NHSP	National Health Strategic Plan
NMR	Neonatal Mortality Ratio
PHC	Primary Health Care
PMTCT	Prevention of Mother to Child Transmission (of HIV)
PNC	Postnatal Care
PNMR	Perinatal Mortality Rate
PvtHE	Private Health Expenditure
PPP	Purchasing Power Parity
RBF	Results Based Financing

SHI	Social Health Insurance
SWAp	Sector Wide Approach
TB	Tuberculosis
TBA	Traditional Birth Attendant
THE	Total Health Expenditure
UN	United Nations
UNGASS	United Nation General Assembly Special Session on HIV and AIDS
UNIGME	UN Interagency Group for Child Mortality Estimation
US	United States
US$	United States Dollar
WHO	World Health Organization
ZDHS	Zambian Demographic and Health Survey
ZMK	Zambian Kwacha
ZMW	Zambian Kwacha *(rebased June 2013 1 ZMW=1000 ZMK)*

PART A - INTRODUCTION

Outlines the purpose of the project, its objectives, and the overall project approach.

1. OVERVIEW

1.1 The protection of women in maternity and during crucial periods thereafter is recognised as an important individual right and social need. This has been recognised by the International Labour Organisation through the following conventions:

1.1.1 Convention on maternity protection no.3 of 1919;

1.1.2 Convention no. 103 of 1952; and

1.1.3 Convention no.183 of 2000.

1.2 Developing countries, which face significant and rapid social and economic change, need to meet key social challenges with under-developed institutions and fiscal space. Protection for women in maternity is however often poorly prioritised despite strong evidence for cost-effective interventions.

1.3 Within this context Zambia, a country experiencing substantial and sustained economic growth, is nevertheless characterised by widespread poverty, income inequality and poor health outcomes, especially with respect to maternal and newborn deaths.

1.4 Zambia is however well-positioned to drive new interventions with its expanding fiscal space, to broadly address both income poverty and poor health outcomes. Within such a general expansion, however, it remains important to lift out certain priorities, for special consideration.

1.5 This project therefore seeks to address the priorities reflected in conventions 3, 103 and 183 regarding women in maternity vulnerable to both income poverty and inadequate access to health care in Zambia. It however does not seek to address the maternity protection requirements of income earners, where they exist, able to access contributory schemes. This is instead the focus of other projects.

1.6 The project is being financed by the International Labour Office and carried out by the University of the Witwatersrand.

2. PROJECT OBJECTIVES

2.1 To provide an assessment of the current scope, operation and impact of existing non-contributory social protection programmes providing maternity protection in kind (including nutritional support) and cash benefits and access to pre-natal, child birth and post-natal health care and hospitalization to vulnerable and poor women in Zambia.

2.2 To identify the gaps of the current systems as well as leverage mechanisms and potentialities to extend coverage to unprotected, vulnerable and poor women.

2.3 To showcase international experiences relevant for the study, including lessons learned from the assessment and set-up process in countries which have embarked in similar efforts (e.g. Cambodia, Thailand, India, etc.).

2.4 To present operationally feasible and financially sustainable scenarios for the extension of maternity income protection with cash, and in kind (including nutritional support), and medical benefits to uncovered women based on cost estimates.

2.5 To provide recommendations and guidance to assist ILO constituents and departments in charge of social protection in developing:

2.5.1 integrated social protection floor packages of maternity cash, in kind and medical benefits;

2.5.2 advising on dedicated mechanisms for delivery of these packages;

2.5.3 advising on needs for general improvements in the governance of established health systems and social protection institutional frameworks to make effective the delivery of the packages; and

2.5.4 to effect necessary linkages between benefit delivery and existing social and care services.

3. PROJECT APPROACH

3.1 The project has five discrete parts which will build toward the production of the final report. These are:

3.1.1 *Step 1 – Strategic case*: which provides a benchmark for reform based on international evidence on addressing maternal and newborn protection within developing country settings.

3.1.2 *Step 2 - Situation analysis*: which evaluates the Zambian context with respect to two defined areas of need:

- Income support (which will include nutrition support).
- Access to maternal health services; and

3.1.3 *Step 3 - Gap analysis*: which evaluates the mismatch between needed and sustainable social protection measures based on a strategic case for reform and what is presently offered by Government within both the above areas.

3.1.4 *Step 4 - Options analysis and costing of preferred option*: flowing from the step 2, specific programme options are assessed leading to a preferred approach. This will include highlighting possible linkages between income support and health programmes.

3.1.5 *Step 5 - Implementation plan*: taking account of step 4, a high-level strategic implementation approach and guide is developed. This identifies pre-requisites for the reforms and possible sequencing.

3.2 In order to strengthen certain outputs certain draft sections of the report were reviewed with key role-players in Zambia. This included:

3.2.1 The overall concept; and

3.2.2 Provisional findings on the strategic case and high-level options.

3.3 Following feedback from review and consultations the options were finalised and costed.

PART B - STRATEGIC CASE

Provides the strategic case for integrated social protection strategies in relation to maternal and infant protection based on international evidence. The evidence centres on the need to integrate generalized income support, nutrition, and healthcare services. The conceptual framework stresses the need for a strategic intervention to eliminate systemic poverty resulting from the poor protection of pregnant women, infants, and their mothers.

4. OVERVIEW

4.1 Countries in Africa are characterised by limited and often highly targeted systems of social protection with almost no integration between different interventions related to the same social vulnerabilities. Limited systems of social protection, occurring particularly within a context where the traditional social structures of social support are breaking down, leave many children with permanent physical and mental impairment. Given the scale of poverty within Africa the potential long-term consequences for human and economic development are so significant that careful consideration needs to be given to appropriate policy responses.

4.2 This section documents some of the evidence of the causes of this impairment, and its multi-faceted nature, and how it can be addressed in a developing country context such as Zambia. This is then used to develop a strategic policy approach relevant to the Zambian context which in turn serves as a building block to a contextual evaluation, gap analysis and specific package of support related to pregnant women, newborns and infants. The vulnerabilities of pregnant women, mothers, infants and young children are inseparable, forming a family of needs which need to be assessed against a family of interventions.

4.3 The strategic case is developed from the evidence and related to a developing country context consistent with that found in most of Africa. The context is therefore consistent with the situation prevailing in Zambia. Context-specific evaluations of Zambia, focusing on the health and social protection packages, are provided separately, drawing from this evidence-based strategic case as a point-of-departure. The conditions prevailing in Zambia determine the specific path that any implementation of the strategic case can take rather than affecting the relevance of the strategic case.

5. EVIDENCE OF VULNERABILITIES

5.1 A healthy pregnancy requires an increased nutritional intake to gain 11.5-16.0kg in pregnancy. Larger weight gains are required where a woman was underweight prior to conception. Where these weight gains are not possible, due to social or economic conditions, both the mother and the child are at substantial risk. (Chersich *et al*, 2011).

5.2 Maternal and newborn under-nutrition, which derives from a complex range if basic, underlying, and immediate causes leads to a set of severe short- and long-term outcomes (Black *et al*, 2008). The political, social and economic context are seen to lead to poor social and human capital development; which when shocked by disease or poor dietary intake leads to poor short- and long-term outcomes (**Figure 5.1**).

Box 5.1: Central findings regarding maternal and child under-nutrition

"*Poor fetal growth or stunting in the first 2 years of life leads to irreversible damage, including shorter adult height, lower attained schooling, reduced adult income, and decreased off spring birthweight*

• *Children who are undernourished in the first 2 years of life and who put on weight rapidly later in childhood and in adolescence are at high risk of chronic diseases related to nutrition*

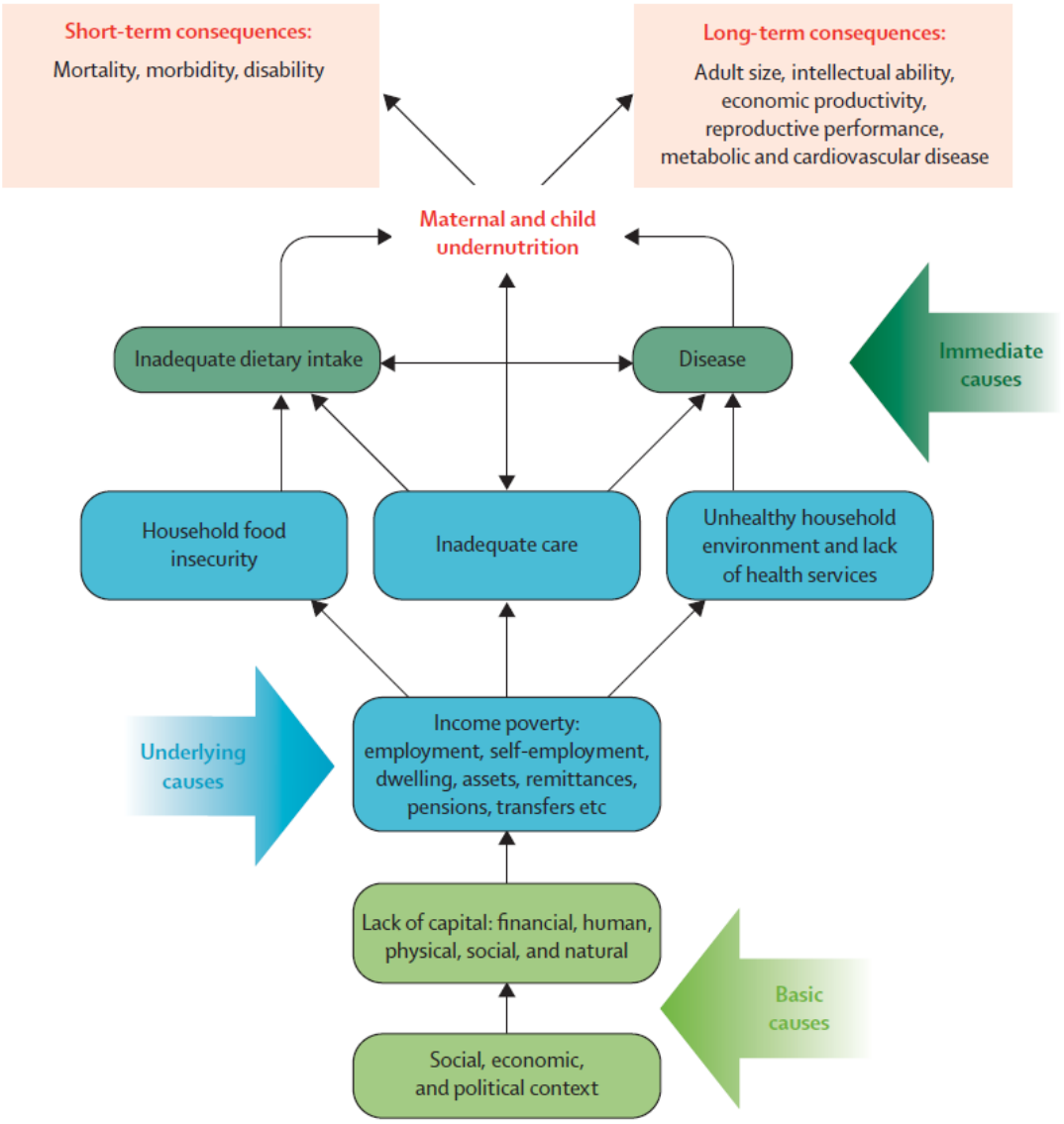
• *There is no evidence that rapid weight or length gain in the first 2 years of life increases the risk of chronic disease, even in children with poor fetal growth*

• *The prevention of maternal and child undernutrition is a long-term investment that will benefit the present generation and their children*"

Victora, 2008, p.340.

5.3 Supporting this finding, an important cohort study carried out in South Africa found that height-for-age at two years best predicted "human capital" and that under-nutrition was specifically associated with lower human capital (Victora *et al*, 2008). Under-nutrition in this study was strongly associated with "*shorter adult height, less schooling, reduced economic productivity, and—for women—lower off spring birthweight*." (Victora *et al*, 2008, p.340). They conclude that damage suffered in early life leads to permanent impairment of the child, with possible inter-generational impacts and that prevention would probably lead to important health, educational, and economic benefits. This finding is supported by work by Palloni *et al* (2009) who find that early child health has an import effect on adult social class positions.

Figure 5.1: Framework of the relations between poverty, food insecurity, and other underlying and immediate causes to maternal and child under-nutrition and its short-term and long-term consequences



Source: Black *et al*, 2008, p.244. This conceptual framework is also found in UNICEF, 2013, p.4.

5.4 The consequences of under-nutrition include (UNICEF, 2013):

5.4.1 Increased risk of child mortality, disease and disability;

- A severely stunted child faces a four times higher risk of dying;
- A severely wasted child faces a nine-times higher risk of dying;
- Vitamin A, iron or zinc deficiencies increase mortality risk; and
- Disabilities, such as blindness, are due to vitamin A deficiency, and neural tube defects are due to folic acid deficiencies.

5.4.2 Inadequate brain and nervous system development results from iron, folic acid, and iodine deficiencies. These have long-term impacts on cognitive capabilities with lifetime consequences.

5.4.3 Stunting is associated with poor school achievement and performance.

5.4.4 Various longitudinal cohort studies have also confirmed an association between stunting and reduced schooling and a predictor of grade failure. Reduced school performance and attendance has long-term impacts on employment opportunities and income-earning capacities.

5.5 Linking maternal and child nutrition is evidence that brain and nervous system development starts early in pregnancy and is largely complete by two years of age. While it is accepted that the developing brain has some capacity for repair, long-term effects result from deficiencies occurring during this critical period. (UNICEF, 2013).

5.6 According to UNICEF (2013) the most recent evidence on the irreversible nutritional vulnerabilities arising during pregnancy and for up to two years thereafter have led to a shift in programme focus from children under the age of 5 to the first 1,000 days including pregnancy. Nutritional improvements after age two do not lead to a recovery of lost potential (UNICEF, 2013).

Box 5.2: Lost potential resulting from undernutrition

"Data from the five countries studied indicated that weight gain during the first two years of life, but not afterwards, improved school performance later on in childhood, underlining the critical importance of this window of opportunity. Earlier studies of malnourished Korean orphans adopted into American families showed residual poor performance on cognitive tests based on nutritional status at the time of adoption. Adoption before age 2 was associated with significantly higher cognitive test scores compared with children adopted later. A series of longitudinal South African studies assessed the impact of severe undernutrition before age 2 on physical growth and intellectual functioning in adolescence. Even accounting for improvements in environment and catch-up growth, the children who had experienced chronic undernutrition in early infancy suffered from irreversible intellectual impairment."

References upon which the above relied:

Martorell, R, et al. "Weight Gain in the First Two Years of Life Is an Important Predictor of Schooling Outcomes in Pooled Analyses from Five Birth Cohorts from Low- and Middle-Income Countries", pp. 348–354.

Lien, N.M. Knarig, K. Winick, M. Winick, M. "Early Malnutrition and Late Adoption: A study of their effects on the development of Korean orphans adopted into American families." *American Journal of Clinical Nutrition*, vol. 30, no. 10, October 1977, pp. 1738–1739.

Stoch, M.B. Smythe, P.M. "15-year Developmental Study on Effects of Severe Undernutrition During Infancy on Subsequent Physical Growth and Intellectual Functioning", *Archives of Disease in Childhood*, vol. 51, no. 327, 1976, pp. 332–333.

UNICEF, 2013, p.5

5.7 The impact of stunting and subsequent disproportionate rapid weight gain, referred to as the foetal programming concept, has negative health consequences for the child through life. Health outcomes include the increased risk of (UNICEF, 2013):

5.7.1 Coronary heart disease;

5.7.2 Stroke;

5.7.3 Hypertension; and

5.7.4 Type II diabetes.

5.8 It is therefore desirable for optimal growth to be achieved before the first 24 months. Becoming stunted and then gaining weight is likely to lead to an increased risk of health problems. This, seen together with a demographic transition, will result in a non-communicable disease epidemic in low- and middle-income countries. (UNICEF, 2013).

5.9 The role of care, or feeding behaviour, has also been emphasised as a potential cause of nutritional deficiencies in addition to food deficiencies (Engle *et al*, 2000). Evidence here suggests that not all the variance in nutritional status can be explained by food availability. How food is provided to children is also important.[1] Any attempt to modify food practices prove difficult without face-to-face interactions and require consideration of programmes that designed to directly interact with families.

"*The basic point is to recognise that behavioural components of nutrition are extremely important, particularly for the feeding and development of young children. … We should remind ourselves that in order to support families in providing the best possible care, we will need to learn to conceptualise the multiple tasks of child feeding and development from the perspective of the family, rather than the service agency. This programme will require the full participation of the families themselves.*" (Engle *et al*, 2000, p.34).

5.10 Access to health services also plays an important role in protecting maternal and child health during and after pregnancy. Advice, preparation for the delivery, monitoring health and nutritional status are all possible through antenatal services. Problems typically exist with ensuring adequate access to services early on in the pregnancy:

5.10.1 Poor patient understanding of the need for early attendance;

5.10.2 Transport costs;

5.10.3 Explicit fees for services; and

[1] This includes complementary feeding which requires that a caregiver decides on more than just food selection and preparation. Caregivers must decide where and when to feed, and whether to encourage children through threats, praise, or demands. (Engle *et al*, 2000).

5.10.4 Excessive queuing.

5.11 Non-attendance and delayed attendance at health facilities are regarded as the most important patient-oriented causes of maternal deaths in South Africa (National Department of Health, 2009). Low- and middle-income countries consequently face demand problems for needed preventive services, even where supply is adequate.

5.12 This is particularly important when dealing with HIV positive mothers – as complications from HIV infection is the most common underlying condition associated with maternal death. Almost four out of five women who die in pregnancy in South Africa, childbirth or the puerperium were tested for HIV infection, and of those tested 70.4% were HIV infected. (National Department of Health, 2009).

5.13 South African research has also indicated the importance of early antenatal service attendance to allow sufficient time for antiretroviral drugs to be provided during pregnancy to optimise the reduced risk of transmission of HIV to newborn children. (Hoffman *et al*, 2010).

5.14 Adequate antenatal care attendance is also important to ensure that appropriate counselling is provided regarding nutrition and breastfeeding. However, much depends on the training of the health professionals consulted. UNICEF (2013) indicates that despite two thirds of births attended globally by a skilled health professional in 2011, less than 50% were breast fed within an hour of birth.

"*This disjuncture reveals a missed opportunity to assist women with breastfeeding at a time when they are already in contact with the health system.*" (UNICEF, 2013, p.21).

Getting pregnant women to antenatal services is therefore only part of the solution. The service must also provide appropriate counselling and support. *At the time of delivery birth attendants must have adequate skills to deal with both preventive and clinical interventions.*

5.15 Given the strong relationship between early identification of health problems and maternal deaths, access barriers to antenatal health services must be removed in low- and middle-income countries. Early support for pregnant women is also essential to prevent harm to the foetus from poor nutrition, or any other disease related cause. The evidence is strong that vulnerabilities arising from the socioeconomic circumstances of pregnant women and mothers post-delivery have both short- and long-term health effects. Addressing these vulnerabilities requires a multi-faceted social protection intervention which incorporates income support, nutrition support, and access to health services.

6. EVIDENCE OF INTERVENTIONS

Introduction

6.1 Poverty and its consequences are multifaceted and strongly suggest the need for holistic or integrated strategies. However, many interventions are considered within a particular silo, such as programmes to address income poverty, educational needs, nutritional needs, and health care needs. Each area of intervention typically has a body of evidence demonstrating its social value. Silo'd approaches often miss the synergistic opportunities resulting from a degree of integration, whereby a prioritised "package" of interventions, jointly conceptualised, may have more impact than a disconnected set of approaches.

6.2 This section therefore summarises the evidence related to maternity and newborn vulnerabilities and associated interventions within their silos, and thereafter considers the rationale for their integration within a holistic strategy. Four distinct areas of intervention are considered that are rationally related to the vulnerabilities associated with maternity and newborns:

6.2.1 *Adequate incomes*, which diminishes the ability of households to effectively access goods and services necessary for the general protection of pregnant women, mothers of infants and newborn children, particularly within the first two years of life.

6.2.2 *Adequate nutrition*, sufficient to ensure the healthy development of the foetus, and the newborn, particularly within the first two-years of life.

6.2.3 *Health service delivery*, which is the point of contact for health-related interventions as well as nutrition-related interventions with a preventive focus (counselling, treatment, and access to appropriate food supplements).

6.2.4 *Pregnancy support*, where integrated interventions focused on pregnancy and newborns are considered.

Income support

6.3 Where poverty is widespread and persistent it is argued that interventions should be structural in nature rather than residual (Slater, 2011; Mkandawire, 2005). Policies that simultaneously address poverty and inequality therefore aim to achieve a structural break in poverty and poverty traps (Slater, 2011). Cash transfers represent one of the most important mechanisms to achieve this break and are widely implemented internationally – particularly in developing economies, but with different approaches in different countries.

6.4 Cash transfer schemes can be targeted or universal, conditional or unconditional, form part of rights-based approaches or highly discretionary. Resource constraints in developing country contexts require careful consideration of their merits and their design. Choices between universal, targeted and conditional programmes are also becoming subject to increased scrutiny and evaluation.

6.5 The evidence generally supports the multi-dimensional impact of cash transfer schemes on lives and livelihoods operating through direct and indirect effects (Devereux, 2006). The latter operate through multiplier and other consequential micro-economic (local economies) and macroeconomic effects with benefits for extended families and the wider community. However, despite having a multi-faceted impact, cash grants are also not seen as sufficient to deal with capability deprivation and social exclusion (for factors other than income). (Gabel, 2012).

6.6 Evolving concepts of social protection are tied to a deepened understanding of poverty and its causes within the developing world that go beyond crude specifications in terms of income or consumption (Gabel, 2012). It is argued that income and consumption measures, for instance, fail to differentiate the needs of children from adults; and fail to account for intra-household (and often gender-based) discrimination against children.[2]

6.7 The concepts of poverty and deprivation are also distinguished, with the former related to the lack of income and other resources, and the latter to the various conditions, independent of income, experienced by people who are poor. Social exclusion can also be seen as a manifestation of either or both. (Gabel, 2012).

6.8 When seen together in the case of children, poverty as deprivation, however, adopts a rights-based approach that is grounded in the Convention on the Rights of the Child (CRC). This approach distinguishes children from adults and recognises that children have special needs for development protection. The definition of child poverty adopted by UNICEF is consequently multi-dimensional in nature:

"*Children living in poverty [are those who] experience deprivation of the material, spiritual and emotional resources needed to survive, develop and thrive, leaving them unable to enjoy their rights, achieve their full potential or participate as full and equal members of society*". (UNICEF, 2005).

6.9 The understanding of poverty consequently requires a deepening of the strategies used to alleviate poverty, with a focus required on broadened and multi-dimensional social protection approaches. This suggests the need to combine preventative, promotive and transformative elements into a comprehensive protection scheme rather than narrow focuses on specific design issues such as conditionalities and targeting. (Gabel, 2012).

"*While interest has grown in conceptualizing social protection as a human rights strategy, most social protection measures in developing countries continues to be focused on reducing poverty among the poorest. Targeted, cash transfers continue to be favored, though increasingly social services and other support services are being linked and benefits are integrated across sectors. Just as we have expanded conceptualizations of poverty and policymaking, we need now to open out*

[2] This would include socio-cultural practices that affect school attendance, such as early marriages; or the enrolment of boys into indentured servitude such as the *talibe* in Senegal and Mali. (Gabel, 2012).

and deepen our understanding of how child well being is affected by cross-sectoral linkages among social protection efforts. Social protection benefitting children requires a cross-sectoral approach because the causes of children's vulnerabilities and their consequences have implications across areas and require multifaceted approaches." (Gabel, 2012, p.544).

6.10 According to Devereux (2006) the technical role of cash transfer schemes in social protection schemes are all but won. Convincing empirical evidence exists of their positive influence on beneficiaries' lives and livelihoods, together with the generation of indirect multiplier effects. He argues that cash transfers are however not a panacea and that they are not applicable in every situation.

"In some contexts In some contexts the market might not be strong enough to support cash transfers, and in some cultures cash transfers could be mis-used and achieve little benefits. There is a danger that over-optimistic expectations about the multiple benefits of cash transfers will distract policy attention away from the underlying causes of poverty and vulnerability, which cash transfers can address only marginally, if at all. If vulnerability is caused by chronic or transitory food production deficits, for instance, then cash transfers (but also food aid) can bridge consumption deficits in farming households, but more sustainable solutions would require other measures to strengthen agricultural production systems, such as investing in agricultural research and extension, building irrigation infrastructure to reduce output variability, and enhancing access to farm inputs to raise productivity." (Deveraux, 2006, p.15).

6.11 Cash transfer schemes within Africa nevertheless face the challenge of scaling up from pilot projects to national programmes institutionalised within government structures. This is needed to expand coverage from the local to national levels, and enhance accountability. Beneficiaries "*cannot hold donors and NGOs – which design, fund and implement several cash programmes at present – to account. … A missing voice in these debates is civil society, especially representatives of workers (e.g. trade unions), farmers organisations and women's groups. The right to social protection should be a campaigning issue, and citizens should be claiming this right from their national governments. It is time for the social protection discourse in southern Africa to move beyond technical debates about targeting and selection of instruments, and into the realm of politics and governance.*" (Deveraux, 2006, p.16).

6.12 Although cash transfer schemes cannot be seen as the sole instrument for the elimination of poverty (and deprivation) it remains a critical component. It is with this in mind that more modern social protection schemes under consideration look at combining cash transfers with related initiatives on different platforms.

6.13 Although CCTS are one form of this, they are not the only approach that can achieve cross-cutting objectives across multiple platforms. This is of particular relevance to developing countries that lack the institutional capability (within the short- or medium-term) for the efficient administration of conditions. Unconditional cash transfer schemes designed together with health, nutrition, and education supply-side improvements also demonstrate positive gains. A meta-analysis by Manley *et al* (2013) relating to cash transfer programmes and their impacts on height for age found that conditional programmes statistically accomplish the same as unconditional. Importantly, they also found that

conditions related to factors other than education and health strongly inhibit child growth. This suggests that some conditions may harm access to needed benefits and services.

Improved nutritional status during pregnancy and lactation

6.14 On their own cash transfer schemes do not demonstrate significant effects on nutritional status despite many other successes[3]. (Manley *et al*, 2013). They recommend that for those with a particular interest in improving child nutritional status using cash transfer schemes should take note of the following findings (Manley *et al*, 2013, p.147):

- "*Targeting the poorest and most vulnerable is likely to yield high marginal impacts. This is true in many ways: it is true of girls and younger children as well as people in poor health environments.*"
- "*At the same time, providing cash and even supplements alone is likely not enough: children must be healthy to see gains in nutritional status, which requires good health care, sanitation, and maternal education.*"
- "*Unconditional transfers do as well as anything, and transfers conditional on participation in health care are also effective. Setting other conditions may be counterproductive.*"

6.15 Health-based conditions are found to lead to increased gains in in nutritional status, with unconditional programmes also effective. Non-health conditions, which push parents out to work (particularly away from the home) or forcing them to meet savings requirements, however have negative effects. (Manley *et al*, 2013).

"*Economic models would suggest that parents are already optimizing, and pushing them to work at regularly available rates of return may be detrimental to their children. Mothers working outside the home may not be able to be as attentive to their young children, and in particular may be less inclined to breastfeed or to create a clean, safe, and stimulating household environment for the child.*" (Manley *et al*, 2013, p.147).

6.16 Manley *et al* (2013) note further that conditions can limit household coping responses to shocks and that meta-analysis of workfare programmes in the United States and Canada that push parents to work does not improve child development. Although when accompanies by added income the results are there. Unfortunate consequences also arise when conditions are misunderstood due to poor communication (cases include Honduras, Turkey, and Brazil).

6.17 Overall Manley *et al* (2013) conclude that conditional programmes are good at getting children to school, they are much less important than other factors – such as the age and sex of children in the household and access to healthcare. However, Fernald *et al* (2011) found that Ecuador's unconditional cash transfer programme (Bono de Desarrollo Humano) achieved better health outcomes (in the form

[3] Which include: improved education, decreased child labour, and increased access to health care.

improved vitamin A and iron supplementation) where parents believed the programme was conditional relative to those that did not.

6.18 Schady (2012) reporting on a modest cash transfer scheme (equivalent to about 10% of the total consumption of the average recipient household) in Ecuador finds a substantial reduction in anaemia among women of reproductive age in rural areas. However, they were unable to account for the specific feature of the programme responsible for the impact.

6.19 Miller *et al* (2011) find that a cash transfer scheme demonstrates significant impacts on food security and diversity in rural Malawi. This scheme follows the design of Zambian schemes with cash transfers allocated by elected Community Social Protection Committees who are required to select the poorest 10% of households for an allocation of US$14 per month per household. In a separate analysis by the authors they found that cash recipients purchase livestock and other productive assets, such as farming equipment and fertilizer coupons, which increase agricultural yield that is either consumed or sold for income.

6.20 The cash transfer scheme consequently allowed households to smooth their food consumption throughout the year, sharply reducing hunger and food shortages during the rainy season. Households also increased their dietary diversity and in the regular consumption of complex proteins. According to the authors it is likely that these outcomes were associated with gains in height, reduced stunting and fewer reported illnesses. However, these outcomes are not confirmed.

6.21 Ranganathan *et al* (2012) report on several CCT schemes which found positive nutritional outcomes:

6.21.1 The Columbian programme (Familias en Accion) improved the nutirional status of newborns and infants – but only for those less than two years.

6.21.2 The Mexican programme (Opportunidades) was associated with a better nutritional status and greater growth of children as well as lower prevalence of obesity and hypertension amongst adults. There was also a large decline in rural infant mortality. Five-and-a-half years after inception the doubling of cash transfers was also associated with increased growth of children, lower prevalence of stunting and of being overweight.

6.21.3 The Nicaraguan programme was found to significantly reduce the proportion of underweight and stunted children amongst the beneficiaries.

6.21.4 Effects on anaemia were not clear from the research in Mexico and Nicaragua.

6.22 Child health outcomes from cash transfers in Sri Lanka demonstrate a positive impact on short-term nutritional status proxied by weight-for-height z scores as well as long-term nutritional status proxied by height-for-age z-scores. The results of the analysis showed that the programme (Samurdhi) improves the weight-for-height of a child aged 36-60 months by roughly 0.45 standard deviations. It also improves the height-for-age by 0.4 standard deviations. The programme has a

particularly high impact on children aged 6-36 months (improvement of over 0.5 standard deviations). (Himaz, 2008).

6.23 Overall, therefore cash transfer schemes can provide positive food security and nutritional outcomes on their own. The strongest effects are most likely in very poor rural households, together with improved access to healthcare. Conditionalities tied to health service use (combining health care and nutrition interventions) are likely to yield positive outcomes – provided service access is developed.

Utilization of health care services – resolving barriers to access

6.24 Ranganathan *et al* (2012) in an overview of CCT schemes in low- and middle-income countries find they can be used to address the obstacles faced by the poor in accessing health services and to modify risky sexual behaviour. However, disentangling the various effects of the varying programme designs over time limit their ability to make definitive findings on causality. Many CCT programmes were implemented together with improvements in health service supply which *inter alia* incorporated health and nutrition education.

6.25 Negative effects from conditionality were found in Malawi suggesting that very low resource settings are not able to manage administratively complex programmes.

6.26 Barham (2011) in an investigation of the Progresa (Mexico) cash transfer scheme found a 17% reduction in infant mortality among the treated and an 8% reduction in programme municipalities. The analysis was adjusted to eliminate the effects of changes in health service supply – confirming that the effects resulted exclusively from the cash transfer programme.

6.27 More than half the decline resulted from reductions in the major causes of post-neonatal mortality, such as respiratory or intestinal infections, "*demonstrating that the Mexican CCT program was well designed and effective in addressing important causes of infant mortality. The success of the Progresa health program as a whole is further confirmed by the benefit cost ratio of the health component which ranges from 1.3 to 3.6. Because the benefits were based solely on infant deaths averted, the benefit cost ratio is an under-estimate of the total health benefits of Progresa.*" (Barham, 2011, p.83).

6.28 Importantly, infant mortality reduced by up to 47% in municipalities that prior to the implementation of Progresa were more disadvantaged in terms of access to electricity, literacy rates, and families having larger households. However, the programme was less effective in areas where household sanitation levels likely to be worse (less access to piped water, more dirt floors, and a greater percentage of the population working in the primary sector). According to Barham (2011) it is possible that children in these households have a higher incidence of intestinal worms which can cause death.

6.29 Cementing dirt floors in Mexican households are however associated with significant reductions in the number of parasites found in children, the incidence of diarrheal diseases and anaemia. The findings therefore suggest that Progresa

may be less effective in areas that do not meet minimum standards of sanitation. (Barham, 2011).

6.30 Programmes that effectively increase service utilisation, irrespective of the method used, are likely to improve health outcomes for poor households (the group vulnerable to service under-utilisation). For instance Habibov *et al* (2011) finds that in Azerbaijan increased use of prenatal care is associated with improved child birth weight - by about 26g or equivalent to 0.8% of the raw mean birth weight in the country. The analysis also finds that a unit increase in the quality of antenatal care increases birth weight by about 26 g equivalent to a 1.3% increase. In general, it is found, that the magnitude is comparable with that of other countries.

6.31 In contrast to the other studies reported here, Bassini *et al* (2013) reviewed 25 studies reporting on the impact of financial incentive schemes on five health coverage indicators:

"*breastfeeding practices (breastfeeding incidence, proportion of children receiving colostrum and early initiation of breastfeeding, exclusive breastfeeding for six months and duration of breastfeeding); vaccination (coverage of full immunization, partial immunization and specific antigens); health care use (seeking healthcare when child was sick, visits to health facilities for preventive reasons, visits to health facilities for any reason, visits for health check-ups including growth control); management of diarrhoeal disease (ORS use during diarrhoea episode, continued feeding during diarrhoea, healthcare during diarrhoea episode) and other preventive health interventions (iron supplementation, vitamin A, zinc supplementation, preventive deworming).*"

6.32 While the findings suggest that financial incentives may have the potential to promote increased health service coverage of several child health interventions, the quality of the evidence was too low to confirm effects. The more pronounced effects were achieved by programmes that removed user fees for access to health services. Importantly, effects were also observed for programmes that conditioned financial incentives on participation in health education and attendance to health care visits. "*This finding suggests that the measured effect may be less a consequence of the financial incentive and more due to conditionalities addressing important informational barriers.*" (Bassini *et al*, 2013, p.2).

6.33 Overall, programmes that combine income support (through conditionalities) with specific health service use do demonstrate improved health and nutrition outcomes. Not all studies can separate out the independent effects of improved health service supply or the removal of user fees (not always effective where staff continue to charge co-payments). The benefits of health and nutrition advice, resulting from requirements to use health services, demonstrate improved health outcomes. Importantly, many of these benefits are achieved in very low income households, who for various reasons face access barriers to health services.

Pregnancy support

6.35 There is much evidence that reducing vulnerability of pregnant women and their foetuses will improve maternal and child outcomes (Bhutta *et al*, 2008). The key benefits identified in the review are summarised in **Table 6.1**.

Table 6.1: Nature and size of benefits of maternity and early child support for maternal and child health

Potential benefit of maternity and early child support	Mechanism	Potential benefit
Reduction in stillbirths	Folic acid fortification	1.2% reduction in stillbirths (Bhutta *et al*, 2011)
	Maternal energy-protein and calcium supplementation	13% reduction in stillbirths 4 trials of balanced energy-protein supplementation in pregnancy found a 45% reduction in stillbirths: Lancet systematic review (Bhutta *et al*, 2011) and (Kramer et al, 2003) (Imdad *et al*, 2011)
Reduction in intra-uterine growth restriction and low birth weight	Energy and protein supplementation during pregnancy	32% reduction in intrauterine growth restriction Estimate based on 19 studies
	Multiple micronutrient supplements in pregnancy	14% reduction in intrauterine growth restriction and 16% reduction in low birth weight
Improved childhood psycho-social benefits and consequent raised educational attainment and human capital	Micronutrient supplements in pregnancy	Reduction in stunting, used as proxy for child development
	Complementary feeding support, with food supplements or conditional cash transfer	Increase height by 3.6 cm at 36 months
Improved child survival	Micronutrient supplements in pregnancy	A study in Indonesia found a 22% reduction in infant mortality with multiple micronutrient supplementation in pregnancy in over 31 000 women
	Maternal energy-protein and calcium supplementation	Reduction in neonatal mortality by 38%

Potential benefit of maternity and early child support	Mechanism	Potential benefit
Improved maternal health	Reduction in maternal morbidity and mortality	Pregnancy supplementation with three or more micronutrients lowered maternal anaemia by 39%
Preventing adverse inter-generational effects	Reduction in stunting in child, and in subsequent generations	

Source: Chersich *et al*, 2011.

6.36 State health services will bear many costs resulting from not acting to prevent maternal malnutrition and other preventable problems listed in the section above. These costs might be averted through state provision of maternity and early child support, with improved nutrition and access to care during pregnancy.

6.37 There is a clear inverse relationship between the timing of nutritional support for children and the size of benefits gained, simply put: the earlier in life that nutrition improves for children, the larger the benefits. The earlier in pregnancy, or failing which after birth, that support is received, the larger the gains. Thus, ideally, pregnant women would initiate support as soon after they report pregnancy as possible.

6.38 There are considerable long-term benefits of nutrition interventions in early childhood, including on long-term economic growth. A Lancet report of a randomised study showed that receipt of a nutrition supplement before, but not after, age 3 years of age was associated with higher hourly wages in adulthood, but only for men (Hoddinott *et al*, 2008). Adults presently 25-42 years old who had received the supplement when aged 0 to 2 years, had US$0.67 per hour higher wage than those who did not receive the supplement. This meant a 46% increase in average wages, suggesting that improving the nutrition of vulnerable children from early on in life can be a long-term driver of economic growth. Other social interventions, in tandem with nutrition, likely are needed to improve women's income earning potential.

Potential impacts on the utilisation of maternal health care services

6.39 Research in South Africa has demonstrated the importance of early attendance at ANC for allowing sufficient time for antiretroviral drugs to be provided during pregnancy and so to optimise reductions in risk for HIV transmission to infants (Hoffman *et al*, 2010). The longer the period of antiretroviral treatment in pregnancy, the lower the risk of HIV in the infant. This is the most critical factor in determining whether children acquire HIV. About 10% of infants were HIV infected if their mother received antiretroviral treatment for less than 4 weeks before childbirth.

6.40 About half as many (5.5%; 23/422) infants were HIV infected if women took antiretroviral treatment for 4-16 weeks during pregnancy, and only 3.5% with 16 to

32 weeks of therapy. Of note, there were no transmissions among women who were on antiretroviral treatment for more than 32 weeks prior to delivery. Every additional week of antiretroviral drugs reduced the odds of transmission to the child by 7%. It is conceivable that maternity and early child support for women could be configured to encourage earlier attendance at antenatal clinic, or have an incentive built explicitly into such support. This would have a major impact on prevention of HIV transmission to infants and on maternal survival (most maternal deaths in South Africa are due to untreated HIV, with antiretroviral drugs started too late, or not at all).

Experience with maternity and early child support in other settings

6.41 This section overviews several examples of maternity and early child support that has been provided in other countries. **Table 6.2** summarises information on the impact of the over 35 programmes identified. **Box 6.1** presents a case study of a programme from India.

6.42 Programmes to date are characterised as being multifaceted and inter-sectoral in nature. For example, the Tamil Nadu state programme in India, which has given poor pregnant women support since 1987 aimed explicitly to link the cash transfer to counselling and information provision to recipient pregnant women. Several programmes have been evaluated.

6.43 Issues of timely payments have been raised in several evaluations of maternity and early child support in other settings, with support often only received post-delivery. Though still of much benefit, especially if received shortly after childbirth, the reports indicate that substantially larger benefits would accrue if support were initiated during pregnancy.

Box 6.1: Example of maternity and early child support programme in India

In India, support during pregnancy is labelled as an entitlement, rather than as support or assistance, as these latter terms are viewed as being paternalistic. A large pilot study in India is presently assessing comprehensive support for pregnant women, aiming for a wide range of social and health impacts, including:

- To ensure wage compensation for pregnant and nursing mothers in high burden malnutrition districts to enable them to rest adequately during pregnancy and after delivery;
- To ensure that the inflow of additional income to households is used for supplementing the nutritional needs of pregnant and lactating mothers;
- To incentivise antenatal and postnatal clinic follow-up check-ups and referral;
- To promote counselling for breastfeeding and complementary feeding; and
- To ultimately reduce the high burden of anaemia amongst pregnant and nursing women and of maternal mortality.

The receipt of funds is contingent on women meeting four conditionalities:

- being registered at a clinic;
- visiting the clinic at least twice in the three months preceding delivery for an ANC check-up;
- receiving breastfeeding counselling from a community health worker; and
- attending the clinic for at least one postnatal clinic check-up.

Barham, T. *Providing a Healthier Start to Life: The Impact of Conditional Cash Transfers on Infant Mortality*. Department of Agriculture and Resource Economics. U.C. Berkeley. 2005.

6.44 Some programmes reported administrative problems. It is, however, important to note that only one found of this support lead to a small increase in pregnancy rates in the target population, the remainder found no such effects.

6.45 The experience of the Brazil Bolsa Familia programme (BFP), which covers about 25% of the country's population, is very illustrative. This programme specifically includes pregnant and lactating women, who receive cash transfers for attending antenatal clinic, for example. Between 60% and 70% of the cash transfer is used to purchase food, and overall dietary quality has improved in families in the scheme. (Barros *et al*, 2010).

6.46 Families enrolled in BFP spent US$107 more on food per year than a comparison group, families who were had severe food insecurity were able to increase the amount spent on food by 79% after enrolment in BFP. The BFP led to better nutritional outcomes in children 12 to 59 months of age. Children from families exposed to the BFP are 26% more likely to have normal height-for-age and 26% more likely to have normal weight-for-age than non-exposed children (Paes-Sousa *et al*, 2010).

6.47 A report by Save the Children (Devereux *et al*, 2010) mentions social support programmes to reduce poverty, taking the form of either food or cash or a combination thereof, in Ethiopia, Lesotho and Mozambique. Targets of these programmes include malnourished pregnant women. Save the Children (United Kingdom) estimated the current costs of such programmes and found that child and maternal benefits are feasible on a large scale, even in developing countries. They state that in middle-income countries and many Asian countries, universal benefits for pregnant women and children under five are affordable. In low-income countries, although universal transfers are generally unaffordable without external assistance, child and maternal benefits are possible with an appropriate mixture of age-based and geographical targeting (Devereux *et al*, 2010).

Table 6.2: Summary of experiences with pregnancy support programmes in other countries

Country and reference(s)	Nature of support	Key objectives of support	Selection criteria or conditions	Evaluation of programme: Evidence of effects (positive and adverse effects)
Bolivia (Moloney 2010)	Conditional cash transfer programme (*'Juana Azurduy'* stipend) – offers cash payments totalling US$260 to pregnant women, paid in instalments, provided conditions are met. No long-standing CSG or SASSA-type structure available	▪ Reduce maternal mortality	▪ Pregnant women ▪ Conditional on attending regular prenatal and postnatal check-ups until their child is 2 years and having a skilled attendant present during birth. Women without a birth certificate cannot receive payments.	Positive: ▪ In 2009, nearly 350,000 women received cash payments. ▪ Attendance at antenatal care rose, more than four fold since the programme began in March 2009. ▪ Negative: ▪ Many "teething" problems, and logistical and administrative bottlenecks. ▪ Long waiting hours in clinics; month-long delays in receiving payments. ▪ Quality assurance and monitoring challenges: more robust monitoring and evaluation systems needed
Brazil (Morris 2004)	$6.25-$18.7 per household each month, if a pregnant woman or child <7 in household, children also given nutritional supplements	-	▪ Conditional on attending educational workshops, antenatal care and vaccinations in pregnant and breastfeeding women, and similar conditions for children <7 years.	Cluster RCT
Colombia *Familias en Acción*	Mean $50, $20 per family, $6 per primary school child, $12 per secondary school child; about 30% of household consumption	-	▪ Poorest households in municipalities selected using poverty criteria. ▪ Conditional on receiving health and nutrition examinations (children aged <7 y), attending school (children aged 8-18y), attending health education workshops.	▪ Controlled before after study. ▪ Study in urban areas found a 0.58 fold increase in average weight of newborns born to mothers participating in programme.

Country and reference(s)	Nature of support	Key objectives of support	Selection criteria or conditions	Evaluation of programme: Evidence of effects (positive and adverse effects)
India, pilot in 52 districts, began 2011, Indira Gandhi Matritva Sahyog Yojana (IGMSY) (Government of India 2010)	▪ Government of India piloted maternity benefits as conditional cash transfers for women. ▪ Rs4000 in 3 instalments, from 2nd trimester till child is 6 months. ▪ Only for women older than 19 years, for their first 2 live births, and with conditionalities	To improve health and nutrition status of pregnant and lactating women, and infants by: ▪ Promoting appropriate practices, care and service utilisation during; pregnancy, safe delivery and lactation; ▪ Encouraging women to follow optimal infant and young child feeding (IYCF) practices, including early and exclusive breast feeding for the first six months; ▪ Contributing to better enabling environment by providing cash incentives for improved health and nutrition to pregnant and lactating mothers; ▪ Aims to partly compensate for loss of income before and after childbirth.	Excludes government employees. Conditions for receiving money are: ▪ Registration of pregnancy at health facility within 4 months of pregnancy; ▪ At least one ANC visit with iron/folic acid tablets and tetanus toxoid; ▪ Attended at least 1 counselling session. ▪ Institutional delivery and early initiation of breastfeeding (covered by JSY, another scheme for pregnant women); ▪ Birth of the child is registered. ▪ Child has received immunizations; ▪ Attended at least 4 growth monitoring and IYCF counselling sessions; and ▪ Exclusive breastfeeding for six months and introduction of complimentary feeding as certified by the mother.	▪ Pilot project includes evaluation plans, with a baseline and endline survey in the 52 pilot districts

Country and reference(s)	Nature of support	Key objectives of support	Selection criteria or conditions	Evaluation of programme: Evidence of effects (positive and adverse effects)
India, DMMAS in Tamil Nadu State since 1987(DMMAS study team 2010)	▪ Rs6000 to poor women in informal "unorganised" sector. In 2009, to simplify administration, became a once-off payment at childbirth, previously given as several instalments.	▪ Aimed to assist with medical expenses around childbirth and to compensate women for loss of wages around this time. Also intended to promote rest before and after delivery, improve nutrition and exclusive breastfeeding rates. ▪ Links established with information provision to women, especially around maternal nutrition and breastfeeding advice	▪ Excludes women in formal sector or with high income. Takes into account nature of occupation, housing and transport of the family, seasonality of labour, women-headed families, and ability to educate children.	▪ High coverage of eligible women: accessed by 46% of all deliveries in the state ▪ Money received post-delivery only, 86% of which was within 6 months of childbirth (20% received within 1 month) ▪ Women spent money on accessing health services (58%, as services not free in India), savings for child's future (35%) and food (44%) ▪ <6% had any difficulties in getting the grant, even lower in rural areas ▪ No evidence of corruption ▪ Delays are problematic, due to low staff and having only one payment is viewed as a weakness, coverage in urban poor relatively lower than rural areas ▪ Research design not able to document changes in weight, mortality and other outcomes

Country and reference(s)	Nature of support	Key objectives of support	Selection criteria or conditions	Evaluation of programme: Evidence of effects (positive and adverse effects)
Mexico, *Oportunidades* programme (Sosa-Rubi 2011) (Barham T 2006; Barber 2008; Fernald 2008; Barber 2009; Barber 2010)	▪ Conditional cast transfer since 1997.	▪ Targets poorest 20% of rural population	▪ Conditional, in part, on pregnant women attending antenatal care, obtaining nutritional supplements and attending an educational programme on health and nutrition. ▪ Amount given depends on demographic structure of family	▪ Increased birth weight (127.3 g higher birth weight and 4.6% lower low birth weight) ▪ Reduction in maternal mortality (11%, even higher in more marginalised communities), and infant morbidity and mortality ▪ Increased demand for services (higher rates of caesarean section and antenatal attendance) ▪ Higher quality of care received, possibly as programme aimed to make women more informed and pro-active patients ▪ Higher ANC visits and lower anaemia ▪ Money spent on buying supplementary and more nutritious food ▪ Improved sanitation ▪ Positive effects on aspects of reproductive health not covered by conditions ▪ Led to poverty alleviation and women's empowerment ▪ Negative: higher amounts of cash associated with higher blood pressure and obesity in adults. (Fernald 2008)
Peru	-	-	▪ Conditional cash transfer, with several criteria, including attendance at antenatal and postpartum care.	▪ Conditional cash transfer programme has reduced the number of women giving birth at home

Country and reference(s)	Nature of support	Key objectives of support	Selection criteria or conditions	Evaluation of programme: Evidence of effects (positive and adverse effects)
United Kingdom Sure Start Maternity Grant	▪ Grant designed to help with additional costs at the time of the child's birth, and Healthy Start Vouchers to help with the costs of milk, fruit and vegetables during pregnancy.	▪ Grant given as it is widely acknowledged that the health and general well-being of pregnant women in the last months of pregnancy is important for the health and development of a child later in life.	▪ Expectant mothers with low incomes	-
United Kingdom Health in Pregnancy Grant	▪ Grant of £190 paid to all pregnant women. It is not be taxable and is disregarded for the purpose of income-related benefits.	▪ The Health in Pregnancy Grant provides additional financial support to all pregnant women in the last months of pregnancy, towards the costs of a healthy lifestyle, including diet, and with other additional costs faced at this time. ▪ It also aimed to provide an incentive for expectant mothers to seek the recommended health advice at the appropriate time.	▪ Grant linked to the requirement for pregnant women seek health advice from a health professional. ▪ Given at any point after 25 weeks of pregnancy, which coincides with the UK guideline recommended 25th week antenatal appointment for women having their first pregnancy and 28th week appointment for subsequent pregnancies. This aimed to ensure that the burden on health professionals is kept to a minimum and arrangements for the Health in Pregnancy Grant are aligned with already established antenatal care.	-

Source: Chersich *et al*, 2011.

7. FINDINGS

7.1 The conceptual understanding of poverty affects how interventions to address it are understood and developed. If seen merely as insufficient income or consumption, then income support would resolve all social problems. A more complex understanding of poverty looks to the causes of reduced income, which include social exclusion and other factors which undermine capability development. Interventions must also be equal to this complexity to make a sustained difference.

7.2 Although focused explicitly on inadequate income as a problem, cash transfers as an intervention are capable of supporting strategies aimed at the complex understanding of poverty. The evidence demonstrates their ability to unblock barriers to human development, whether as a consequence of social exclusion or poor public service provision, that can largely only be solved at the household level.

7.3 Failures to address under-nutrition of women, newborns and infants from conception to the first two years thereafter have permanent effects on the cognitive and health status of children which cannot be compensated for either by subsequent adequate nutrition, access to healthcare, and/or education. These permanent effects translate into poor educational performance and lower earnings potential (due to educed capabilities). Stunting of children, arising from under-nutrition during the first 1,000 days from conception is consequently a major contributor to systemic poverty.

7.4 Under-nutrition during the first 1,000 days from conception does not arise exclusively from a lack of food security. Advice, from trained professionals, together with access to specific food supplements is also important. Advice is also required at different points – during pregnancy, at the delivery (immediate initiation of breastfeeding), during the next six months (exclusive breastfeeding), and thereafter (breastfeeding, supplements, and important feeding requirements.

7.5 Households in poverty however systematically underutilise health services required to provide advice and support. Both supply and demand factors are typically at play. Supply problems are addressed through the provision of accessible services with properly trained staff. Systemic demand problems arise due to transport costs, social exclusion (services discriminate against some people), and/or opportunity costs (can't take time off work). Resolving utilisation problems therefore needs to accommodate both the supply and demand factors at play, which require the integrated development of instruments as part of a multifaceted approach.

7.6 Although necessary, multifaceted programmes incorporating a family of related interventions operated from different platforms is complex to implement in the settings where they would deliver the greatest value – such as low- to middle-income countries. The central challenge facing a low- to middle-income country is how to develop a multifaceted approach that can be administered quite straightforwardly, at least initially.

7.7 Highly targeted programmes, even when focused on the most destitute or vulnerable, leave many legitimately vulnerable communities, households and people without

protection. Such programmes are also fragmented and lack the scale to address wide-spread systemic poverty. To the extent that they have any relevance in social protection, highly targeted programmes are only important to residual mall-scale social problems. Targeting only a percentage of those in poverty is consequently inappropriate when attempting to address a systemic rather than a residual problem.

7.8 Within Africa most social protection strategies are highly targeted, often using community-based prioritisation, and funded by donors rather than government budgets. Although the resulting projects have value from an evidence-gathering perspective their social impact is negligible. Governments however face challenges scaling up from pilots where no institutional framework or delivery platform has been invested in for a formal on-the-books programme. Furthermore, the required governance framework at scale is quite different to small-scale project-oriented pilots.

7.9 The implementation of an integrated social protection package to support pregnant women, newborns, and children to age two, to be effective should be implemented at scale and at the least incorporate explicit income, nutrition and health service interventions. The implications of implementation at scale will require formal government programming; and a governance and delivery framework able to coordinate across the various platforms and stretch from the national to the local level.

7.10 The pathway from fragmented donor-funded pilots to a government programme can recognise the constraints on administrative capability and therefore consider unconditional programmes - initially. The evidence shows that unconditional cash transfers generally reduce barriers to health service use and food security. Where combined with supply-side improvements, access should generally improve.

7.11 Rural areas in low- to middle-income countries and Zambia are characterised by widespread poverty and food insecurity. Cost-effective targeting is possible by focusing on rural areas – at least initially.

8. STRATEGIC CASE

8.1 The findings suggest that addressing the vulnerabilities associated with pregnancy and infancy provide a pathway for a low- to middle-income country address systemic poverty and promote human and economic development. **Figure 8.1** reflects the conceptual framework arising from the evidence and the points of potential intervention.

8.2 These are summarised as follows:

8.2.1 **Insufficient incomes/consumption**: is caused by under-developed capabilities.

8.2.2 **Under-developed capabilities**: are caused by food insecurity and the underutilisation of health services essential to child development.

8.2.3 **Food insecurity**: results from inadequate income and (inter-alia) unreliable food production impacting critically during pregnancy and for the first two years of the infant's life.

8.2.4 **Under-utilisation of services**: results from barriers to service access.

8.2.5 **Barriers to service access**: result from three potential causes:

- Service under-supply: resulting from inadequate or poorly prioritised service resources. This will include poor quality services and an inadequate health and nutrition package.
- Indirect costs: such as for transport to and from the service.
- Opportunity costs: such as lost earnings or production from excessive transport times and queuing required to make use of a service.

8.3 Points of intervention:

[1] Define a package of health services to be delivered off the public health platform, encompassing antenatal care, deliveries, postnatal care, nutrition support, and counselling and ensure that all services are within a minimum walking distance of all households.

[2] Provide a general cash transfer to reduce indirect cost barriers. The duration should be for at least the period of pregnancy and two-years thereafter.

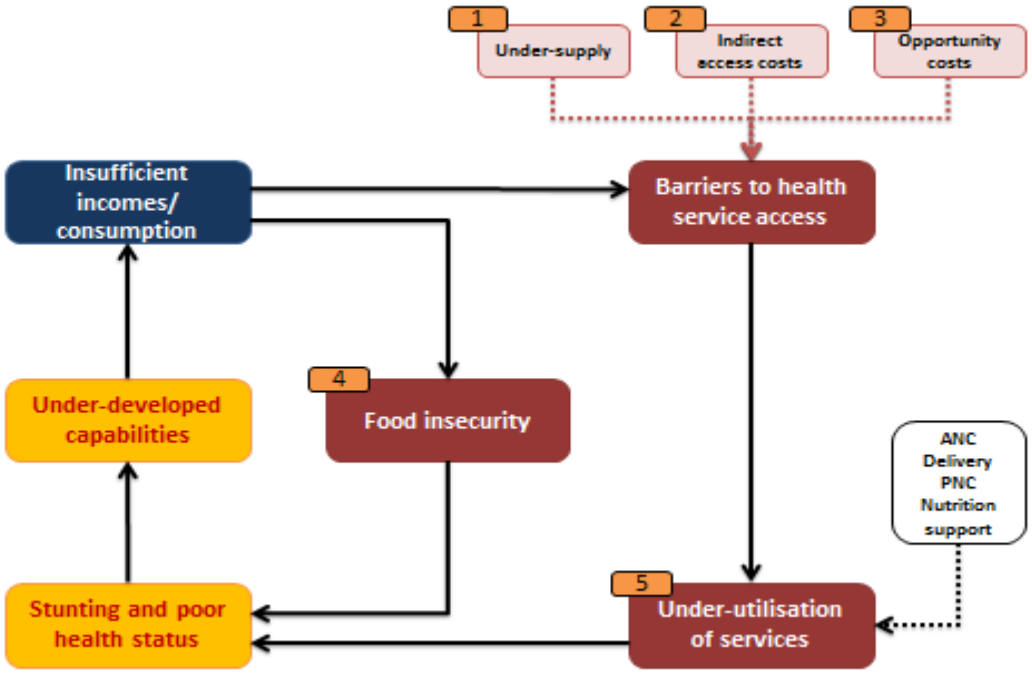
[3] Provide a general cash transfer sufficient to reduce the importance of opportunity costs in the decision to access essential health service platforms. The duration should be for at least the period of the pregnancy and two-years thereafter.

[4] Provide a general cash transfer to provide predictable food security at all times. This grant can also be used to purchase livestock to increase food supply and to purchase it directly. This could be distinct from cash transfers referred to in [2] and [3] above – and used to provide a basic level of household protection.

[5] When service supply has been sufficiently enhanced, and the delivery platform for interventions enhanced, additional cash support, topping up the cash transfers indicated in [2], [3], and [4] above, can be provided on condition that specific services on the health platform have been used. The duration should be for at least the period of the pregnancy and two-years thereafter.

8.4 The strategic framework envisages the health platform as the key delivery agent and contact point for delivery of the non-cash components of the package. Cash transfers would then be used to reduce barriers to accessing the health platform as well as enhancing their use. A general cash transfer will provide a baseline level of support for households, generally improving their condition and income-related capabilities. Seen together the integrated intervention should seek to reduce/remove maternal and child health drivers of systemic poverty and human development.

Figure 8.1: Conceptual framework underpinning the strategic case for a "pregnancy" support package



PART C - SITUATION ANALYSIS

Provides a baseline review of the current social protection and healthcare package in place within Zambia. When seen in relation to the strategic case a gap analysis can be produced.

9. CONTEXT

Overview

9.1 Although the Republic of Zambia (Zambia) has experienced sustained high levels of economic growth, it remains one of the poorest in the world with very high levels of poverty, particularly in rural areas. Economic growth is primarily driven by primary good production and exports (Central Statistical Office, 2014) in the form of minerals and agriculture. Despite this growth poverty has not diminished significantly although there has been an improvement in the depth and severity of poverty in both rural and urban areas (Republic of Zambia, 2006).

9.2 Overall, however, reduced poverty is disproportionate when compared to economic growth which suggests that the nature of the economy reinforces non pro-poor forms of economic development and growth. This in part can be explained by the sectors responsible for the economic growth, which offer very narrow distributional opportunities. Both agriculture and mining export activities are also concentrated in certain geographical regions with the fortunes of the relevant communities tightly linked to the performance of the sectors.

9.3 The collapse of the mining sector during the late 1990s for instance appears to have influenced a decline in population growth, due to migration, within the Copperbelt. Subsequent improvements in mining production and prices however reversed poverty trends in the region and increased population levels in the North-Western province in response to new mining activities. Agricultural production has also potentially reduced poverty in the Eastern province due to strong growth in the production of cash crops such as cotton and tobacco. (Republic of Zambia, 2006).

9.4 The distributional effects of growth are however uneven and geographically confined. This in large part can be explained by the limited reach of the Zambian system of social protection which, for instance, in the form of non-contributory schemes targets a minute proportion of the total population with a modest overall allocation and inconsistent delivery. Public health expenditure has also not kept pace with growth and remains reliant on donor funding. (International Labour Office, 2008a). *In the absence of mechanisms to achieve a more balanced distribution of incomes, the impact of growth on social development will remain constrained.*

Economic growth and development

9.5 Economic growth in Zambia has exceeded 5.0% in real terms (excluding inflation) for the full period from 2003 to 2013. Taking account of population growth of roughly 3% annually (see below), this would amount to real per capita GDP of between 2% and 4% over a 10 year period. There has also been a structural change in the make-up of GDP over the past 13 years, with the secondary sector increasing from 19% to 38% of the total.

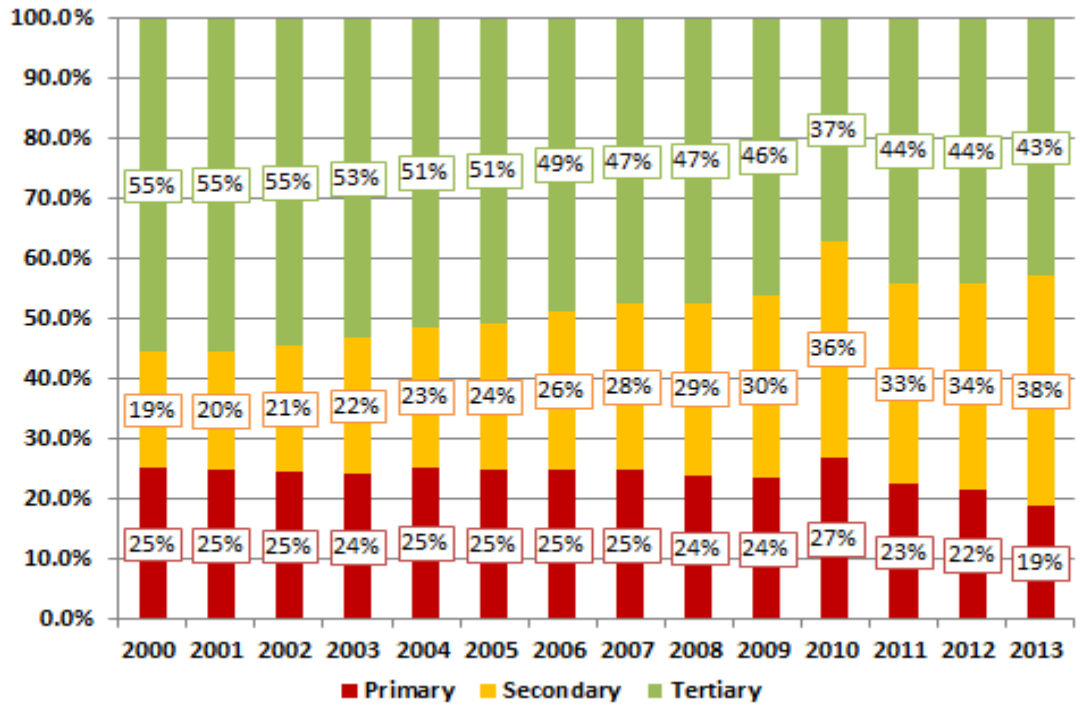
9.6 The achieved economic growth rates suggest the availability of increased fiscal space for expanded government programmes *at least at the annually realised growth rates. As these growth rates have been sustained during periods of slow global growth, the trends are sufficiently reliable upon which to plan expanded social programmes.*

Table 9.1: Growth in Gross Domestic Product for Zambia

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
GDP growth	5.1%	5.4%	5.3%	6.2%	6.2%	5.7%	6.4%	7.6%	6.8%	7.3%	6.5%

Source: Central Statistical Office, 2014

Figure 9.1: Distribution of economic growth by broad economic sector (primary, secondary and tertiary)



Source: Based on Central Statistical Office, 2014.

Table 9.2: Breakdown of economic sectors

Primary sector:

- Agriculture, forestry, fishing
- Mining and quarrying

Secondary sector:

- Manufacturing
- Electricity, gas and water
- Construction

Tertiary sector:

- Wholesale and retail trade

- Restaurants, bars and hotels
- Transport, storage and communications
- Financial institutions and insurance
- Real estate and business services
- Community, social and personal services

Population change

9.7 According to the census Zambia had a mid-year population of 13,092,666 in 2010, with 6,454,647 males and 6,638,019 females. The mid-year population estimate for 2014 is 15,023,315 and is expected to increase to 26,923,658 by 2035. (Central Statistics Office, 2014).

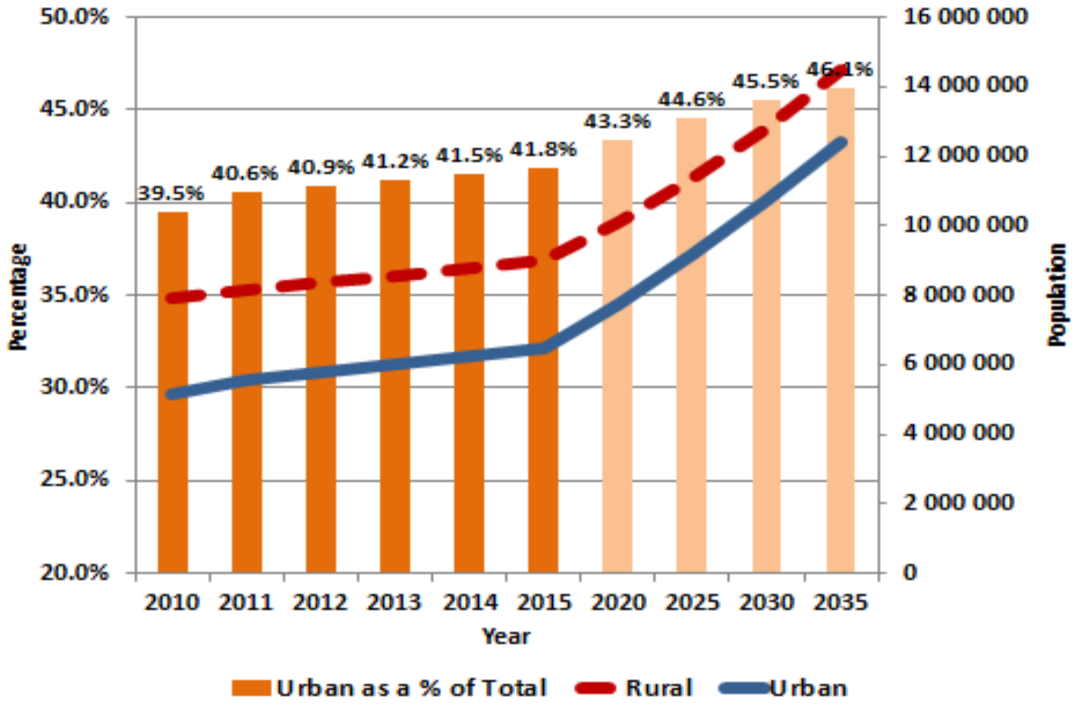
9.8 Zambia is going through a substantial social and economic transition that can be expected to last for many decades. Demographic factors, affected by both domestic and international economic developments, are driving rapid urbanisation, within the context of relatively high fertility rates and overall population growth. It is expected that the urban population will reach 41.8% of the total population by 2015 and 46.1% by 2035 (**Figure 9.3**).[4]

9.9 Internal migration is also reflected in the inter-provincial population changes, which show that over the period 2010 to 2015 only three provinces grew at a rate faster than that of the national population. The fastest growing province over this period is Lusaka at 24.3% with Muchinga next at 23.5%. The slowest growing is Western province, at only 9.4% over the same period. (**Figure 9.4**).

9.10 The overall annual population growth rate is roughly 3%, which is high and indicates a near doubling of the national population every 20 years. It is possible that higher urbanisation rates will slow population growth within the 20 year period. *Nevertheless, the economy will need to expand considerably to accommodate this change – with much of the growth required in urban settings.*

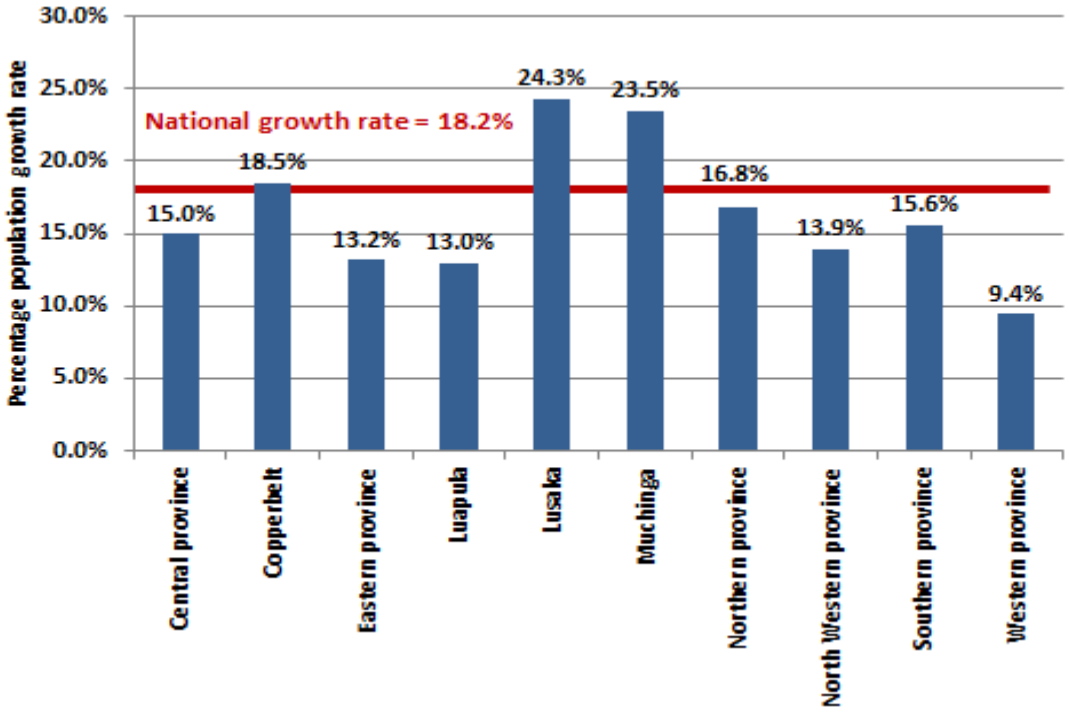
[4] It is likely that the rate of urbanisation presented by the Central Statistical Office is an underestimate as rapidly growing economies typically face accelerated levels of urbanisation. Historical trends in Zambia potentially reflect the urbanisation associated with the slower economic growth rates of the past.

Figure 9.3: Population growth estimates for Zambia



Source: Central Statistical Office, 2014.

Figure 9.4: Provincial population growth rates for the period 2010 to 2015 compared to the national population growth rate (percentage)



Source: Central Statistical Office, 2014.

Poverty and inequality

9.11 The majority of Zambians live in poverty with poverty levels remaining high despite economic growth. Approximately 60.5% of the population falls below the domestic poverty line, a slight drop from 2006. The extremely poor are estimated at 42.3% in 2010, a slight decline from 42.8% in 2006. Rural poverty is three times higher than in urban areas. (**Table 9.3**).

9.12 Children account for half the population in poverty with a strong poverty bias toward larger families headed by persons with an inadequate education. Around one-fifth of all children are orphans, with orphaned children experiencing higher levels of poverty than those with parents. (International Labour Office, 2008a).

9.13 In addition Zambia is one of 36 countries with more than 20% stunting rates. (Taylor, 2012).

9.14 When reviewed over long periods, poverty has demonstrated a structural decline from 70% of the total population in 1991 with reductions in both urban and rural areas. The extreme poor have also reduced, with levels at 58% in 1991. Of those that have escaped poverty over the period from 1991 to 2006, the majority are from urban areas. Reductions in rural areas have been far more modest. (International Labour Office, 2008a).

Table 9.3: Overall and extreme poverty by province and urban and rural area, Zambia 2006 and 2010

Rural/Urban & Province	2006		2010	
	Overall %	Extreme %	Overall %	Extreme %
Total	62.8%	42.7%	60.5%	42.3%
Rural	80.3%	58.5%	77.9%	57.7%
Urban	29.7%	13.0%	27.5%	13.1%
Central	70.7%	48.8%	60.9%	36.7%
Copperbelt	37.3%	19.5%	34.3%	18.3%
Eastern	78.5%	56.4%	77.9%	58.7%
Luapula	73.9%	53.6%	80.5%	64.9%
Lusaka	24.7%	10.3%	24.4%	11.5%
Northern	78.5%	57.5%	75.0%	55.8%
North-Western	70.8%	44.6%	67.0%	46.1%
Southern	73.1%	50.9%	67.9%	47.3%
Western	83.3%	64.6%	80.4%	64.0%

Source: Central Statistical Office. Zambia Labour Force Survey. 2012, p.3.

9.15 The persistence of poverty despite high rates of economic growth can in part be explained by the low levels of formal sector employment relative to informal employment and unemployment. Only 15.4% of the employed population are in formal employment with 84.6% in informal employment. (Central Statistical Office, 2012).

9.16 Overall educational attainment is also low, with only 58.7% of formal sector employees achieving educational levels of grades 8 to 12. Most of the informal sector

employment, at around 59.9%, occurs in the agricultural sectors. Within the formal sector most of the employed work in education. (Central Statistical Office, 2012).

9.17 Thus although agriculture is one of the most important economic sectors, it is not able to provide stable employment for a large part of the population.

9.18 Poor nutrition provides further evidence of extreme poverty with 15.3% of under-five children underweight in rural areas and 12.8% in urban areas. Chronic food insecurity particularly affects the urban poor households and small-scale farmers. In particular households relying on maize production are at risk from crop failures and recurrent shocks. (National Food and Nutrition Commission of Zambia, 2012) (International Labour Office, 2008a).

9.19 The provinces with the highest population growth rates, and most urban are also those with the lowest levels of poverty (**Table 9.3** and **Figure 9.4**). Although this suggests some correlation between improved growth and poverty reduction, poverty reduction is not being reduced at the rates suggested by general economic growth. *In the interests of broader human development consideration therefore needs to be given to improving the redistributional effects of growth through the design of government programmes.*

Births in Poverty

9.20 Of the total estimated number of births for 2014 391,913 will be to mothers in poverty and 274,015 to mothers in extreme poverty. The majority of births in poverty however occur in rural areas with 295,170 (75.3%) in poverty and 218,631 in extreme poverty. Within rural areas births in extreme poverty represent 74.1% of all rural births in poverty.

9.21 Within urban areas births in poverty are estimated to be 11.4% of all births in poverty, with those in extreme poverty at only 5.4%. The risks associated with giving birth in poverty are therefore predominantly a rural phenomenon.

Table 9.4: Estimated distribution of births in poverty, distinguishing between urban and rural settings for 2014

	Population	% of total
Total births	647 790	100.0%
Births in poverty	391 913	60.5%
Births in extreme poverty	274 015	42.3%
Births in poverty - urban	73 942	11.4%
Births in extreme poverty - urban	35 223	5.4%
Births in poverty - rural	295 170	45.6%
Births in extreme poverty - rural	218 631	33.8%
Birth rate (per 1,000 people)	43.1	
Urban areas: poverty as a % of total	18.9%	
Rural areas: poverty as a % of total	75.3%	
Urban areas: extreme poverty as a % of total	47.6%	
Rural areas: extreme poverty as a % of total	74.1%	

Sources: The estimates are derived by extrapolating from the population mid-year estimates, and the distributions of urban and rural poverty. (Central Statistical

Office and **Table 9.3**). The birth rate is from the World Bank. World Development Indicators. 2013.

10. SOCIAL PROTECTION

Overview

10.1 Central to the challenge of adequate maternal protection within Zambia are the poor general levels of social protection within the country as a whole. Despite good evidence that both non-contributory social protection arrangements are able to substantially mitigate the wide-ranging effects of income poverty (for instance see Department for International Development, 2011; Kakwani *et al*, 2005), very little is presently in place within Zambia.

10.2 As a programme targeting maternal health is narrowly focused, it is important to ascertain whether efficient implementation is possible in the absence of a wider set of programmes with stable delivery platforms and benefits. Strong delivery platforms are required to achieve integrated packages of benefits across multiple programmes (e.g. income support, welfare services, health care, etc.), which require high levels of inter-programme co-ordination.

10.3 This section outlines the present status of programmes within Zambia that could be used as a springboard for improved maternal protection. The focus is on non-contributory schemes capable of directly addressing the needs of households without adequate income.

Non-contributory social protection schemes

10.4 In response to persistent poverty two areas of social protection are important impacting on both short- and long-term poverty: cash transfers; and nutrition support. The four main programmes falling into this category are:

10.4.1 *The Public Welfare Assistance Scheme*: this scheme targets mainly the incapacitated, terminally ill and other vulnerable individuals and families. Beneficiaries are provided with rations and other welfare needs. In this scheme, beneficiaries are not given cash, instead they are provided with the needed goods (materials) and services. (Mumba, 2013).

10.4.2 *The Social Cash Transfer Scheme*: this scheme provides cash to vulnerable families using community-based targeting, to enable them meet their basic needs. The scheme is currently being implemented in 13 districts and it has shown that households spend funds on critical areas such as education for the children (increase by 3%), food- nutrition (56.6% to 35.2%), health (illnesses 45% to 35%), livestock and shelter as well as increased buying power. (Mumba, 2013).

10.4.3 *The Food Security Pack*: this scheme targets vulnerable but viable individuals and families that seek to engage in agricultural activities by giving them support in form of inputs in order to improve household and national food security. (Mumba, 2013).

10.4.4 *School Feeding Scheme*: This consists of a wet meal given to children once per school day. In many instances this provides their main meal of the day. (International Labour Office, 2008).

10.5 Of the above, no single programme reaches more than 2.1% of the population in poverty with the cash transfer scheme reaching no more than 0.8% of the population in poverty. Even seen together the programmes have a minimal social impact. Also, as the Food Security Pack scheme does not offer financial transfers or specific food support only the other three schemes are evaluated further.

Table 10.1: Social protection programmes

Scheme	Beneficiaries	% of in poverty
Public Welfare Assistance Scheme	166 559	2.0%
Social Cash Transfer Scheme	64 700	0.8%
Food Security Pack	34 942	0.4%
School Feeding Programme	173 980	2.1%

Source: Beneficiary data based on International Labour Office, 2008a, p.101.

10.6 Although the three schemes involving some form of transfer undoubtedly offer relief to extremely poor families the programmes are criticised for their coverage, depth, and administrative sustainability (International Labour Office, 2008a). These are summarised as follows:

10.6.1 *Coverage*: All three programmes address the needs of a very small portion of the population in need. As a consequence the potential for systematic social impacts very limited. Presently the budget allocation for all transfer programmes amounts to only 0.6% of Gross Domestic Product (GDP). (International Labour Office, 2008a, p.26).

10.6.2 *Benefit adequacy*: Benefits offered via the Public Welfare Assistance and School Feeding Scheme are predominantly in kind and are therefore difficult to assess from an adequacy perspective. The majority of the Welfare Assistance benefits identified in 2006 are either in the form of food, affecting 86,144 beneficiaries, and clothing and bedding affecting 51,758 beneficiaries.

Monthly cash grants from 2007 are set at US$10 (or ZMK40,000 in 2007 prices) which could be considered reasonable within the context, but nevertheless constitute only 26% of the value of the poverty line based on $1.25 per day. Taking into account that cash grants cover only 0.8% of the population in need (as benefits are restricted to pilot areas), benefit levels fall far below the socially required levels.

The funding for benefits tends to be erratic due to both varying government and donor commitments over time. Given the periods of sustained economic growth, however, funding streams from government should be a stable and increasing proportion of the overall benefit liability.

10.6.3 *Targeting*: Eligibility for benefits is determined on a decentralised basis for all three schemes: with Community Welfare Assistance Committees (CWACs) responsible for prioritising households in need at a local level in the case of cash transfers and welfare assistance; and community volunteers, including

teachers, in the case of the School Feeding Scheme. Although regarded as better than proxy targeting, the targeting mechanism is open to wide discretion and is not systematically monitored (International Labour Office, 2008a). In all instances the sustainability of the targeting mechanism is questioned, particularly when programme expansion is considered.

Targeting and the payment of benefits is also determined on the basis of the availability of funds in a given year, subordinating considerations of poverty and vulnerability. (International Labour Office, 2008a).

10.6.4 *Administrative sustainability and expansion opportunities*: The administrative platforms for all three programmes are precarious despite a presence (when all programmes are seen together) in all 72 districts in the country.

With respect to the Public Welfare Assistance Scheme, which is needed to provide the administrative framework for the Cash Grant scheme, the International Labour Office (2008a, p.102) reports that: "*The scheme is reported to suffer from weak administrative capacity, with supervising officers from the DSW having excessive workloads and being unable to respond in a timely manner to requests for assistance. The community-based targeting mechanism is also reported to be susceptible to manipulation and not sustainable in the long run, given the voluntary nature of the CWAC members.*"

The administrative platform for the Public Welfare Assistance Scheme cannot support a large-scale expansion of benefits, particularly in the form of cash grants. The system for determining beneficiaries and benefits, to be efficient, requires a centralised administration to manage enrolments and benefit payments within the context of a rights-based framework.

10.7 Although the social protection allocation is presently very low, at 0.8% of GDP (based on the 2014 budget), Government has indicated an intention in the 2014 budget speech to substantially upscale the various programmes. However, this up scaling was not identifiable in the 2014 allocation.

"*In 2014, Government's contribution to the social cash transfer scheme will be scaled up by over 700 percent in order to make a significant impact on reducing extreme poverty. In the same vein, the Food Security Pack programme will also be scaled up.*" (Minister of Finance, Budget Speech, 2014).

10.8 The actual budget increase for 2014 for social protection amounts to 19.0% when inflation is taken into account (see **Table 10.1**), which is equivalent to the increase for the entire budget. Were the beneficiary numbers to be increased by 700.0% however, total beneficiaries covered would still only be 4.8% of the total population in poverty, and 7.1% of the population in extreme poverty.

Nutrition

10.9 Zambia is one of 36 countries with stunting rates in excess of 20% (Taylor, 2012) with medium nutrition governance according to the World Health Organisation. Zambia is identified by the World Health Organisation as achieving "*insufficient progress*" toward the achievement of nutritional goals with an annual reduction in

underweight children[5] of only 1.6% (UNICEF, 2009). The 2007 Demographic and Health Survey (DHS) (Central Statistical Office, 2009) however indicates that "*no progress*" has been achieved to 2007 with only 0.4% reduction per year. Nevertheless, over the past two decades there are reductions in both underweight and stunting – possibly due to success in addressing HIV and AIDS (Taylor, 2012).

10.10 Zambia performs well on breastfeeding with the DHS indicating that exclusive breastfeeding is widespread in Zambia. Only about 61% of infants below six months are exclusively breastfed, with younger children more likely to be breastfed. Eighty six percent of infants below two months are exclusively breastfed compared to 35% of infants aged from 4 to 5 months (**Figure 10.1**). The results, according to the DHS (Central Statistical Office, 2007) suggest an improved compliance with World Health Organisation/UNICEF recommendations due to the increase exclusive breastfeeding for children under the age of 6 months from 40% in 2001-2 to 2007.

10.11 Regulations regarding breast milk substitutes in Zambia also discourage the use of bottles with nipples to avoid infections resulting from contamination. Only 3% of infants up to five months are fed with a bottle with a nipple. (Central Statistical Office, 2007).

10.12 A critical evaluation of the Zambian nutrition focus by Taylor (2012) however finds significant problems which include:

10.12.1 Despite a relatively low acute malnutrition rate, stunting remains significant at "*one child in two*".

10.12.2 Nutrition policy has historically focused on food production and availability with limited attention to broader nutrition issues.

10.12.3 Despite the passing of the National Food and Nutrition Act of 1967 implementation structures have remained weak.

10.12.4 The National Food and Nutrition Commission (NFNC)[6], formed in 1967 and charged with coordinating implementation of the legislation, had little impact on government policy until the 2000's.

10.12.5 The Fifth National Development Plan (2005-2010) deepened the focus of policy to include:

- Health aspects of nutrition (curative and preventive including growth monitoring and health promotion (GMP);

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[5] "*Average annual rate of reduction of underweight – Underweight prevalence among children under 5 years old is the indicator used to measure progress towards the MDG target to reduce by half the proportion of people who suffer from hunger. Progress is calculated by comparing the average annual rate of reduction (AARR) based on multiple data estimates available for around the period of 1990–2008 with the AARR needed to achieve a 50 per cent reduction over a 25-year period (1990–2015). The rate of change required to achieve the goal is a constant of 2.8 per cent per year for all countries*." (UNICEF, 2009, p.186).

[6] The deliberative part of the Commission is composed of permanent secretaries while the secretariat is falls under the Ministry of Health.

- Antenatal health services;
- Strengthening of the NFNC to enable it to accomplish its mission;
- The establishment of monitoring mechanisms and a research agenda;
- Implementation of training programmes for nutritionists, none of which existed before in Zambia;
- The budgeting of US$7 million over five years, 90% of which was to be donor funded; and
- A National Food and Nutrition Policy and a School Health and Nutrition Policy were passed in 2006.

10.12.6 The plan was however largely donor-driven and did not adequately prioritise nutrition, resulting in proposals (contained within the sixth National Development Plan) to mainstream nutrition into a programme of Food and Nutrition Coordination, moving away from a more health-focused approach to toward food availability, access and utilisation. The focus is on dietary diversification, vulnerable groups, control of diseases (that have an impact on nutrition), and school feeding. Funds were channelled through the ministries of Health (MOH) and Agriculture, Livestock and Fisheries (MAL) using a national development budget falling under the Ministry of Finance (MOF). However, as the changes in approach were largely donor-driven, there was limited impact on the key government role-players and nutrition programming.

10.12.7 In 2011 new moves to address stunting via the Nutrition Strategic Plan (National Food and Nutrition Commission, 2011) outlined in the form of a five-year plan, achievement shortfalls in the past were attributed to: the lack of implementation power; and inadequate funding.

10.12.8 Zambia's maize policy, which favours crop specialisation, limits diet diversification, and results in food distribution problems.[7]

10.12.9 Nutrition governance remains weak due to:

- Insufficient inter-sectoral cooperation: due to a lack of qualified staff; the absence of an effective mandate (for the NFNC) to convene high-level role-players; and insufficient funding for government-based nutrition activities.
- Sectoral silos are split into health and food security. The MOH/NFNC includes only formal but not operational links to the agricultural sector.

[7] The commercial sale of crops reduces stock-piling of grain for the purposes of food protection.

- The health focus is quite different to that of the food security focus of the MAL, which concentrates on food production at the expense of dietary diversity and an orientation toward food availability and use.
- The lack of trained nutritionists generally and within the MOH limits inter-sectoral coordination due to the absence of a common language on nutrition – reducing the opportunities for collaboration and programming.
- Nutrition implementation is achieved mainly through national structures (MOH, MAL, etc.) which is supposed to be coordinated down to community level through the NFNC. As lower level bodies do not exist there is no overall coordination for nutrition implementation.
- Nutrition activities are not implemented at scale apart from micronutrient supplementation and fortification of salt and sugar.
- Although the GMP has been rolled out to all health centres, health centres are not accessible to the whole population.
- Civil society is not sufficiently organised to advocate effectively for adequate nutrition programmes.
- Funding for nutrition has been low and inconsistent over time – despite substantial improvements in fiscal space, due to high rates of economic growth.[8]
- Financing also occurs predominantly on a bilateral basis (between government and donors) and outside formal government programmes. Government is not adequately incentivised to develop the capacity to coordinate for itself.
- The absence of pooled funding for nutrition is responsible for fragmented delivery of projects.
- Additional donor funding is affected by a lack of transparency in the financing of health services. This arises from instances of corruption involving the allocation of funds through government.
- General poverty reduction strategies lack a focus on nutrition, with the nutrition environment characterised by "*small implementing bodies and large bilateral and multilateral donors who are keeping their funding separate from government accounting mechanisms*" (Taylor, 2012, p.17).

10.13 In summary, therefore, the nutrition intervention framework can be characterised as follows:

[8] The dedicated annual nutrition budget fell from US$113,385 in 2010 to US$74,574 in 2011 – "*an amount assessed as inadequate by the donors and government officials interviewed*." (Taylor, 2012, p.11)

10.13.1 The policy area is fragmented, poorly governed and poorly funded.

10.13.2 Funding is not pooled in relation to a generalised cross-cutting strategy.

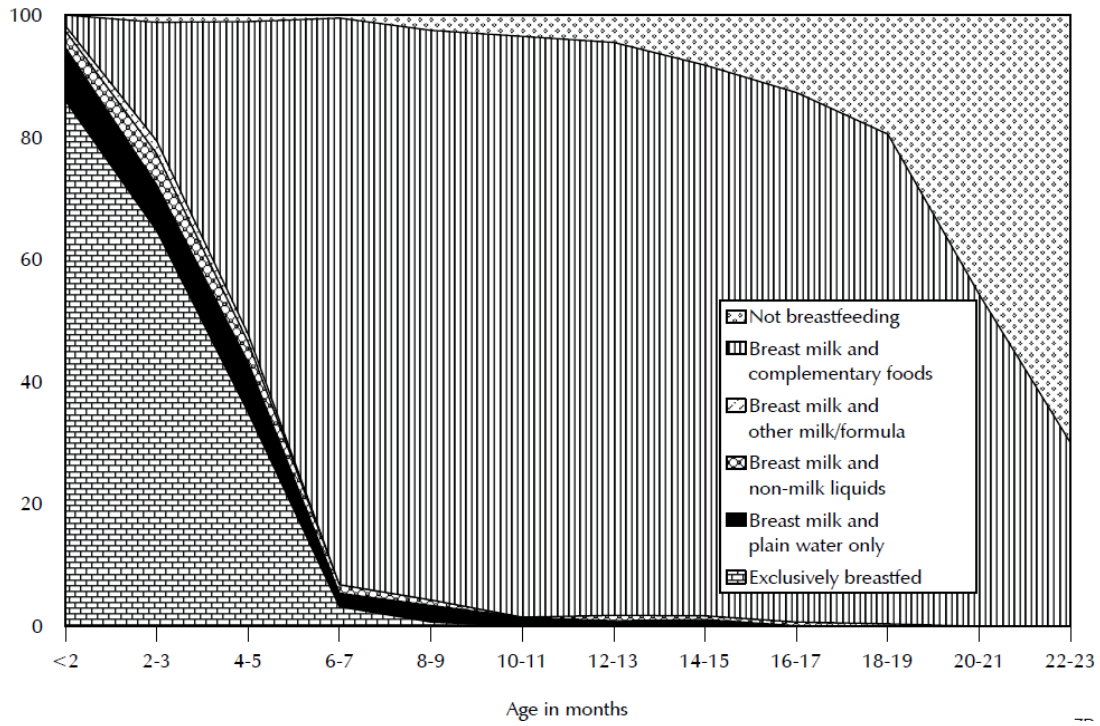
10.13.3 Poverty alleviation lacks a nutrition focus, which threatens to entrench poverty by leaving in place the long-term effects of a failure to address maternal, newborn and infant nutrition needs in the first 1,000 days.

10.13.4 Nutrition policy strategies are not sufficiently prioritised to obtain the institutional organisation and reorganisation required for mainstreaming.

10.13.5 The Ministry of Health lacks sufficient health facilities to drive a complete nutrition strategy on this platform.

10.14 Overall, therefore, nutrition strategies do not form part of an integrated strategy aimed at addressing the critical vulnerabilities associated with pregnancy and maternal and infant needs within the first two years following the delivery.

Figure 10.1: Infant feeding practices by age



Source: Central Statistical Office, DHS, 2009, p.167.

Maternal health

10.15 Outside of health programmes, there is no recognition of maternity as a specific area of programmatic support via either the Public Welfare Assistance Scheme or the Social Cash Transfer Scheme. In both instances the decentralised community-based targeting mechanism takes account of a wide range of vulnerabilities, one of which will undoubtedly include maternal health.

10.16 Therefore households identified as in need of support will benefit, with maternal protection accounted for either directly or indirectly. However, due to the

administrative, targeting, and coverage weaknesses of the general programmes, maternal needs are presently not met in either the urban or rural areas.

Conclusion

10.17 Despite widespread and pervasive poverty within Zambia, no programme of any scale is presently in place. Furthermore, notwithstanding the implementation of pilot projects demonstrating the value of social cash grants, no institutional platform has been developed to expand coverage of the programmes beyond a minute proportion of the population in need.

10.18 Also, although the innovative use of community-based approaches to determine entitlements has been utilised, the long-term sustainability and fairness of the targeting methods have been questioned and may not prove to be an adequate platform for a serious expansion of the social protection, whether in-kind or in the form of cash grants. It is therefore likely that a substantial expansion of existing and new social protection programmes without appropriate institutional investments will lead to corruption and distributional unfairness.

10.19 The present social protection package is not uniformly available to the national population with substantial local discretion exercised in targeting, benefit determination, and benefit continuity (which is subject to fairly arbitrary funding constraints). There is consequently no rights-based framework and no method by which the most disadvantaged can enforce appropriate benefit access and standards. The implementation of a benefit package focused on maternity protection would require a more formal approach to benefit design, funding, and continuity of protection.

10.20 Existing social protection, although (probably) providing some direct and indirect maternity protection, depending upon how the community-based prioritisation works, involves no formal targeting of the vulnerability and leaves many in need without any protection.

10.21 For such a maternity package to be considered in future it is necessary to do more than design a benefit. The absence of any infrastructure or institutional framework for a targeted programme of this nature implies the need for the implementation of a new expanded general social protection scheme off which a maternity package can be delivered.

10.22 Nutrition strategies, although having a strong evidence-based effect on long-term poverty, lack an effective delivery platform in Zambia and are not integrated with other poverty strategies. Funding is fragmented as are the programmes with the area allocated a low policy priority when assessed against governance and funding decisions.

11. HEALTH CARE

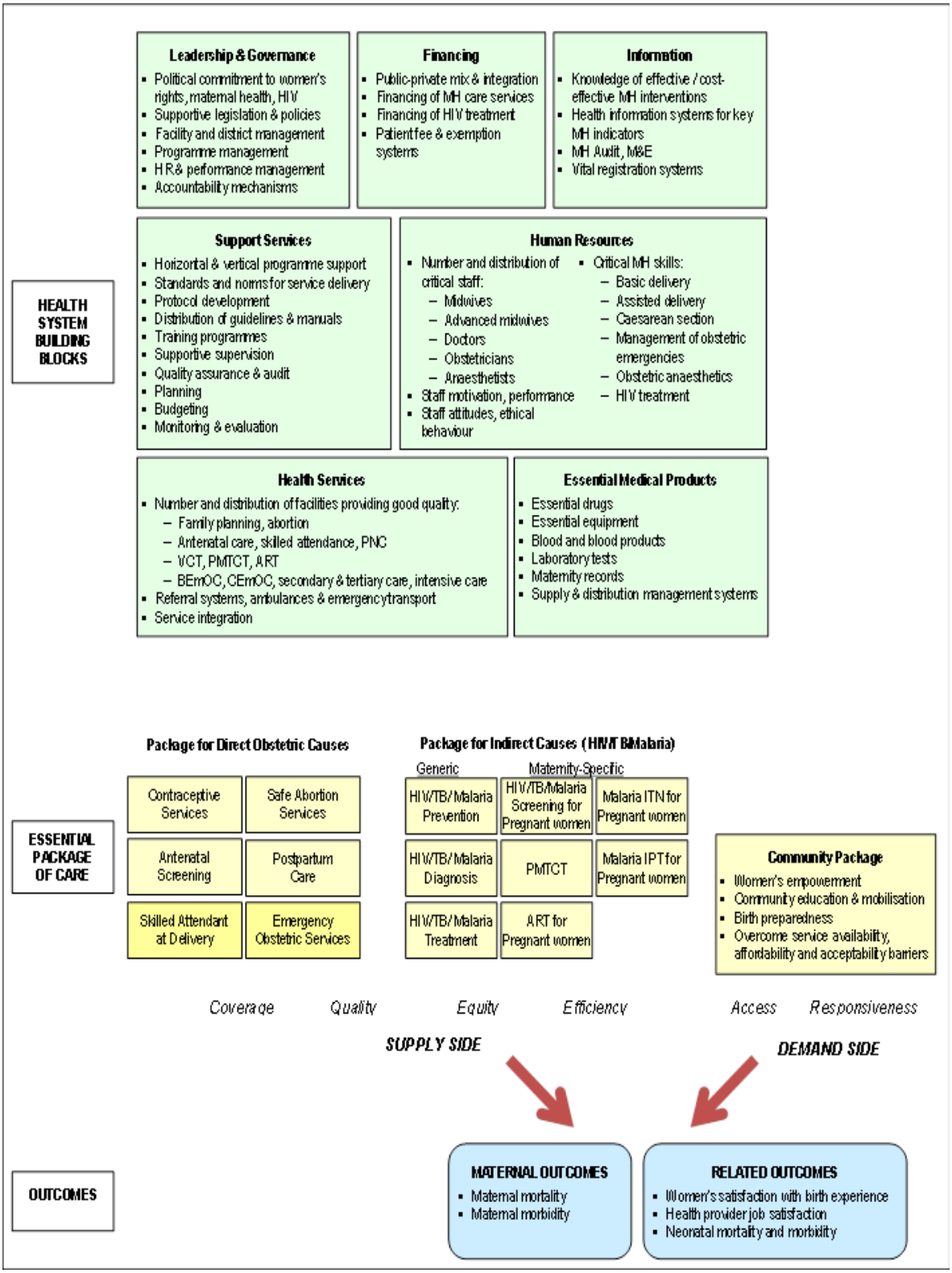
Overview

11.1 This section provides a situation analysis of the current provision of maternal health care services in Zambia, in light of the Strategic Case presented in **Part A**.

11.2 The conceptual approach used in this section is summarised in **Figure 11.1**.

- The essential maternal health package includes access to contraception and safe abortion services, effective antenatal care, institutional delivery by a skilled attendant, emergency obstetric care, and good postpartum care. International efforts have focused on skilled attendance as the most important component for reducing maternal mortality.
- The traditional maternal health package is only effective for direct obstetric causes of death. Countries with a high proportion of indirect maternal deaths due to HIV/AIDS require additional interventions targeting HIV in pregnant women. Countries such as Zambia with high rates of malaria contributing to maternal mortality require additional interventions targeting maternal malaria.
- Many elements of the maternal health care package are delivered through general health care facilities rather than as standalone vertical programmes. As such, it is difficult to evaluate maternal health service performance without considering the health system constraints that influence general health service delivery. Key health system components required to improve maternal health include human resources, essential drugs and equipment, programmatic support, financing, information and management.
- Improving maternal health requires not only the supply of good maternal health care by the health system but that women make use of the services provided. Ultimately, it is the match between supply and demand that determines maternal health outcomes, so interventions also need to target the barriers to community access and uptake.

Figure 11.1: Key maternal health components

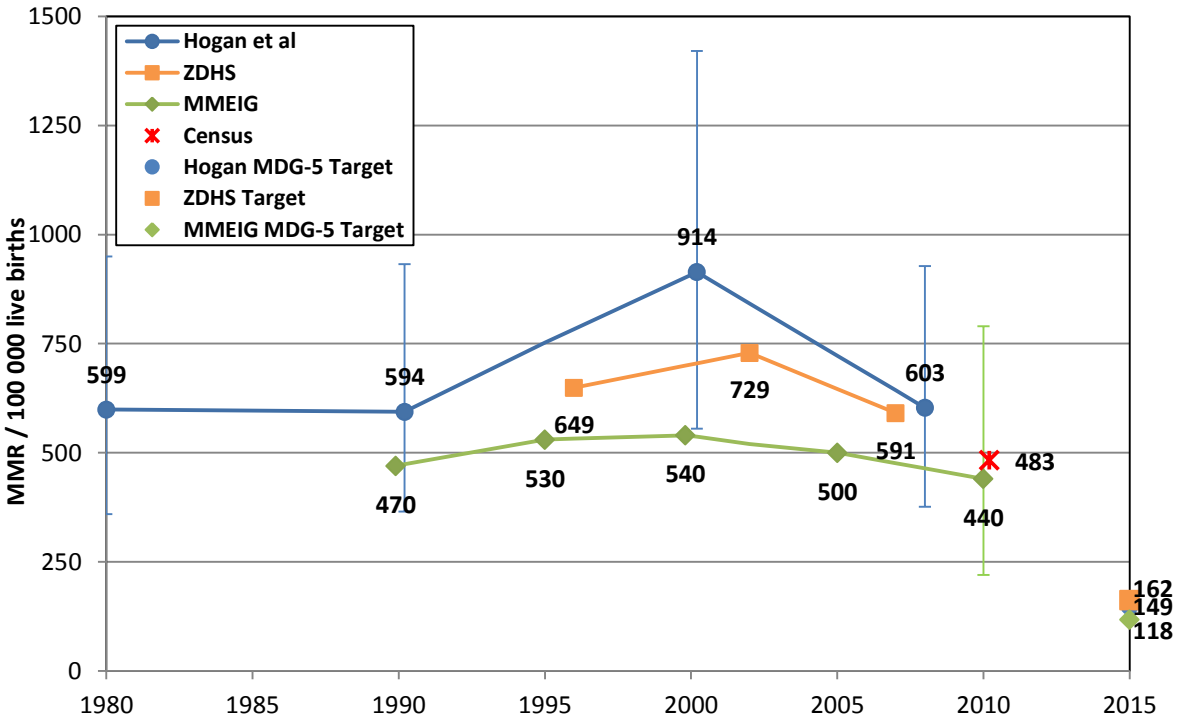


Source: Blaauw and Penn-Kekana, 2010.

Maternal Health Outcomes

11.3 The key indicator for MDG-5 is the maternal mortality ratio (MMR). The MMR is defined as the number of women dying in a year while pregnant or within 42 days of the termination of pregnancy, from causes related to or aggravated by the pregnancy, per 100 000 live births in the same year. The agreed target for MDG-5 is to decrease the MMR by 75% by 2015 from the levels in 1990.

Figure 11.2: Recent Maternal Mortality Ratio (MMR) estimates for Zambia



Drawn from: Central Statistical Office *et al*, 2009; Hogan *et al*, 2010; Central Statistical Office, 2012; Maternal mortality estimation inter-agency group, 2012.

11.4 The MMR is difficult to measure accurately (Graham *et al*, 2008). Different methods produce different results which can create confusion between different reports. The different figures also produce different targets for MDG-5. **Figure 11.2** summarises different recent MMR estimates, and the related MDG-5 goals, for Zambia.

11.5 The DHS surveys estimate the MMR using indirect methods and for babies born in the 5 years prior to the survey. These are the most frequently quoted estimates within Zambia, presumably because they derive from locally-collected data. The most recent DHS results available are from the 2007 DHS which calculated an MMR of 591 deaths per 100 000 births. The estimates from the 1996 and 2001/2002 DHS surveys were 649 / 100 000 and 729 / 100 000 respectively suggesting first an increase and then a decrease in MMR over the last two decades. Using the MMR of 649 from the 1996 DHS as reflecting levels in 1990, local officials have settled on a target of 162 / 100 000 for MDG-5 for Zambia. Although DHS data indicates that the MMR is falling, the rate of decline is insufficient to meet the MDG target by 2015 (UNDP, 2013).

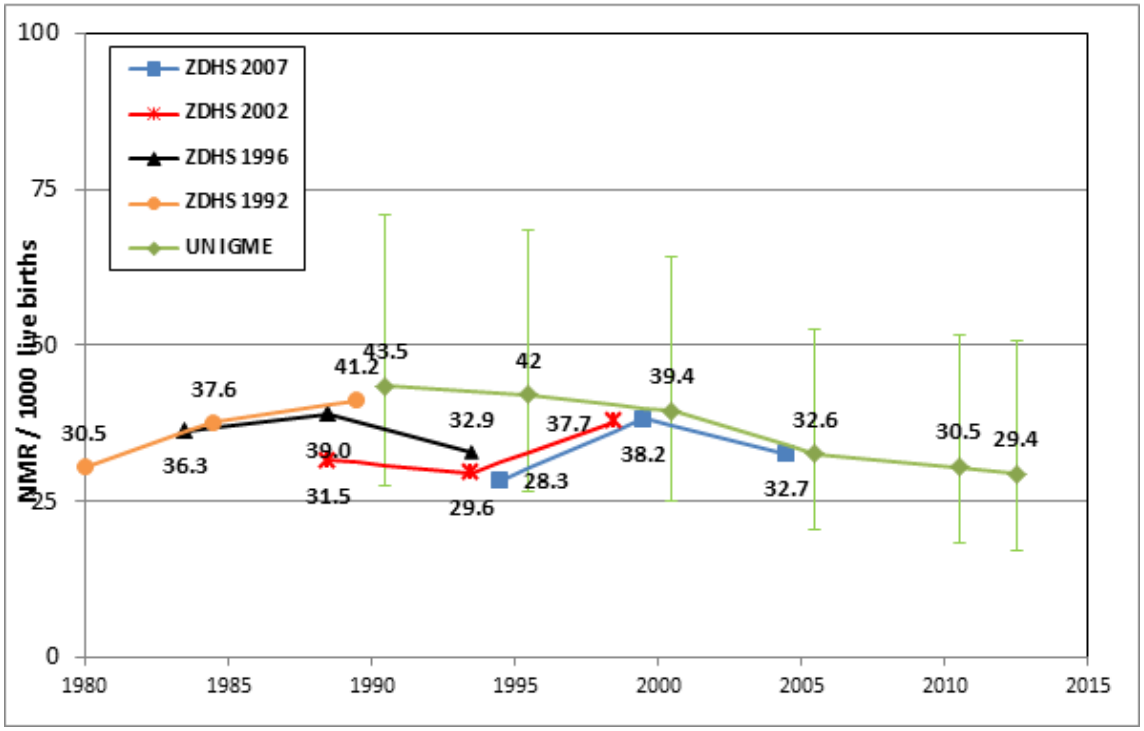
11.6 Since 1990, the World Health Organization (WHO), World Bank, United Nations Population Fund (UNFPA) and the United Nation Children's Fund (UNICEF) have produced global and national MMR estimates every 5 years. The maternal mortality estimation group (MMEIG) uses different methods for different countries depending on the availability of local data. For Zambia, as with many other countries without complete death registration systems, the estimates are based on a multi-level regression model with GPD per capita, the general fertility rate (GFR), and the proportion of births delivered by a skilled attendant as predictors (Maternal mortality estimation inter-agency group, 2012). The most-recent MMEIG calculations are from 2010 which produced a figure of 440 / 100 000 for Zambia. The MMEIG estimates are lower than those from the DHS but suggest a similar increasing and then decreasing trend since 1990 (Figure 11.). The MDG-5 goal based on the MMEIG figure for 1990 would be an MMR of 118 / 100 000 in 2015.

11.7 Hogan et al (2010) have recently used a different statistical method to calculate new MMR estimates for 181 countries for the period from 1980 to 2008. The figures reported for Zambia are also shown in Figure 11.. These MMRs are higher than the most recent MMEIG analyses for Zambia but follow the same trend. The figure of 603 / 100 000 for 2008 is similar to that from the 2007 DHS.

11.8 Lastly, the Zambian Census in 2010 included, for the first time, a question on pregnancy-related deaths which produced an MMR estimate of 483 / 100 000 for 2010 (Central Statistical Office, 2012).

11.9 A similar analysis for the Neonatal Mortality Rate (NMR) is shown in **Figure 11.3**. The NMR refers to deaths in babies in the first 28 days of life and is strongly influenced by the quality of antenatal, intrapartum and neonatal health care services. The Perinatal Mortality Rate (PNMR) may be more closely correlated with maternal health care services but is a more difficult indicator to measure accurately because it requires information on stillbirths as well as live births. Analyses from DHS data suggest little change in NMR since 1980 with most estimates between 30 and 40 per 1000 live births. However, analyses by the UN inter-agency group for child mortality estimation (IGME) indicate a slight downward trend in NMR from 1990 to 2012 (UN inter-agency group for child mortality estimation, 2013).

Figure 11.3: Recent Neonatal Mortality Rate (NMR) estimates for Zambia



Drawn from: Central Statistical Office et al, 2009; UN inter-agency group for child mortality estimation, 2013.

Causes of Maternal Deaths

11.10 An understanding of the main causes of maternal death is important in developing appropriate public health interventions. Four main groups of causes of maternal death can be differentiated:

- direct obstetric causes, such as obstetric haemorrhage or pregnancy-induced hypertension;
- pre-existing medical causes, such as cardiac disease, aggravated by pregnancy (termed indirect causes);
- HIV infection; and
- incidental causes, such as road traffic accidents, unrelated to pregnancy.

11.11 Unfortunately there are few recent publications on the causes of maternal deaths in Zambia, and none for the country as a whole. Most of the existing reports describe maternal deaths at University Teaching Hospital (UTH) in Lusaka (Hickey and Kasonde, 1977; Mhango *et al*, 1986; Ahmed *et al*, 1999; Phiri, 1999).

11.12 For example, Phiri (1999) analysed the 107 maternal deaths that occurred at UTH in 1996, equivalent to an institutional MMR of 871 per 100 000 live births. 59% of all maternal deaths were due to indirect causes while direct causes made up the remaining 41%. The most important causes of direct obstetric deaths were haemorrhage (36% of direct causes) and pre-eclampsia or eclampsia (23% of direct causes). The overwhelming majority of indirect deaths were attributed to malaria (51%). Respiratory tract infection and TB accounted for 27% of indirect causes.

11.13 One of the largest case series is that of Ahmed *et al* (1999) who investigated the 251 maternal deaths recorded at UTH during 1996 and 1997. The institutional MMR for UTH was calculated at 921 per 100 000 live births, a significant increase from previous studies. They found that 42% of cases were due to direct obstetric causes and 58% were due to indirect causes. Malaria (30%), tuberculosis (25%) and unspecified chronic respiratory tract infections (22%), probably HIV-related, together accounted for 77% of non-obstetric causes of maternal deaths and 44% of all causes of maternal deaths.

11.14 Because of the timing and scale of these studies there is very little published information on the impact of HIV/AIDs on maternal mortality in Zambia, either in the pre-antiretroviral era or in the period when HIV treatment became more widespread.

Coverage of Key Maternal Health Interventions

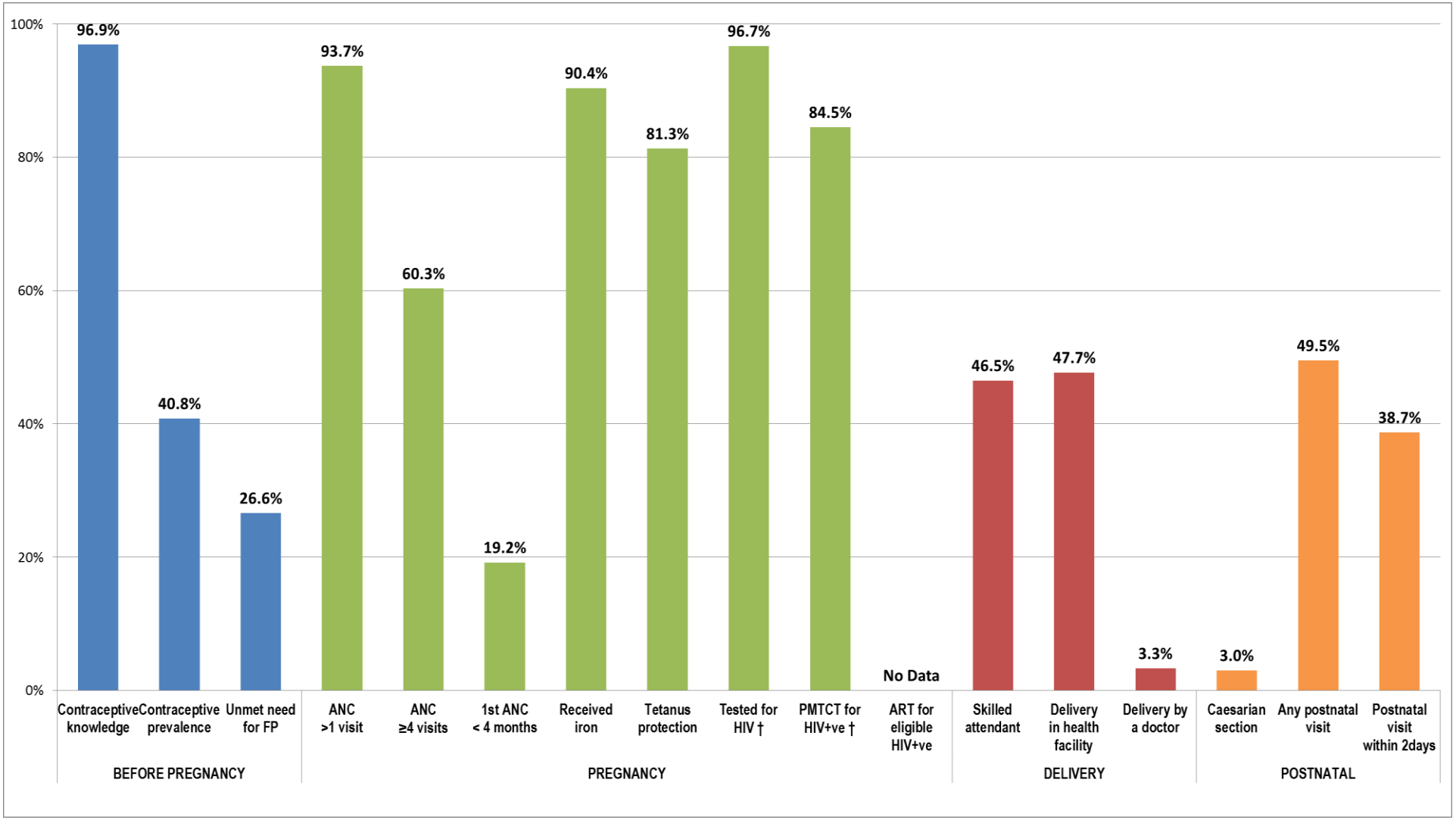
11.15 More proximal process indicators are used to measure access and coverage for key aspects of the maternal health package in order to identify and address critical gaps in health service delivery.

11.16 An important strategy to decrease maternal mortality is to increase the proportion of deliveries in health facilities by skilled health professionals and this has become an important area of policy focus for maternal health in low- and middle-income countries (LMICs). The proportion of births delivered by a skilled birth attendant is the second indicator used to monitor progress for MDG-5 (United Nations, 2003).

11.17 Available data on the access of women in Zambia to key components along the continuum of maternal health care is summarised in **Figure 11.4**. These indicators require population-level data so are typically calculated from DHS surveys. The most recent DHS data in Zambia is from 2007.

11.18 **Figure 11.4** indicates a number of important gaps in access to key package components. Knowledge about family planning is high but only 40.8% of married women in the reproductive age group are using any method of family planning and the unmet need for family planning is estimated at 26.6%.

Figure 11.4: Coverage of key components along the continuum of maternal health care (2007)



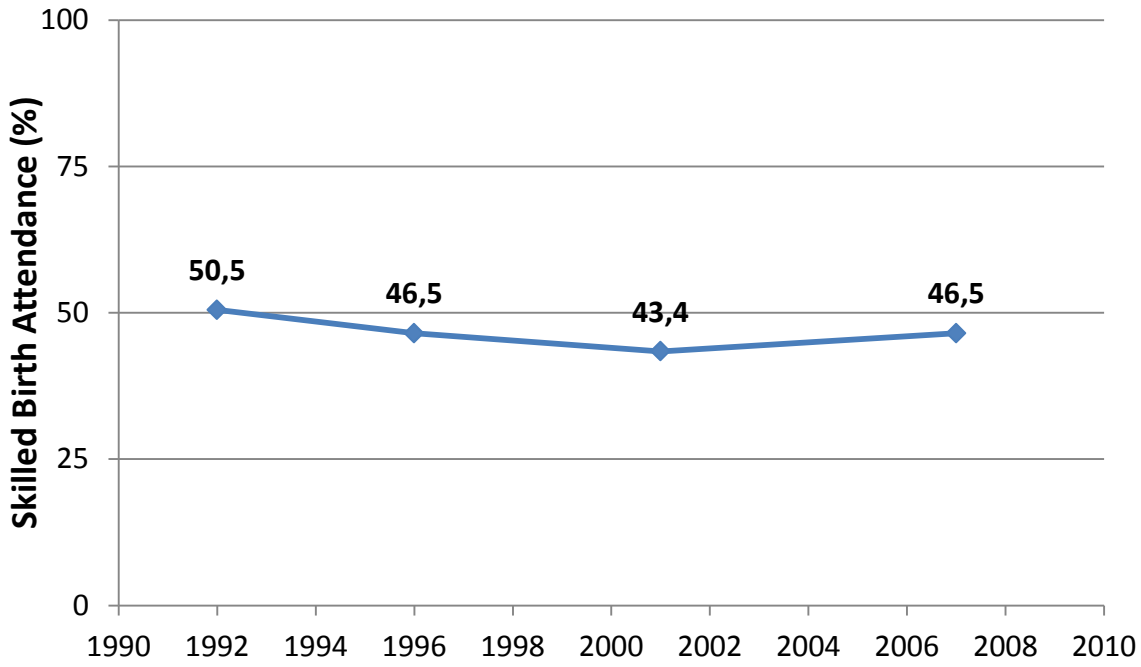
Drawn from: Zambian DHS (ZDHS) 2007 (Central Statistical Office et al, 2009) and from †(National Aids Council, 2012).

11.19 During pregnancy there is almost universal access to at least one antenatal care (ANC) visit and 60.3% of women attend more than 4 ANC visits. However, the mothers tend to start ANC late with only 19.2% attending for their first visit in the first 16 weeks as recommended. The quality of care they receive during ANC appears adequate as least in terms of the coverage of key ANC interventions such as the provision of iron supplementation and protection against tetanus.

11.20 Although only 39.5% of women surveyed in the 2007 ZDHS reported having an HIV test during pregnancy. The more recent UNGASS HIV country report for 2011 calculates that 96.7% of women who attended ANC received testing and 84.5% of HIV-positive women received prophylaxis to prevent mother to child transmission (National Aids Council, 2012). Although there is no data available only on pregnant women the UNGASS report estimates that 90.0% of adults with advanced HIV in need of antiretroviral therapy (ART) received it in 2011.

11.21 Access to delivery care is sub-optimal, less than half of the women deliver in a health facility and the skilled attendance rate is only 46.5%. Further cause for concern is that this figure has remained relatively unchanged over the last two decades despite significant government attention (**Figure 11.5**).

Figure 11.5: Trend in the skilled birth attendance rate (1992-2007)



Drawn from: Zambian DHS (ZDHS) 2007 (Central Statistical Office *et al*, 2009)

11.22 Only 3% of women in the 2007 ZDHS survey were delivered by a doctor indicating that maternity services are predominantly nurse-based. However, the population caesarean section rate of 3% is below the recommend range of 5-15% (World Health Organization *et al*, 2009) which would suggest inadequate access to emergency obstetric care (EmOC).

11.23 Postnatal care has also received significant attention in recent years and figures have increased from a low base. By 2007 half of pregnant women had a postnatal visit and 38.7% were seen within 2 days which is the period of high risk for postnatal complications and maternal mortality.

11.24 Access to abortion services in Zambia is relatively liberal compared to other countries in the region. The Termination of Pregnancy Act of 1972 permits abortion for the following reasons:

- risk to the life of the pregnant woman;
- risk of injury to the physical or mental health of the pregnant woman;
- risk of injury to the physical or mental health of any existing children of the pregnant woman;
- risk of physical or mental abnormalities to the unborn child; and
- the Act was extended to include rape in 2005.

11.25 There is no published data on the national access to legal abortion services. Also, as indicated above, the contribution of unsafe abortion to maternal mortality is unclear. However, there a number of reports suggesting that only a small proportion of women in need are able to access safe abortion and that significant numbers of women with complications from unsafe abortion continue to report to referral hospitals each year (Castle *et al*, 1990; Bradley *et al*, 1991; Dahlback *et al*, 2010; Geary *et al*, 2012).

Equity of Maternal Health

11.26 Indicators, such as those presented in the previous sections, are national averages that may hide significant disparities between groups within the country.

11.27 There is little information on inequities in maternal health outcomes. Because of the difficulties of MMR measurement, population surveys such as the DHS are not large enough to allow sufficiently precise comparisons between sub-groups. Estimates from the national census are based on much larger numbers and can help to address this problem. The MMR estimates from the 2010 Zambian Census for different groups are shown in **Table 11.1**.

11.28 Unfortunately an analysis by socio-economic status is not provided but there is evidence of disparities between areas and between provinces. The MMR for rural areas was 517 per 100 000 live births compared to 428 in urban areas. The MMRs estimated for provinces in 2010 varied between a low of 330 per 100 000 live births in Muchinga and a high of 786 per 100 000 in Western Province.

Table 11.1: Distribution of maternal mortality

		MMR (per 100,000 live births)
Zambia		483
Area	Urban	428
	Rural	517
Province	Central	500
	Copperbelt	474
	Eastern	442
	Luapula	573
	Lusaka	357
	Muchinga	330
	Northern	475
	North-Western	423
	Southern	343
	Western	786

Source: Central Statistical Office, 2012.

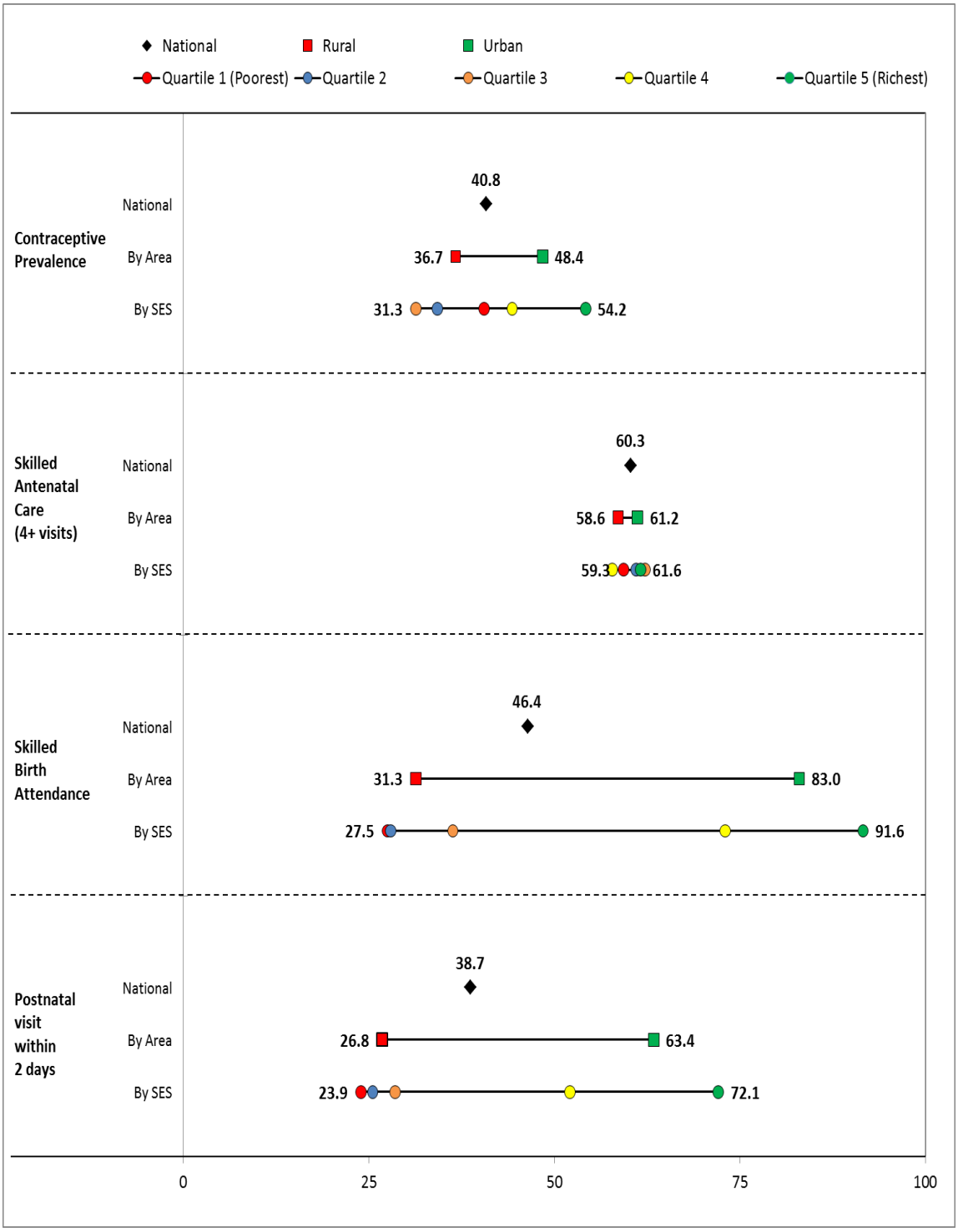
11.29 In the absence of reliable MMR data, **Figure 11.6** presents an analysis from the 2007 ZDHS comparing coverage for four key indicators between women from rural and urban areas and from different socio-economic quintiles.

11.30 **Figure 11.6** shows significant disparities in access between rural and urban areas and between wealth quintiles for family planning, skilled attendance and postnatal care. The range in ANC coverage, even using the more demanding indicator of at least four ANC visits, is relatively narrow.

11.31 Contraceptive prevalence is low even in urban areas and the richest quintile but only a third of rural women and of poor women were using family planning in 2007.

11.32 The inequity in access to skilled attendants for delivery an unacceptably wide. 83% of urban mothers and 91.6% of those in the richest quintile are delivered by a skilled attendant but this is true of only 31.3% of women in rural areas and 27.5% of the poorest women.

Figure 11.6: Equity of access to key maternal health care components (2007)



Drawn from: Zambian DHS (ZDHS) 2007 (Central Statistical Office *et al*, 2009).

Health Service Platform for Maternal and Child Health

11.33 The strategic case in **Part B** sets out the rationale for a package of health services for maternity protection which includes antenatal care, deliveries, emergency obstetric care, postnatal care, nutrition counselling and support, and recommends that the package of health services be delivered by the public health platform. The capacity and coverage of the public health platform in Zambia is evaluated in this section.

11.34 Maternal health services are mostly provided through general health services which require the availability of health facilities, human resources, essential drugs and equipment, financing, information and governance.

Health Facilities

11.35 The most recent data on the availability of general health facilities in Zambia is shown in **Table 11.2**. There are a total of 1,956 health facilities, the majority of which are rural health centres. The total number of beds available is 25,806 for adults and 3,446 for children. 81.3% of health facilities are run by the Ministry of Health (MOH) with a small number of mission and private facilities, mainly in urban areas.

Table 11.2: Health facilities in Zambia

Type	No	%
Third level hospital (TLH)	6	0.3%
Second level hospital (SLH)	19	1.0%
First level hospital (FLH)	84	4.3%
Urban health centre (UHC)	409	20.9%
Rural health centre (RHC)	1 131	57.8%
Health post (HP)	307	15.7%
Total	**1 956**	**100%**

Ownership	No	%
Government	1 590	81.3%
Mission	116	5.9%
Private	250	12.8%
Total	**1 956**	**100%**

Beds	25 806
Cots	3 446

Source: Ministry of Health, 2013a.

11.36 All of the facilities listed in **Table 11.2** should be able to provide basic primary care services, including family planning, antenatal care, nutritional counselling and support.

11.37 **Table 11.3** shows the proportion of health facilities in each province, according to the latest MOH audit, that offer selected maternal health care services Ministry of Health 2013a). Seventy eight percent can do deliveries and 83% offer PMTCT but only 24% can provide at least basic emergency obstetric care (BEmOC). Maternity waiting homes are available at 17% of all health facilities, mostly in rural areas.

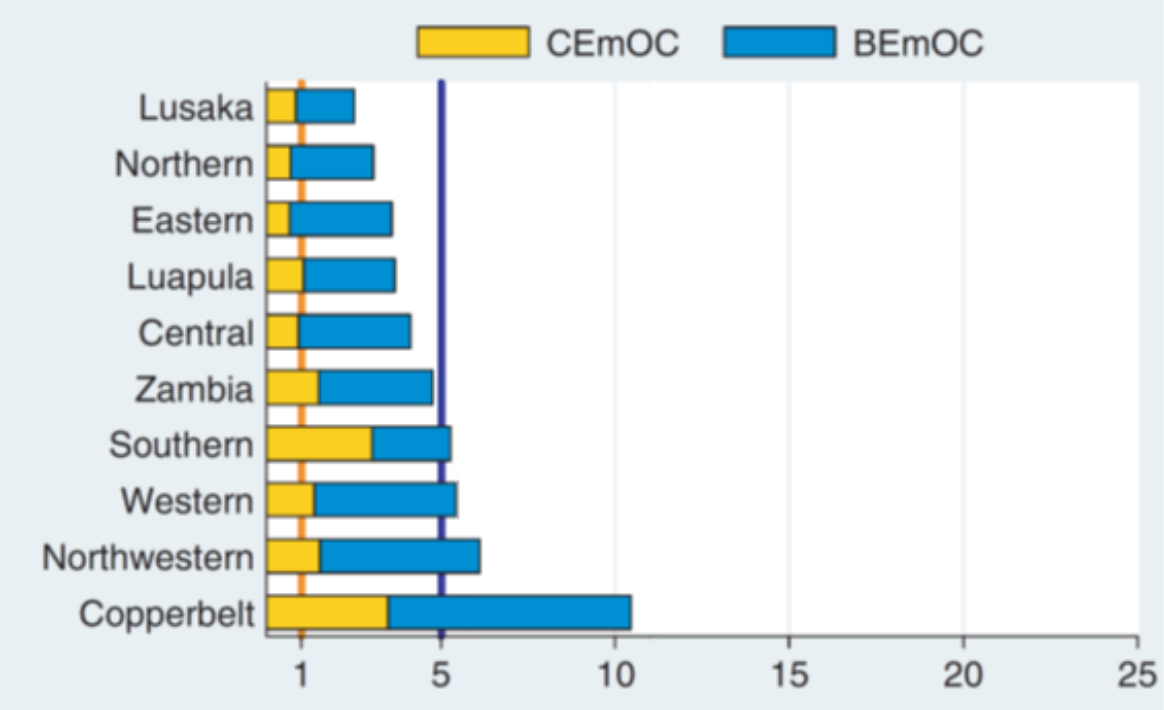
Table 11.3: Proportion of health facilities offering maternal services

	HIV Counselling & Testing	PMTCT	Delivery	EmOC	Mother Waiting Shelter	Theatre
Central	93%	87%	78%	36%	15%	6%
Copperbelt	94%	81%	63%	17%	5%	10%
Eastern	96%	97%	82%	32%	15%	5%
Luapula	96%	95%	92%	44%	5%	4%
Lusaka	74%	65%	46%	10%	11%	2%
Muchinga	67%	79%	86%	18%	25%	6%
Northern	87%	75%	90%	10%	9%	4%
North-Western	49%	67%	69%	22%	15%	11%
Southern	99%	93%	82%	30%	22%	7%
Western	93%	94%	89%	21%	48%	6%
Zambia	**85%**	**83%**	**78%**	**24%**	**17%**	**6%**
Total number	**1 663**	**1 623**	**1 526**	**469**	**333**	**117**

Source: Ministry of Health, 2013a.

11.38 As shown in **Figure 11.7**, the availability of EmOC facilities for the whole country almost meets the UN benchmark of 5 BEmOC facilities per 500 000 population and is above the required 1 CEmOC per 500 000 population (Gabrysch, Simushi, *et al*, 2011). However, the density of BEmOC facilities is below the minimum norm in 5 of the 10 provinces.

Figure 11.7: Density of EmOC facilities in Zambia by province



Blue line: UN BEmOC benchmark, Yellow line: UN CEmOC benchmark

Source: Gabrysch, Zanger, *et al*, 2011

11.39 Gabrysch *et al* (2011) also calculated that although 86% of the population live within 15km of a delivery facility, only 48% are within 15km of an EmOC facility. For urban areas the figure was over 70% but in rural areas less than 25% of pregnant women are within 15km of an EmOC facility,

Human Resources

11.40 The most recent data on health workers in Zambia is from 2010 (Ministry of Health, 2013b) as shown in **Table 11.4**. In 2010, there were 16,256 health care workers (HCW) working in public facilities, an increase of 4,085 (33.5%) of the number available in 2005.

11.41 However, in terms of the minimum required staff establishment it was estimated that an additional 23,104 health care workers were required across all categories, a gap of 58.7%. Only for administration staff was there a surplus of personnel.

Table 11.4: Availability of public sector health workers in Zambia (2005 and 2010)

Staff Category	2005	2010					
	Actual	Actual	Establishment	Change since 2009	Gap	Filled (%)	Gap (%)
Clinical Officers	1161	1535	4000	374	2465	38.4%	61.6%
Dental Surgeons	56	257	633	201	376	40.6%	59.4%
Doctors	646	911	2300	265	1389	39.6%	60.4%
Nutritionists	65	139	200	74	61	69.5%	30.5%
Lab Scientists	417	639	1560	222	921	41.0%	59.0%
Pharmacist	108	371	347	263	-24	106.9%	-6.9%
Physiotherapists	86	239	300	153	61	79.7%	20.3%
Radiographers	142	259	233	117	-26	111.2%	-11.2%
Midwives	2273	2671	5600	398	2929	47.7%	52.3%
Nurses	6096	7669	16732	1573	9063	45.8%	54.2%
Environment Health	803	1203	1640	400	437	73.4%	26.6%
Oral Health	320	363	5815	43	5452	6.2%	93.8%
Total HCW	**12173**	**16256**	**39360**	**4083**	**23104**	**41.3%**	**58.7%**
Administration	11003	14457	12054	3454	-2403	119.9%	-19.9%
Overall Total	**23176**	**30713**	**51414**	**7537**	**20701**	**59.7%**	**40.3%**

Source: Ministry of Health, 2013b.

11.42 Midwives, nurses, clinical officers and doctors are the most important categories for the delivery of maternal care. For all these health workers, less than half of the required staff establishment are currently in post.

Health Finances

11.43 National health account (NHA) analyses were conducted for Zambia for 1998, 2000-2004, and 2003-2006 (Ministry of Health, 2009). **Table 11.5** shows the results of these audits together with more recent analyses by WHO (WHO, 2014).

11.44 The main sources of health care financing in Zambia are government budget appropriations, earmarked donor funding through the National Treasury, health sector basket funding under the sector wide approach (SWAP), donor support to specific health projects, and household health expenditures(Ministry of Health, 2013b). Total health expenditure (THE) was 5.9% of GDP in 2011 of which the government contributed 61.9%. Total per capita health expenditure was 96 US$ adjusted for purchasing power parity (PPP).

11.45 In 2011, total health expenditure was just under 6% of GDP. Total government expenditure on health was ZMK3.4 trillion (US$683 million), 16.0% of the total government budget, amounting to an annual per capita expenditure of US$60.0 (PPP).

11.46 Despite recent increases in total and government health expenditure, current available resources are still inadequate for the delivery of an essential package of care (Ministry of Health, 2010; Ministry of Health, 2013b).

11.47 User fees for services in rural and peri-urban areas were removed in 2006 but household expenditure remains a significant proportion of THE. The contribution of private health insurance remains small. The MOH is also working on the establishment of a new social health insurance (SHI) fund (Ministry of Health, 2013b).

11.48 Because maternal health care services are provided by general health facilities it is difficult to separate maternal health care expenditure. A recent budgeting exercise calculated that US$69.9 million (ZMK349.7 billion / ZMW349.7 million) was spent on maternal and neonatal health in 2012, amounting to an annual per capita expenditure of US$6.47 (Ministry of Community Development Mother and Child Health and Ministry of Health, 2013).

Governance and Leadership

11.49 Within government, responsibility for maternal health care services is shared between the Ministry of Health (MOH) and the Ministry of Community Development, Mother and Child Health (MCDMCH). Maternal and child health were only included in the MCDMCH mandate in 2011 so governance arrangements between the two departments for maternal services are still in evolution (Ministry of Community Development Mother and Child Health, 2012).

Table 11.5: National Health Accounts for Zambia (1995-2011)

Health Financing Indicator		1995	2000	2005	2010	2011
Macro-Economic *(Million ZMK)*	Gross domestic product (GDP)	3 005 100	10 121 292	32 041 510	77 666 590	93 344 404
	General government expenditure (GGE)	743 200	3 122 295	8 349 000	17 634 000	21 368 000
Health Expenditures *(Million ZMK)*	Total expenditure on health	168 310	571 223	2 242 883	4 692 373	5 515 331
	General government expenditure on health	102 030	292 842	1 230 410	2 818 648	3 415 497
	Ministry of Health	56 029	242 848	800 469	1 522 787	1 546 484
	Social security funds	0	0	0	0	0
	Private expenditure on health	66 280	278 381	1 012 473	1 873 725	2 099 834
	Private health insurance	601	2 434	21 445	68 306	75 921
	NGOs serving households	4 113	12 053	267 924	360 926	401 162
	Out of pocket expenditure	58 827	223 777	614 447	1 253 897	1 393 681
Health Expenditure Ratios	Total expenditure on health (THE) as % of GDP	5.6	5.6	7.0	6.0	5.9
	External resources on health as % of THE	11.5	17.8	42.5	43.1	28.2
	Health share of domestically funded government expenditure	8.8	5.0	5.5		
	General government expenditure on health (GGHE) as % of THE	60.6	51.3	54.9	60.1	61.9
	Private expenditure on health (PvtHE) as % of THE	39.4	48.7	45.1	39.9	38.1
	GGHE as % of General government expenditure	13.7	9.4	14.7	16.0	16.0
	Social security funds as % of GGHE	0	0	0	0	0
	Private insurance as % of PvtHE	0.9	0.9	2.1	3.6	3.6
	Out of pocket expenditure as % of PvtHE	88.8	80.4	60.7	66.9	66.4
Per Capita Health Expenditure *(US$ PPP)*	Total expenditure on health / capita	47	51	81	93	96
	General government expenditure on health / capita	28	26	44	56	60

Source: WHO, 2014.

11.50 A number of development partners are active in the health contributing significant resources and expertise to the governance of the health sector.

11.51 There is currently no clear legislation guiding the health sector in Zambia. The previous National Health Services Act of 1995 was repealed in 2006 but has not yet been replaced.

Current Government Priorities and Strategies

11.52 Both the MOH and the MCDMCH have five year strategic plans outlining their proposed priorities, strategies, activities and performance targets (Ministry of Health, 2010); Ministry of Community Development Mother and Child Health, 2012; Ministry of Health, 2013b). Because improving maternal health outcomes is an important priority for both Ministries, it features prominently in these general strategic plans.

11.53 A more specific and more detailed outline of the Government of Zambia's priorities and strategies in relation to maternal health is provided in the recent Roadmap for Maternal, Newborn and Child Health (MNCH) (Ministry of Community Development Mother and Child Health and Ministry of Health, 2013). With regard to the underlying health system platform there are also specific government plans for human resources for health (HRH)(Ministry of Health, 2011) and governance (Ministry of Health, 2012).

Ministry of Health National Health Strategic Plan

11.54 The current national health strategic plan (NHSP) of the MOH covers the period from 2011-2015 (Ministry of Health, 2010). Maternal, neonatal and child health are identified as a public health priority, as are improvements to the broader health support system (**Table 11.6**).

Table 11.6: National Health Strategic Plan (2011-2015) principles and priorities

Key Principles	Public Health Priorities	Health (Support) System Priorities
▪ Primary health care (PHC) approach ▪ Equity of access ▪ Affordability ▪ Cost-effectiveness ▪ Transparency & accountability ▪ Decentralisation ▪ Partnerships ▪ Gender sensitivity ▪ Leadership ▪ Quality health care	▪ Primary health care services ▪ Maternal, neonatal and child health ▪ Communicable diseases, especially malaria, HIV and AIDS, STIs and TB ▪ Non-Communicable Diseases (NCDs) ▪ Epidemics control and public health surveillance ▪ Environmental health and food safety ▪ Health service referral systems ▪ Health promotion and education	▪ Human Resources for Health ▪ Essential drugs and medical supplies ▪ Infrastructure and Equipment ▪ Health information ▪ Health care financing ▪ Health Systems Governance

Source: Ministry of Health, 2010.

11.55 The NHSP includes a number of targets relevant to maternal, neonatal and child health. **Table 11.7** compares the NHSP maternal health targets with those in the MCDMCH plan and the integrated Roadmap.

Table 11.7: MNCH targets in recent government strategic plans

	MOH NHSP (2011-2015)	MCDMCH Strategic Plan (2013-2016)	Roadmap for MNCH (2013-2016)
Outcomes	▪ Reduce the MMR from 591 deaths / 100 000 live births to 159 deaths / 100 000 live births by 2015	▪ Reduce the MMR reduced from 591 / 100 000 live births to 162 / 100 000 live births by 2016	▪ Reduce the MMR reduced from 591 / 100 000 live births to 159 / 100 000 live births by 2016
		▪ Reduce the NMR from 34 / 1000 live births to 20 / 1000 live births by 2016	▪ Reduce the NMR from 34 / 1000 live births to 20 / 1000 live births by 2016
	▪ Reduce the U5MR from 119 deaths / 1000 live births to 63 deaths / 1000 live births by 2015	▪ Reduce the U5MR from 119 / 1000 live births to 62 / 1000 live births by 2016	▪ Reduce the U5MR from 119 / 1000 live births to 63 / 1000 live births by 2016
Pre-pregnancy & Adolescence		▪ Reduce the unmet need for contraception for women in reproductive age groups from 27% to 14% by 2016	▪ Reduce unmet need for contraception for married women from 26.5% to 14% by 2015
			▪ Increase the modern contraceptive prevalence rate in reproductive aged women from 24.6% to 50% by 2015
			▪ Reduce the proportion of teenage pregnancy and motherhood from 27.9% to 18% by 2015
			▪ Reduce problems with access to health services for women (of reproductive age) from 73.5% to 42% by 2015
Pregnancy		▪ Increase the percentage of women accessing ANC services in the first trimester from 19% to 80% by 2016	▪ Increase the percentage of women accessing the first ANC visit within the first trimester from19.2% to 58% by 2015
			▪ Increase the % of women accessing 4 or more visits to Focused Antenatal Care (FANC) from 60.3% to 80% by 2015
			▪ Increase the coverage of pregnant women taking 2 or more doses of IPT from 70.2% to 80% by 2015
			▪ Increase the percentage of eligible HIV+ pregnant and postnatal women accessing ARVs from 60.5% to 95% by 2015
	▪ Increase the coverage of PMTCT from67% to 87% by 2015	▪ Increase the coverage of PMTCT services from 58% to 80% by 2016	▪ Increase coverage with PMTCT services from 80% to 95% by 2015
			▪ Increase the percentage of pregnant women who are informed of signs of pregnancy complications from 73.3% to 95% by 2015
			▪ Increase the proportion of pregnant women sleeping under ITNs from 47.7% to 80% by 2015
Delivery	▪ Increase the percentage of deliveries assisted by skilled health personnel from 45% to 65% by 2015	▪ Increase institutional deliveries from 47% to 80% by 2016	▪ Increase the proportion of institutional deliveries (47.7%) and by skilled attendants (46.5%) to 70% by 2015
			▪ Increase the coverage with EmOC facilities to all districts (from 68% to 100%) by 2015
			▪ Increase coverage with appropriate uterotonics to prevent haemorrhage countrywide from 20% - 80% of births by 2015
Post-natal			▪ Increase postnatal attendance with skilled care (within 2 days) from 38.7% to 55% by 2015

Source: Ministry of Health, 2010; Ministry of Community Development Mother and Child Health, 2012; Ministry of Community Development Mother and Child Health and Ministry of Health, 2013).

11.56 The NHSP also includes some targets for improving the underlying service delivery platform relevant to maternal health as shown in **Table 11.8**. The priority is clearly to increase the number of health facilities and finding the health workers to staff them.

Table 11.8: NHSP health system targets

Targets
▪ Increase the proportion of rural households living within 5km of the nearest health facility from 54.0 percent in 2004 to 70.0 percent by 2015
▪ Increase the number of CHWs/TBAs implementing a defined community health care package from 50% to 63% by 2015
▪ Increase the percentage of health centres with two or more professional health staff
▪ Reduce the population/Doctor ratio from the current 17,589 to 10,000 by 2015
▪ Reduce the population/Nurse ratio from the current 1,864 to 700 by 2015
▪ Increase the percentage of facilities with no stock outs of tracer drugs and vaccines to 100% by 2015

Source: Ministry of Health, 2010.

11.57 The NHSP provides only a broad outline of how the maternal health and health systems targets will be achieved.

Ministry of Community Development, Mother and Child Health Strategic Plan

11.58 The current strategic plan for the MCDMCH is for the period 2013-2016 (Ministry of Community Development Mother and Child Health, 2012). The plan includes a number of objectives relevant to maternity protection and maternal health care services, primarily:

- *Objective 1:* To empower low capacity households to improve their productivity and livelihoods;
- *Objective 2:* To provide social assistance to incapacitated individuals and households to reduce extreme poverty;
- *Objective 3:* To provide quality maternal and child health services in order to reduce maternal and child mortality;
- *Objective 4:* To provide preventive and curative health services to reduce high prevalence and incidence of diseases; and
- *Objective 5:* To facilitate the construction, rehabilitation and maintenance of infrastructure and equipment for effective delivery of primary health care and social protection services.

11.59 The identified strategies to address maternal and neonatal mortality are to:

- Mobilise and sensitise communities on maternal, newborn, child health and nutrition services
- Scale up the scope and coverage of reproductive health services

11.60 The MCDMCH performance targets in the strategic plan are shown in **Table 11.7** above. Some of their targets for 2016 are more ambitious than those proposed by the MOH to be achieved by 2015.

Roadmap for Maternal, Newborn and Child Health

11.61 The roadmap for accelerating reduction of maternal, newborn and child mortality for 2013-2016 is the most recent and most comprehensive policy proposal for MCH. It was produced jointly by the MOH and MCDMCH (Ministry of Community Development Mother and Child Health and Ministry of Health, 2013).

11.62 The guiding principles for the Roadmap are the same as those identified in the NHSP (**Table 11.6**). The key strategies to achieve a reduction in maternal, neonatal and child mortality are summarised in **Table 11.9**.

11.63 The 17 performance targets specified in the MNCH Roadmap for maternal health are listed in **Table 11.7**. Given the more specific focus on MNCH it is appropriate that the Roadmap identified a greater number of targets than in the MOH and MCDMCH strategic plans. The Roadmap also presumably defines the consensus position going forward between the MOH and MCDMCH for governmental maternal health targets (**Table 11.7**).

11.64 For each performance area, the Roadmap provides specific strategies for strengthening the MNCH support system (**Table 11.9**).

Table 11.9: MNCH Roadmap strategies and health system strengthening

Key Strategies	Support System Priorities
▪ Advocacy and resource mobilisation ▪ Community mobilisation ▪ Behaviour change mobilisation ▪ Health system strengthening ▪ Capacity development ▪ Improved referral system ▪ Research, monitoring and evaluation	<u>Enabling Environment</u> ▪ Social norms ▪ Legislation and policy ▪ Finances ▪ Management coordination <u>Supply</u> ▪ Availability of commodities ▪ Availability of human resources ▪ Geographic access to delivery points <u>Demand</u> ▪ Initial utilisation of services ▪ Timely continuous utilisation <u>Quality of Care</u> ▪ Effective coverage of good quality services

Source: Ministry of Community Development Mother and Child Health and Ministry of Health, 2013.

Table 11.10: Summary of situational analysis

Context	Maternal Health	Health System Platform	Government Responses
▪ High rates of poverty, particularly in rural areas	▪ High maternal mortality rates, which although decreasing will not meet the MDG-5 target ▪ Little improvement in neonatal mortality over the last two decades ▪ A high proportion of indirect causes of obstetric health although obstetric haemorrhage and pregnancy-induced hypertension are the most important individual causes of death and should be preventable ▪ A significant unmet need for family planning ▪ Very few pregnant women start ANC in the first trimester ▪ Low rates of institutional delivery and delivery by a skilled attendant, with little improvement in these indicators over the last two decades ▪ Significant inequalities in access to skilled attendants for delivery with very low coverage in rural areas and for the poorest mothers ▪ Good performance on improving access to PMTCT and ARVs in pregnancy ▪ Low coverage for postnatal care, although is increasing	▪ Persistent geographical and financial barriers to access, particularly for poor and rural women ▪ Insufficient numbers of EmOC facilities in half of the provinces ▪ Large shortages in health workers with a maldistribution between urban and rural areas ▪ Deficiencies in the availability of essential drugs and equipment ▪ Inadequate health care financing to provide an essential package of care	▪ Evidence of political will to tackle maternal health ▪ Recent increases in government expenditure on health, maternal health and health infrastructure, but still inadequate to provide the health platform required for an essential maternity protection package. ▪ Limited detailed planning for how targeted improvements will be achieved at scale ▪ Limited impact on maternal mortality and inequalities to date

PART D – SPECIFICATION OF GAPS

Provides a strategic assessment of the gap in social protection and health services for pregnant women, infants and their mothers.

12. OVERVIEW

12.1 A policy gap can only be reasonably specified in relation to some form of benchmark suggestive of optimal delivery and compared with the existing situation. This section consequently seeks to specify policy gaps in relation to social protection and health services taking account of the situation analysis provided in **Part C** contrasted with the policy framework implied by the strategic case provided in **Part B**.

13. SOCIAL PROTECTION

13.1 The strategic case outlined in **Part B** specified an evidence-based response framework. Although it's not possible to specify the gap quantitatively, the following is a qualitative summary (see **Table 13.1**):

13.1.1 *Insufficient incomes/consumption*:

Income and capability related outcomes indicate that poverty is structural, with only a minimal response framework in place.

The formal sector is small relative to the total workforce, with the agricultural sector providing the bulk of informal employment. However, the agricultural sector offers uncertain food security and incomes.

13.1.2 *Under-developed capabilities*:

The levels of poverty, extreme poverty, births in poverty are widespread. Although breastfeeding is at acceptable levels this is not alleviating undernutrion of children – with implications for the perpetuation of a cycle of poverty.

No effective programmes are in place to impact on the address the causes of poverty in the critical intervention period – pregnancy, infancy, and two years thereafter.

13.1.3 *Food insecurity*:

Food security and nutritional attainments are poor – with weak programme governance and insufficient progress toward an integrated programme. Poverty strategies also lack any nutrition focus. Programmes thus far are fragmented and donor-driven and funded – suggesting a low policy commitment to expansions to scale.

Nutrition interventions should be driven from health centres as a point of entry into communities and households. However, health services are not available to the entire population.

13.1.4 *Under-utilisation of services*:

High maternal mortality ratios are indicative of a poorly performing health platform generally, but more specifically for maternal and child health. This is suggestive of an incomplete package of maternal and child health services and inadequate availability of services in general.

As maternal and newborn health services, which are relatively inexpensive to implement, have important implications for capability development, they should be prioritised for expansion.

13.1.5 *Barriers to service access*:

The greatest barrier to service access at present is the inadequate supply of services. Once services are more accessible consideration should be given to incentivising their use.

Table 13.1: Indicative gap analysis

Indicator	Situation	Present intervention	Indicative intervention
Insufficient incomes/consumption			
Employed population in:		Income protection coverage 0.8% of the population in poverty. Programmes are targeted at a minute proportion of the population. Prioritisation is at the community level. The current platform for delivery is unlikely to cope with an expansion to scale.	General income support programme equivalent to around 3.5% - 5.0% of GDP (includes maternal and newborn income support)
Formal employment	15.4%		
Informal employment	84.6%		
In agricultural sector	59.9%		
Other	40.1%		
Under-developed capabilities			
Poverty rate	60.5%	Nutrition programmes not implemented at scale. Funding for nutrition is low and inconsistent - mainly donor-driven. Poverty reduction strategy lacks a nutrition focus. Fragmented programmes, no pooling of funds, and absence of sufficient health facilities to drive a complete nutrition strategy off this platform. Nutrition strategies do not form part of an integrated strategy aimed at addressing the critical vulnerabilities associated with pregnancy and maternal and infant needs within the first 2 years following the delivery.	Income support aimed at women from pregnancy to delivery and for a further 2 years. Conditional top-up linked to use of essential health care package for maternal and child care.
Extreme poverty rate	42.7%		
Total births	647 790		
Births in poverty	391 913		
Births in extreme poverty	274 015		
Urban births in poverty	73 942		
Rural births in poverty	295 170		
Urban births in extreme poverty	35 223		
Rural births in extreme poverty	218 631		
Approximate number of orphans	1/5 of all children		
Educational attainment	58.7% of formal employees have grades 8-12		

Indicator	Situation	Present intervention	Indicative intervention
Food security and nutritional attainment			
Agricultural sector	not able to provide stable employment for large part of the population		
Chronic food insecurity	urban poor households and small farmers - in particular maize farmers		
Prevalence of undernourishment	47.0%		
Under 5 children underweight - urban areas	15.3%		
Under 5 children underweight - rural areas	12.8%		
Stunting rate	50% (1 in 2)		
Exclusive breastfeeding under 6 months	61.0%		
Exclusive breastfeeding under 2 months	86.0%		
Infants up to 5 months fed with a bottle	3.0%		
Under-utilisation of services			
Maternal mortality ratio (per 100,000 live births)		Services are not sufficiently distributed to meet the needs of the entire population.	Expansion of primary care services to the entire population. Particularly in rural areas. Implementation of complete package of maternal and newborn health service package
Actual	440 (2010)		
Appropriate for GDP	328 (2010)		
Achievable	25 (2010)		

Indicator	Situation	Present intervention	Indicative intervention
Infant mortality rate	56 (2012)		
Barriers to service access[9]			
Health centres	not accessible to the entire population		

[9] More completely specified in **section 14.**

14. HEALTH CARE

Local Research on Maternal Health Gaps

14.1 A number of studies have sought to clarify the reasons for the failure in demand for early ANC and institutional delivery in Zambia, and identify the barriers that particularly poor and rural pregnant women face in accessing these services.

14.2 The 2007 DHS survey asked pregnant women about problems in accessing maternal health services (**Table 14.1**) (Central Statistical Office *et al*, 2009). Seventy three percent of all pregnant women reported at least one barrier to care, but 82.2% of rural women and 83.6% of the poorest women reported problems in accessing care. The most common problems were concerns about drug availability, the availability of transport, and distance to the health facility, which affected more than half of the pregnant women from rural areas and in the lowest wealth quintile.

Table 14.1: Problems reported by pregnant women in accessing maternity care

	Total	Rural	Urban	Poorest Quintile	Richest Quintile
At least one problem accessing health care	73.5	82.2	61.6	83.6	60.1
Concern no drugs available	53.5	59.3	45.6	57.2	46.0
Having to take transport	42.4	57.2	22.0	64.5	19.6
Distance to health facility	40.8	57.0	18.4	65.4	19.0
Getting money for treatment	33.6	39.9	24.9	44.6	20.2
Not wanting to go alone	25.6	33.7	14.4	36.9	14.6
Concern no provider available	25.4	32.1	16.0	28.5	15.9
Concern no female provider available	17.1	22.7	9.5	21.9	8.8
Getting permission to go for treatment	4.2	4.7	3.4	3.7	2.7

Source: Central Statistical Office *et al*, 2009.

14.3 An early study by Stekelenburg *et al* (2004) evaluated factors that influence women's choices of where to deliver in Kalabo District. Although 96% of women in the study indicated that they would prefer to deliver in a clinic or hospital, only 54% actually did so. The main reasons for not delivering in a health facility included long distances, lack of transport, user fees, inadequate education during ANC, poorly staffed and ill-equipped institutions. More educated women and those with formal employment, were more likely to deliver in a clinic.

14.4 Although user fees for rural and peri-urban health services were abolished in 2006, pregnant women still incur significant indirect costs (for transport, essential supplies etc) in accessing maternity services (Central Statistical Office *et al*, 2009).

14.5 The analysis of determinants of institutional delivery in Zambia by Gabrysch *et al* (2011) found that geographical access to an EmOC facility and the quality of care provided there were key factors in explaining the low rates of institutional delivery and skilled attendance in rural areas. As distance to the closest health facility doubled, the odds of facility delivery decreased by 29% (95% CI, 14%-40%). Independently, each step increase in the level of EmOC care provided led to 26% higher odds of facility delivery (95% CI, 7%-48%).

14.6 Banda *et al* (2012) compared factors associated with late ANC attendance in a rural and an urban district in Copperbelt Province. Rates of late ANC attendance were high - 72.0 % of women from the rural district and 68.6% of women from the urban district had their first ANC visit after 4 months of pregnancy. In both districts, late antenatal care attendance was associated with multiparity, unplanned pregnancy, inadequate knowledge about ANC, cultural beliefs and misconceptions.

14.7 For example, urban women with inadequate knowledge about ANC were 2.2 times more likely to attend late; rural women with unplanned pregnancies were 4.2 times more likely to start ANC late; and women who believed that there were no benefits from starting ANC early were 4 times more likely to start late.

14.8 Another recent Zambia study found no impact of distance to facilities on the timing and frequency of ANC attendance (Kyei *et al*, 2012). However, they did identify significant differentials in the quality of ANC care available at the nearest health facility. 100% of urban mothers lived within 15km of an ANC facility and 57% had access to an ANC facility providing optimal ANC care within that distance. In rural areas, although 88% of women were within 15km of a facility providing any ANC care, only 9% were within 15km of a facility providing optimal ANC care.

14.9 Ensor *et al* (2013) investigated the link between the two problems in 11 Zambia districts and found that that the location of ANC care and the number of ANC visits was strongly associated with the eventual use of a facility for delivery. This effect was also stronger in remote areas. They suggest that ANC attendance influenced later institutional delivery by increasing maternal knowledge and by establishing a pattern of using formal care.

14.10 Lagro *et al* (2006) investigated factors associated with postnatal care attendance at Mpongwe district hospital. They found that older mothers and those that lived further away were less likely to access postnatal care. Also, of those women that did not attend, 35% said that they did not know about the need for a postnatal visit.

14.11 A number of studies have investigated access to abortion services in Zambia (Castle, Likwa and Whittaker, 1990; Dahlback *et al*, 2007). Lack of knowledge about contraception and limited access to family planning services, particularly among teenage girls, are underlying problems related to the incidence of unsafe abortions (Dahlback *et al*, 2010). The main barriers to obtaining access to legal abortion include (Geary *et al*, 2012):

- lack of knowledge about the abortion law;
- requiring the consent of two medical practitioners;
- requiring that abortions be performed by a doctor; and
- limited access outside tertiary hospitals in major cities.

International Recommendations on Maternal Health Gaps

14.12 Another approach to identify the key gaps in health services provided to pregnant women in Zambia is to compare local practice to current international recommendations.

Table 14.2: PMNCH 31 best interventions for maternal health

Interventions	Community	First level	Referral
Before Pregnancy			
Family planning	x	x	x
Prevent and manage Sexually Transmitted illnesses including Mother-to-Child Transmission of HIV and syphilis	x	x	x
Folic acid fortification and/or supplementation for preventing Neural Tube Defects	x	x	x
Pregnancy			
Management of unintended pregnancy			
Availability and provision of safe abortion care when indicated			x
Provision of post abortion care		x	x
Appropriate antenatal care package:		x	x
Screening for maternal illnesses			
Screening for hypertensive disorders of pregnancy			
Screening for anaemia			
Iron and folic acid to prevent maternal anaemia			
Tetanus immunization			
Counselling on family planning, birth and emergency preparedness			
Prevention and management of HIV, including with antiretrovirals			
Prevent and manage malaria with insecticide treated nets and antimalarial medicine			
Smoking cessation			
Reduce malpresentation at term with External Cephalic Version			x
Prevention of pre-eclampsia			
Calcium to prevent hypertension		x	x
Low dose aspirin to prevent hypertension			x
Magnesium Sulphate for eclampsia		x	x
Induction of labour to manage prelabour rupture of membranes at term			x
Antibiotics for preterm prelabour rupture of membranes		x	x
Corticosteroids to prevent respiratory distress syndrome in newborns			x
Childbirth			
Induction of labour for prolonged pregnancy			x
Prophylactic uterotonics to prevent postpartum haemorrhage	x	x	x
Active management of third stage of labour to prevent postpartum haemorrhage		x	x
Management of postpartum haemorrhage (e.g. uterotonics, uterine massage)	x	x	x
Caesarean section for maternal/foetal indication			x
Prophylactic antibiotics for caesarean section			x
Postnatal (mother)			
Family planning	x	x	x
Prevent and treat maternal anaemia		x	x
Detect and manage postpartum sepsis		x	x
Screen and initiate or continue antiretroviral therapy for HIV		x	x

Source: The Partnership for Maternal, Neonatal & Child Health, 2011.

14.13 Improving maternal health in LMICs has attracted significant international attention thought global programmes such as the Safe Motherhood Initiative (Freedman *et al*, 2007) and the Millennium Development Goals (van den Broek and Falconer, 2011). There is significant global consensus on a number of key points:

- Decreasing maternal mortality should remain the primary focus while the number of deaths remains unacceptably high in most LMICs (Campbell *et al*, 2006).
- The package of interventions that is known to be effective and cost-effective in reducing maternal deaths (Adam *et al*, 2005; Campbell, Graham and Lancet Maternal Survival Series steering, 2006; Graham *et al*, 2006; The Partnership for Maternal, Neontal & Child Health, 2011).
- The need to prioritise intrapartum care and ensure universal access to institutional delivery, skilled birth attendants and emergency obstetric care (EmOC) for those women that need it (Campbell, Graham and Lancet Maternal Survival Series steering, 2006).
- Important complementary strategies outside intrapartum care include family planning, safe abortion services, antenatal care, and postpartum care.

14.14 As an example of effective interventions, the essential maternal health package developed by the Partnership for Maternal Neonatal and Child Health (PMNCH) is show in **Table 14.2**.

14.15 Despite the global consensus on what needs to be done to decrease maternal mortality in LMICs, progress in achieving this goal has been slow (Bhutta *et al*, 2010; Lozano *et al*, 2011; Bhutta and Black, 2013; Bryce *et al*, 2013; Zureick-Brown *et al*, 2013). It has proven challenging to ensure that all pregnant women have access to these effective interventions when they need them for two main reasons (Mbizvo and Say, 2012):

14.15.1 Implementation of the package of effective maternal health interventions depends on the existence of a well-functioning healthcare delivery system, which is seldom available in resource-limited countries.

14.15.2 Cultural and behavioural factors might decrease women's utilisation of health services, if they are provided.

14.16 In Zambia, the first problem seems more important. The package of maternal and child care interventions identified for Zambia mostly follows international norms. However, access to the full package is low, and coverage is uneven primarily because the health delivery platform is weak, particularly in rural areas. Pregnant women express the intention of using biomedical health care services but encounter a number of barriers in being able to achieve that objective (Stekelenburg *et al*, 2004).

14.17 An interesting recent study analyses the success factors in 6 LMICs (Bangladesh, Bolivia, Cambodia, Gambia, Morocco, and Rwanda) that have managed to address these constraints and markedly decrease maternal mortality (Mbizvo and Say, 2012). Some of their main findings are summarised in **Table 14.3**.

14.18 Key success factors appear to have included investments in obstetric care services and human resources for health, innovative financing strategies including demand-side financing and performance-based financing, strengthened political commitment and accountability.

Table 14.3: Strategies that have proven effective in improving health service delivery platforms and decreasing maternal mortality

Strategies	Performance Targets
Strengthening obstetric care	▪ Defining an essential delivery packages, including key effective interventions to reduce maternal mortality. ▪ Increasing the number of health facilities. ▪ Upgraded facilities to provide emergency obstetric care. ▪ Strengthened the existing infrastructure, including supply of required equipment and essential medicines. ▪ Improved surveillance of maternal deaths. ▪ Increased accountability to improve the quality of care.
Investment in human resources	▪ Human resource strategies to strengthening midwifery. ▪ Administrative reforms to improve the status of midwives. ▪ increasing the intake of midwifery schools. ▪ Upgrading midwifery training. ▪ Strengthened in-service emergency obstetric care training for doctors, nurses, and midwives. ▪ Engagement of community health workers to expand community-based interventions to promote the use of healthcare facilities and support referrals.
Innovative financing	▪ Demand-side financing mechanisms including maternal health voucher schemes; financial incentives to women for using selected services, and insurance schemes to eliminate user fees. ▪ Safe delivery incentives for providers, and increased performance-based contracting.
Tackling broader determinants	▪ Family planning ▪ Women's education ▪ Women's socioeconomic empowerment
Enhanced governance	▪ Strong political will ▪ Multi-stakeholder involvement in the development and implementation of policies and actions.

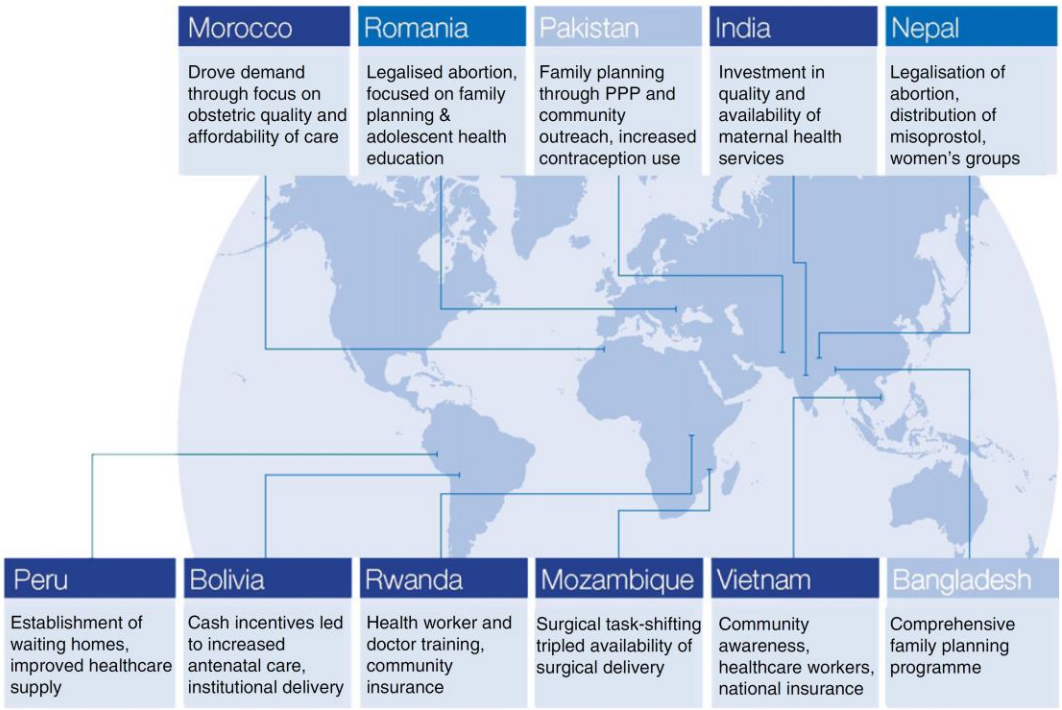
Source: Mbizvo and Say, 2012.

14.19 A similar analysis by Pucher *et al* (2013) identifies successful lessons and innovations from 13 countries on track to achieve MDG-5 despite having similar financial, human resource and other constraints as most LMICs. Some examples of these local innovations and strategies are reflected in **Figure 14.1**. They conclude that clinical interventions are necessary but not sufficient. Improvement in obstetric services need to be supplemented with interventions that stimulate demand for services and ensure that they are both accessible and affordable. In addition, they identify five principles that characterise successful implementation strategies:

- embedding maternal health as a top priority;
- focusing on targeted effective initiatives;
- fostering strong local ownership;

- maximizing efficiency and use of available resources; and
- creating a tough system of national accountability.

Figure 14.1: International maternal health success stories



Source: Pucher, Macdonnell and Arulkumaran, 2013.

Evaluations of Local Innovations and Interventions

14.20 There have also been some efforts at local innovation in addressing maternal health in Zambia. These may provide the best evidence of what needs to be done to improve maternal health in Zambia as they come from rigorous evaluations of interventions implemented locally.

14.21 The Mobilizing Access to Maternal Health Services in Zambia (MAMaZ) project was conducted in six districts within Central, Western, Southern and Muchinga provinces during 2010-2013 (MAMaZ, 2013). The impact of a package of community interventions on the utilisation of maternal health services was evaluated. The key elements of MAMaZ were:

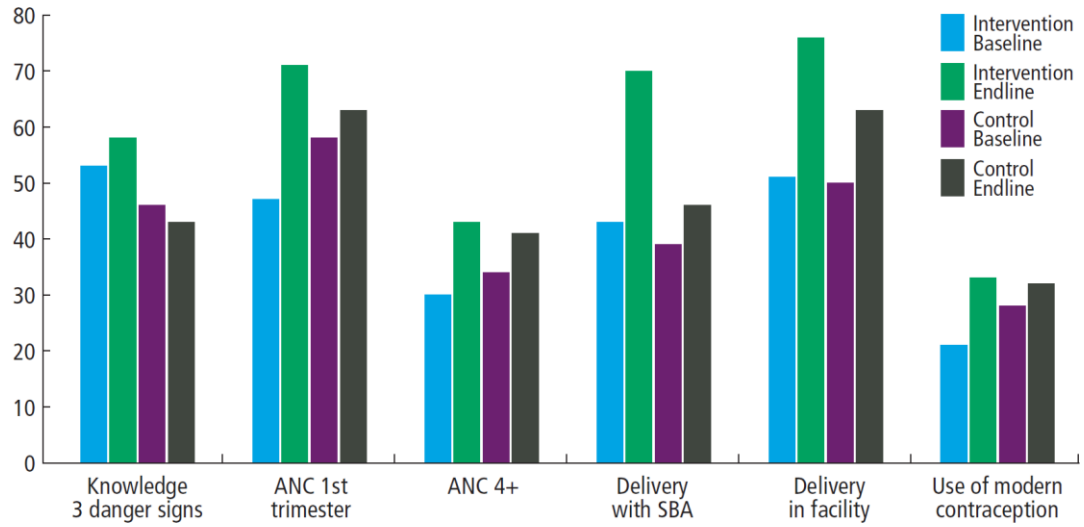
- A whole community approach to build social approval for behaviour change.
- Community mobilisation through Safer Motherhood Groups (SMAGs) and community volunteers.
- Building sustainable community systems and capacity to address identified barriers to access including: community-based emergency transport, emergency savings schemes, food banks, child care schemes, mother's helpers and safe pregnancy plans.
- A community monitoring system for maternal health.
- Mentoring and coaching support for volunteers.

14.22 The formal evaluation of the MAMaZ project found statistically significant improvements in a number of key maternal health indicators in intervention districts compared to control districts (Ensor *et al*, 2014), including (**Figure 14.2**):

- The proportion of women who knew that ANC should be provided in the first trimester increased by between 14.5 and 15.7%.
- The proportion of deliveries by a skilled birth attendant in a health care facility increased by between 16.4 and 21.0%.
- The proportion who knew three obstetric danger signs increased by between 10.3 and 14.9%.
- The proportion who used emergency transport increased by between 12.4 and 18.7%.

14.23 The study did not evaluate the impact of these improvements on maternal or neonatal outcomes.

Figure 14.2: Key results from MAMaZ interventions study



Source: Ensor *et al*, 2014.

14.24 The similar EmONC trial was a cluster-randomized controlled trial to evaluate the impact of a package of interventions on perinatal mortality conducted in 7 countries including Zambia (Pasha *et al*, 2010). The package had three key elements:

- Community mobilisation to develop and sustain systems for emergency transport and finance;
- Training of community birth attendants to recognise obstetric emergencies and to stabilise and referral complications appropriately; and
- Training of providers at obstetric facilities to improve the quality of care.

14.25 After two years of intervention the study unfortunately found no significant overall improvement in perinatal mortality, neonatal mortality, maternal mortality or maternal morbidity between intervention and control clusters (Pasha *et al*, 2013).

14.26 A more focused evaluation by van Lonkhuijzen *et al* (2003) investigated the impact of using a maternity waiting home at Nyanje RCZ Hospital. They found that high risk women using the waiting home had equivalent delivery outcomes (birth weight, maternal mortality, perinatal mortality) to low risk women not using the waiting home.

Previous Local Gap Analyses

14.27 Gap analyses were done by government, development partners and local experts, for both the MOH NSHP and the joint MNCH Roadmap.

MOH NHSP Gap Analysis

14.28 For the NHSP, the marginal budgeting for bottlenecks (MBB) tool (Soucat *et al*, 2002) was used to identify key service gaps and the costs of addressing them. The NHSP does not provide much detail on the identified gaps but does present the results of the financial gap analysis (Ministry of Health, 2010).

14.29 The NHSP proposed three possible scenarios targeting different incremental improvements in maternal, neonatal and child health ():

14.29.1 In *Scenario 1*: maternal mortality (MMR) is decreased by 17.0%, neonatal mortality (NMR) by 12.7% and under 5 mortality (U5MR) by 24.4%.

14.29.2 In *Scenario 2*: MMR is decreased by 20.6%, NMR by 15.9% and U5MR by 30.0%.

14.29.3 In *Scenario 3*: MMR is decreased by 24.8%, NMR by 20.7% and U5MR

14.30 The MBB analysis indicated that achieving any of these scenarios would require significant additional health expenditure. The projected increases in government health expenditure for the implementation of the NHSP were significantly below the required amounts. The calculated shortfall from available resources for Scenario 1 and Scenario 3 was 33.7% and 40.3% respectively for 2011 (Ministry of Health, 2010).

MNCH Roadmap Gap Analysis

14.31 A more detailed analysis using both the MBB tool and the Lives Saved (LiST) tool (Walker *et al*, 2013) was undertaken as part of the MNCH Roadmap development.

14.32 For maternal health, the bottleneck analysis focused on two main targets:

- Improved ANC utilisation
- Higher use of skilled attendance at delivery

14.33 The analysis considered three supply-side determinants and two demand-side determinants that constrain the level of effective coverage for these targets (**Table 14.4**):

- Availability of commodities;
- Availability of human resources;
- Geographical accessibility;
- Initial health service utilisation; and

- Continued health service utilisation.

14.34 The results of the gap analysis are summarised in **Table 14.4**. Some of the main conclusions were:

14.34.1 High impact MNCH interventions are not universally accessible. Implementation had not always focused on these.

14.34.2 The family and community package is not effectively linked with the health system interventions.

14.34.3 There are wide disparities within the country, between the urban and rural populations, and for other marginalised populations.

14.34.4 For ANC coverage the main gaps were identified as geographical access, availability of human resource and availability of commodities in rural areas, and effective quality coverage for urban services.

14.34.5 For skilled birth attendance, the availability of commodities and the availability of human resource were identified as bottlenecks in both urban and rural areas. The analysis indicated that low demand by mothers also needs to be addressed.

14.35 **Table 14.4** also outlines the strategies prioritised to address the identified gaps in the Roadmap.

Table 14.4: MNCH Roadmap gap analysis

Target	Area	Key Gaps	Root Causes	Strategies
Antenatal Care	**Urban**	▪ Quality of services provided ▪ Availability of human resources	▪ Inadequate trained staff ▪ Long waiting times ▪ Perceived poor quality of services	▪ Strengthen supervision and support to HCW ▪ Increase supplies and quality of services ▪ Invest in additional health posts
	Rural	▪ Availability of commodities ▪ Geographical access ▪ Availability of human resources ▪ Continuity of care ▪ Quality of services provided	▪ Limited storage space for drugs ▪ Poor drug distribution ▪ Staff attrition and inequitable distribution ▪ Distances from facility and difficult terrain ▪ Low awareness of importance of more than one ANC visit	▪ Improve supply chain and decentralised medical stores ▪ Improved conditions of service ▪ Introduce retention scheme ▪ Build additional health posts ▪ Strengthen outreach including active follow up for ANC defaulters
Skilled Attendance at Delivery	**Urban**	▪ Availability of commodities ▪ Availability of human resources ▪ Quality of services provided	▪ Inadequate BEmOC and CEmOC facilities ▪ Staff attitudes due to overworked and demotivated staff ▪ Inadequate supportive supervision	▪ Intensify supervision, motivation and mentorship ▪ Expedite implementation of operational training plan
	Rural	▪ Demand by mothers ▪ Geographical access ▪ Availability of human resources ▪ Availability of commodities ▪ Quality of services provided	▪ Procurement planning not at district level ▪ High attrition, too few staff trained ▪ Inequitable distribution of midwives ▪ Negative attitudes of HCWs ▪ Inadequate BEmOC and CEmOC facilities	▪ Distribution of stock ▪ Delegation of HRH authority to MCDMCH ▪ Upgrade facilities to provide EmONC ▪ Invest in maternity waiting homes

Source: Ministry of Community Development Mother and Child Health and Ministry of Health, 2013.

Priorities for Maternal Health Care Service Delivery in Zambia

14.36 The focus on maternal health over the last decade through initiatives such as the Millennium Development Goals, Countdown to 2015, MNCH Roadmaps, and CARMMA means that problems and required responses have been thoroughly debated.

14.37 As outlined in this Section of the report, there is significant information on the status of maternal and neonatal health in Zambia, the recommended package of high impact interventions required to address maternal mortality, and the main gaps in the current responses of the MOH and the MCDMCH in Zambia.

14.38 One limitation of these analyses is that most of the available data is already a few years old. The evaluations and recommendations draw heavily on data from the 2007 Zambian DHS and the 2010 Census. There is as yet no information on the impact of the additional strategies and resources directed at maternal health in the last 3-5 years. More recent data available for HIV programme indicators suggests significant improvement since 2007. The DHS was repeated in 2013 but the results are not yet available. Those results are critical to evaluating the effect of recent initiatives and strategies, and to quantify the remaining gaps in the delivery of maternal health services.

14.39 In relation to the underlying objectives of ILO Convention No. 183 it is clear that pregnant women in Zambia remain significantly vulnerable. The majority of pregnant women are poor and live in areas with inadequate access to a basic package of maternity protection.

14.40 With regard to medical care for pregnant women there are a number of significant gaps. Maternal mortality is still very high with approximately one maternal death for every 200 deliveries. Maternal mortality is declining but the rate of decline is too slow to achieve MDG-5. The rate of decline in neonatal mortality is very much slower.

14.41 The package of maternal health services required to address maternal health is well understood, both from internationally and in Zambia. However, the coverage of the package is inadequate at present. Approximately half of the pregnant women in Zambia do not receive the optimal package of care with identified high impact interventions. There are problems along the entire continuum of care:

- there remains a high unmet need for family planning,
- safe abortion services are only available to few,
- most women attend ANC but only start late,
- less than half of pregnant women are delivered by a skilled birth attendant and this figure has changed little over the last two decades,
- access to early postnatal care is increasing but is still insufficient to catch early maternal and neonatal complications which are an important component of preventable mortality.

14.42 There are significant inequalities in access to an optimal maternal health package. The coverage gaps are most marked in rural areas and for the poorest women.

14.43 Supply-side responses in the delivery of maternal health care services are required to extend access and close the existing gaps. The existing health system infrastructure in inadequate to deliver the full package of maternal health care to all pregnant women. Responses in supply are required at all levels but should focus on:

- Increasing the number of health facilities capable of providing EmONC care in under-served areas,
- Expanding availability of maternity waiting homes for high-risk women,
- Increasing skilled health workers in under-served areas through additional training and redistribution,
- Major improvement in the supply of essential drugs and equipment throughout the health system,
- Strengthened management, supportive supervision and accountability.

14.44 All of these responses require additional financial resources for maternal health, probably at least double what is currently being spent, and significant investment in infrastructure development. Government expenditure on health has been increasing, and currently accounts for approximately 10% of total government expenditure, but there are no clear plans for how the necessary additional health financing will be obtained.

14.45 The low levels of initial and continued utilisation of available ANC and delivery services point to the need for demand-side responses as well. The low uptake of services may be partly explained by the low quality of maternal health care services provided in under-served areas but poor pregnant women also face considerable geographical, financial and knowledge barriers in accessing available health care services.

14.46 Important demand-side responses include:

- Community education and mobilisation,
- Development of community systems for emergency transport and emergency support,
- Community financing schemes for emergency costs,
- Improved social protection for the neediest women in the form of financial and nutritional support.

14.47 As argued in paragraph 14.18 above, innovative financing arrangements have been a key component in countries that have been the most successful in addressing maternal mortality. This has been both in terms of in terms of demand-side financing mechanisms to increase uptake of services by pregnant women and results-based financing on the supply-side to improve the quality of care provided. Zambia has limited experience with both of these approaches.

14.48 There are some aspects of the maternity care package that are being delivered at scale. There is almost universal access to at least four antenatal care visits, PMTCT and ARVs for those women that are eligible to receive it. This suggests a basic level

of functionality in the health care platform that can be expanded to other maternal priorities. Understanding the strategies used to achieve this scale-up would also be informative in future expansion.

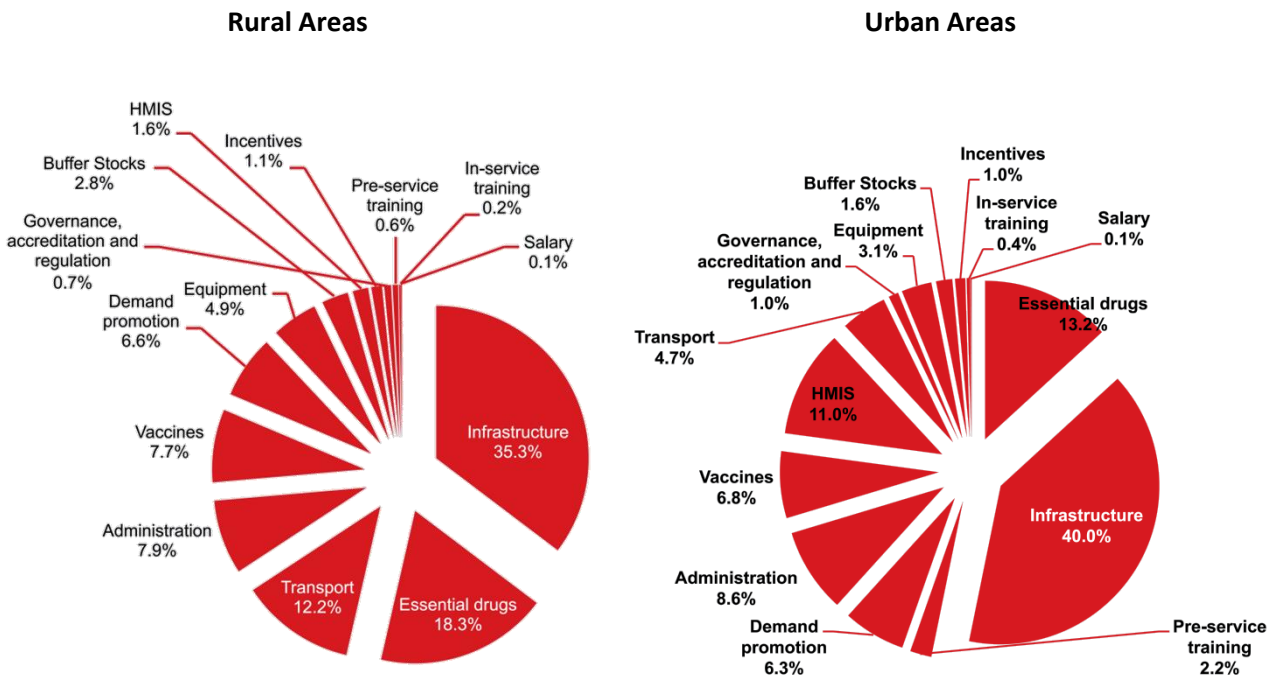
14.49 As outlined in **Section 10**, social protection systems in Zambia fail to provide even limited support to the most needy and this includes pregnant women. Pregnant women are an important group for the targeting of social protection because of their increased vulnerabilities and the potential impact not only on their own health but the health and well-being of their infants. Pregnancy and maternal health care services also provide a unique opportunity for an integrated social protection and health response to address the needs of poor pregnant women.

Costing Of Proposals

14.50 The MOH and MCDMCH undertook a detailed costing of the additional resources required to achieve the MNCH Roadmap objectives, combining the results from the MBB and LiST tools to estimate the cost of increasing access to high impact interventions.

14.51 **Figure 14.3**: shows the functional breakdown of the required budget in rural and urban areas. Infrastructure costs are the largest component in both rural and urban areas but transport costs make up a larger proportion of the budget in rural areas.

Figure 14.3: MNCH cost distribution in rural and urban areas



Source: Ministry of Community Development Mother and Child Health and Ministry of Health, 2013.

14.52 The details of the costs of implementing the MNCH roadmap are shown in **Error! Reference source not found.**. The budgeting exercise calculated that US$69.9 million (ZMK349.7 billion / ZMW349.7 million) was spent on maternal and neonatal health in 2012 (It was estimated that to achieve the Roadmap

performance objectives for maternal and neonatal health would require an annual increase of 15.2%, 3.8%, 4.6% and 4.4% in 2013, 2014, 2015 and 2016 respectively.

14.53 Some of the other increases in Error! Reference source not found. are more substantive. For example, it was determined that systems strengthening required a 465% increase in expenditure to achieve the Roadmap targets. The total budget for MNCH services needs to more than double from US$6.47 per capita in 2012 to US$13.58 per capita in 2015.

Table 14.5: Costs of scaling up MNCH service delivery (2013-2016)

Focus Area	High Impact Interventions	Baseline Expenditure 2012	Budget (1000 US$)			
			2013	2014	2015	2016
Maternal & neonatal health	ANC	4 769	5 185	5 453	5 720	5 987
	Delivery care	47 475	50 301	52 102	53 903	55 705
	Neonatal preventive	124	170	216	262	308
	Neonatal curative	168	180	191	201	211
	Newborn care	641	6 511	7 260	8 008	8 757
	Long-lasting insecticide nets (LLINs)	2 937	3 256	3 256	3 256	3 256
	PMTCT	2 188	2 494	2 710	2 925	3 141
	FP & Reproductive health	11 644	12 462	13 280	14 098	14 916
	Sub-Total	69 947	80 560	84 467	88 374	92 281
Child health	Case management of illnesses (Pneumonia, malaria, diarrhoea)	842	3 786	6 680	9 574	12 469
	Immunization (including. PCV, Rota)	1 249	4 997	8 036	11 074	14 112
	Paediatric AIDS	327	902	1 292	1 683	2 074
	Sub-Total	2 418	9 685	16 008	22 331	28 655
Cross-cutting	Nutrition (EBF, Micronutrients, malnutrition)	308	2 835	4 926	7 017	9 107
	WASH (Sanitation, safe water, hand washing)	2 117	9 448	13 082	16 717	20 352
	Systems strengthening	9 290	43 235	46 225	46 115	49 309
	Sub-Total	11 715	55 518	64 233	69 849	78 768
	TOTAL	84 080	145 763	164 708	180 554	199 703
	Per capita (US$)	*6.47*	*10.73*	*11.82*	*12.62*	*13.58*

Source: Ministry of Community Development Mother and Child Health and Ministry of Health, 2013.

14.54 The costs shown in **Table 14.5** are not to achieve universal access but only the Roadmap performance targets shown in **Table 11.7**. In terms of key maternal

health indicators, therefore, the analysis indicated that the budget shown in 2016 would achieve:

- A health facility within 5km for 70% of rural households. EmOC health facilities in all districts. Key drugs and vaccines available in all facilities.
- 1 nurse for every 700 people and 1 doctor for every 10,000 people in the population.
- 14% unmet need for family planning
- 80% coverage of at least 4 ANC visits and 58% of pregnant women attending ANC in the first trimester
- 70% institutional delivery

PART D - OPTIONS ANALYSIS

Provides a strategic proposal on the policy interventions required to address the identified gaps in the social protection of pregnant women, infants and their mothers. Consideration is also given to the implementation requirements for the preferred package or approach.

15. OVERVIEW

15.1 This section considers a number of provisional options for a social protection maternity package. Given the resource constraints of the Zambian government, even while experiencing considerable economic growth, creates prioritisation problem, even where a benefit can be proposed. Within the context of a country where 60.5% of the population are in poverty and 42.3% are in extreme poverty, differentiating between groups with a targeted scheme is problematic.

15.2 The package discussed therefore looks at a narrower support framework (basic package), focusing exclusively at income support, and at a wider support framework (comprehensive package) incorporating child support, support to remain in education, and support to remain in employment. The comprehensive package is mainly presented for long-term considerations as fiscal constraints require an urgent focus on income support.

16. PACKAGE AREAS

16.1 Overall eight areas can be considered as part of a comprehensive package of maternity support:

16.1.1 *Cash grant during pregnancy*: which focuses on the providing general unconditional financing during pregnancy, under the assumption that funds will invariably be spent on necessities. This grant could be provided in respect of the full period of pregnancy regardless of when the application for the benefit occurs.

16.1.2 *Cash grant for 24 months post-delivery*: lactating mothers require much higher levels of nutrition to protect their own health and that of the newborn. As food parcels and vouchers present administrative obstacles to any such scheme a cash grant is preferred.[10]

16.1.3 *Conditional increment for use of post natal and family planning services*: An increment to the post-delivery cash grant can be used to incentivise the appropriate use of health services. This should only be considered once supply problems in the distribution of health services has been addressed.

16.1.4 *Nutritional support*: Although the cash grants implicitly cover this benefit, if a food parcel or voucher system were to be considered the grants could be offset by the cost of the in-kind benefits. For Zambia this route should be avoided due to the complexity introduced into the scheme. In-kind nutrition support (beyond counselling and supplementation) can still be considered as a separate programme operating through the health platform.

16.1.5 *Transport assistance*: As with nutritional support, consideration could be given to in-kind benefits to target access to transport assistance. However, there is substantial evidence that cash grants are used for transport in any case. For Zambia cash grants are most appropriate and to achieve this kind of support.

16.1.6 *Health services*: Health service points need to be expanded to ensure universal coverage with access provided to a complete package of services for pregnancy, deliveries, postnatal care, growth monitoring and nutrition support.

[10] Within South Africa the obstacles to introducing a food parcel scheme were seen as prohibitive and cash grants preferred. Additional nutritional support should take the form of advice and support from the health platform where clinically indicated nutritional support can be identified and delivered.

Table 16.1: Potential maternity package options for Zambia

Scheme
1) Cash grant during pregnancy for 9 months. 2) Cash grant for 24 months post-delivery. 3) Conditional increment to (2) for use of specified services on the health platform (post natal visits/family planning). 4) Food security and nutrition: a. Services provided on the health platform (counselling and supplementation); and b. General basic cash transfer to households in poverty. 5) Health service points (clinics and related primary care services) should be expanded to ensure universal coverage of the entire population. 6) A comprehensive health package should be implemented including: a. Antenatal care services; b. HIV and AIDS related treatment available to all pregnant women testing positive – with treatment beginning well before the delivery; c. Delivery-related services, including the capability to deal with basic and complex obstetric emergencies; and d. Postnatal care and routine check-ups required for mothers and infants linked to nutrition support. 7) Targeting should be minimal and aim to include everyone in poverty, with rural areas prioritised first. 8) A single governance framework for the integrated maternal and child package should be implemented. 9) For programmes that need to be scaled up, consideration has to be given to a scalable delivery platform. This requires that agencies are established to drive the cash grant programme with an on-balance-sheet budget and formal legislative framework.

16.2 The pregnancy support cash grant faces a practical constraint as applications only begin when someone becomes pregnant. The grant, when allocated, could be backdated to the date of application, incentivizing women to attend antenatal clinic and apply for the grant early in pregnancy.

16.3 Means-testing is required to target the most vulnerable women in society. However, with poverty so pervasive this may not prove practical.

16.4 Also, eligibility assessment for maternity and early child support will likely require formal verification of pregnancy, necessitating limited operational links with the health platform, possibly involving blood tests for pregnancy.

17. SOCIAL PROTECTION OPTIONS

17.1 The social protection package focuses exclusively on cash transfers and is examined with four scenarios, based on alternative population targeting approaches, each with three cost options based on grant values at different ratios to a poverty line (assumed to be US$2 per day per person). All costs are presented is if the policy framework were fully implemented in 2014.

17.2 Underpinning all the estimates are:

17.2.1 Female population estimates (Central Statistical Office, 2012);

17.2.2 Birth rates by age (Demographic and Health Survey, 2007);

17.2.3 Poverty rates for urban and rural areas (Central Statistical Office, 2012); and

17.2.4 Estimates of the number of pregnancies (calculated).

17.3 Benefits are assumed as follows:

17.3.1 Although the benefits involve three distinct periods, pregnancy (9 months), year 1 following the birth, and year 2 following the birth, all grant values are the same to minimise programme complexity.

17.3.2 During pregnancy – a grant valued for 9 months; and

17.3.3 Following the birth – a benefit for 24 months.

17.4 For purposes of quantification it is assumed that in any given year expenditures will average out at 9 months of payments for all pregnancies in a given year, and 12 months of grants in respect of pregnancies occurring in the previous and current year, and 12 months of grants in respect of the carry-through (year 2) entitlements.

17.5 The four scenarios are as follows:

17.5.1 *Scenario 1*: Total population in poverty - which provides an indication of a broad-based programme able to directly or indirectly target the population shown to be in poverty.

Indirect targeting would see the implementation of a universal benefit with a tax clawback for income earners. A means-tested system will involve costly administrative procedures with inevitable errors of inclusion and exclusion.

17.5.2 *Scenario 2*: Rural population – which focuses on a population group that is explicitly facing systemic poverty challenges. To minimise the need for an expensive targeting mechanism it is proposed that a benefit be offered to all rural inhabitants regardless of income.

The benefit should require a formal application process to access it. Self-selection would result in fewer well-off applicants.

However, as the population is fast urbanising, with the inevitable development of widespread urban-based poverty, this option should only be seen as an initial target.

17.5.3 *Scenario 3*: Rural population in poverty – which requires that eligible rural communities are identified who are permitted to apply for the support. This scenario is broadly similar to scenario 2 except that an effort would be required to exclude better off rural households.

17.5.4 *Scenario 4*: Rural population in extreme poverty – which is similar to scenario 3 except that only those in extreme poverty are prioritised. Distinguishing between those in poverty and extreme poverty will prove difficult in practice – and potentially counterproductive.

17.6 Within each scenario three cost options on the grant value are proposed with the variation based on the percentage of a crude poverty line set. These options recognise that the grant is in fact allocated in respect of both the mother and the child – and should be evaluated against a poverty line based on the individuals covered. However, as the children covered are extremely young the value is set as if only a single person is covered.

17.7 In the short-term this distinction may be immaterial due to fiscal constraints. It is nevertheless appropriate that grant values be set in relation to the full value of multi-dimensional poverty (not merely the crude poverty line) in time. Three options for each scenario are consequently considered:

17.7.1 *Option 1*: 120% (US$72 per family per month) of the crude poverty line – in order to provide for both the mother and the child.

17.7.2 *Option 2*: 50% (US$30 per family per month) of the crude poverty line; and

17.7.3 *Option 3*: 25% (US$15 per family per month) of the crude poverty line.

17.8 The administration of the cash grants are set at 10% of the grant expenditure in all scenarios and options.

17.9 The results summarised in **Table 17.1** indicate that the cost differences between near universal targeting of everyone in poverty (scenario 1) does not differ substantially from scenario 4, which targets only extreme poverty in rural areas. To the extent that fiscal constraints exist, therefore, it makes sense for universality to be prioritised over the grant value.

17.10 With this in mind option 3 for scenario 1, which results in a total grant expenditure equivalent to 0.9% of GDP, can be considered as a start-up programme. An administration cost of ZMW 107 million is indicated – which should be allocated on a recurrent basis to a formal agency established to administer cash grants.

Table 17.1: Cost scenarios and options for the maternal and newborn social protection package (2014 financial year)

Scenario result line	Results if implemented in 2014			
	Scenarios			
	Scen 1	Scen 2	Scen 3	Scen 4
	OPTION 1 - grant value set at 120% of the poverty line			
Grant value	**72**			
% of crude poverty line @ US$2 per day	**120%**			
Population covered	413 741	404 211	314 880	233 230
Grants required annually	13 653 460	13 338 959	10 391 049	7 696 580
Annual cost of grants US$	983 049 092	960 405 084	748 155 560	554 153 733
Annual cost of grants ZMW	5 162 724 234	5 043 803 653	3 929 123 045	2 910 274 708
Administration cost @ 10% (US$)	98 304 909	96 040 508	74 815 556	55 415 373
Administration cost @ 10% (ZMW)	516 272 423	504 380 365	392 912 305	291 027 471
Total cost (US$)	1 081 354 001	1 056 445 592	822 971 116	609 569 107
Total cost (ZMW)	5 678 996 658	5 548 184 018	4 322 035 350	3 201 302 178
Expenditure as % of GDP	4.2%	4.1%	3.2%	2.4%
	OPTION 2 - grant value set at 60% of poverty line			
Grant value	**30**			
% of crude poverty line @ US$2 per day	**50%**			
Population covered	413 741	404 211	314 880	233 230
Grants required annually	13 653 460	13 338 959	10 391 049	7 696 580
Annual cost of grants US$	409 603 788	400 168 785	311 731 483	230 897 389
Annual cost of grants ZMW	2 151 135 098	2 101 584 855	1 637 134 602	1 212 614 461
Administration cost @ 10% (US$)	40 960 379	40 016 878	31 173 148	23 089 739
Administration cost @ 10% (ZMW)	215 113 510	210 158 486	163 713 460	121 261 446
Total cost (US$)	450 564 167	440 185 663	342 904 632	253 987 128
Total cost (ZMW)	2 366 248 607	2 311 743 341	1 800 848 062	1 333 875 908
Expenditure as % of GDP	1.7%	1.7%	1.3%	1.0%
	OPTION 3 - grant value set at 25% of the poverty line			
Grant value	**15**			
% of crude poverty line @ US$2 per day	**25%**			
Population covered	413 741	404 211	314 880	233 230
Grants required annually	13 653 460	13 338 959	10 391 049	7 696 580
Annual cost of grants US$	204 801 894	200 084 392	155 865 742	115 448 694
Annual cost of grants ZMW	1 075 567 549	1 050 792 428	818 567 301	606 307 231
Administration cost @ 10% (US$)	20 480 189	20 008 439	15 586 574	11 544 869
Administration cost @ 10% (ZMW)	107 556 755	105 079 243	81 856 730	60 630 723
Total cost (US$)	225 282 084	220 092 832	171 452 316	126 993 564
Total cost (ZMW)	1 183 124 304	1 155 871 670	900 424 031	666 937 954
Expenditure as % of GDP	0.9%	0.9%	0.7%	0.5%

18. HEALTH AND NUTRITION

18.1 Zambia is in the process of implementing a comprehensive health and nutrition package including for maternal and child health (see **Table 11.8** and**Table 14.**4). The costing for the expanded package is outlined in **Table 14.5.** In this section consideration is given to the costing of a more enhanced package than outlined in **Table 14.5**. The package components involve:

18.1.1 Maternal and neonatal health;

18.1.2 Child health; and

18.1.3 Cross-cutting services (including nutrition supplementation).

18.2 Using the analyses of the MCDMCH and the MOH (2013) the shortfall in the 2016 target is estimated and extrapolated to the full cost on a pro-rata basis. The shortfall from a complete package is provided in **Table 18.1** (last column) indicating that the proposed 2016 target package is roughly 82.9% of a complete package.

18.3 The required complete package is reflected for both 2016 and 2014, with the difference in expenditure attributable to population growth. The per capita cost is US$15.12 compared to the existing target of US$12.53.

18.4 It is assumed that once this package is achieved a substantial reduction in maternal and newborn morbidity and mortality is probable. Importantly, the improved access to nutrition and ANC services will substantially improve the development of foetus and infants with long-term implications for poverty.

18.5 If the complete package were implemented in 2014 expenditure will rise by 170.1% from the 2012 baseline of US$84 million (ZMW442 million) to US$227 million (ZMW1,193 million). Overall expenditure in this package will rise from 0.4% to 0.9% of GDP.

Table 18.1: Cost analysis for the maternal and newborn health protection package (US$ '000)

Focus	High Impact	Baseline Expenditure	Existing target	100.0% of a complete package		Existing target as a % of a complete package*
Area	**Interventions**	**2012**	**2016**	**2016**	**2014**	**By 2016**
Maternal & neonatal health	ANC	4 769	5 987	7 484	7 054	80.0%
	Delivery care	47 475	55 705	55 705	52 506	100.0%
	Neonatal preventive	124	308	385	363	80.0%
	Neonatal curative	168	211	263.75	249	80.0%
	Newborn care	641	8 757	10 946	10 318	80.0%
	Long-lasting insecticide nets (LLINs)	2 937	3 256	4 070	3 836	80.0%
	PMTCT	2 188	3 141	3 926	3 701	80.0%
	FP & Reproductive health	11 644	14 916	17 344	16 348	86.0%
	Sub-Total	*69 947*	*92 281*	*100 124*	*94 374*	*92.2%*
Child health	Case management of illnesses (Pneumonia, malaria, diarrhoea)	842	12 469	15 586	14 691	80.0%
	Immunization (including. PCV, Rota)	1 249	14 112	17 640	16 627	80.0%
	Paediatric AIDS	327	2 074	2 593	2 444	80.0%
	Sub-Total	2 418	28 655	35 819	33 762	*80.0%*
Cross-cutting	Nutrition (EBF, Micronutrients, malnutrition)	308	9 107	9 107	8 584	100.0%
	WASH (Sanitation, safe water, hand washing)	2 117	20 352	25 440	23 979	80.0%
	Systems strengthening	9 290	49 309	70 441	66 396	70.0%
	Sub-Total	*11 715*	*78 768*	*104 988*	*98 959*	*75.0%*
	TOTAL	84 080	199 704	240 931	227 095	82.9%
	% of GDP	*0.4%*	*0.7%*	*0.8%*	*0.9%*	
	Per capita (US$)	*6.47*	*12.53*	*15.12*	*15.12*	

*Derived from reviewing the official targets and gaps identified in **Table 11.8** and**Table 14.**4.

19. PREFERRED OPTION

19.1 Zambia has an existing health service platform which can be expended to offer a complete healthcare package for maternal and newborn health care. However the social protection platform still needs to be developed to allow it to allocate grants on a scale required to deal with the prevailing social and economic conditions.

19.2 Consideration can therefore be given to boosting the supply of maternal and child services to 0.9% of GDP over time while implementing an entry-level cash grant scheme focused on maternal and child health with minimal targeting (i.e. consistent with scenario 1). The cash grant scheme can be deepened over time as economic growth provides fiscal space.

19.3 Annually the cash grant scheme will provide income support to roughly 1.4 million families at any point in time together with a scheme guaranteeing universal access to a good quality maternal and child health and nutrition package. Both programmes would cost roughly 1.8% of GDP.

19.4 The combined impact of these programmes targeted on the critical periods of pregnancy and infancy will, assuming good governance of implementation, achieve a systemic improvement in child health in the medium term and impact on poverty in the long-term.

Table 19.1: Cost of preferred package for achievement over the medium-term (2014 financial year and population)

Package component	2014	
	US$	**KMW**
Social protection package	225 282 084	1 183 124 304
Maternal package	94 374 015	495 628 363
Child health package	33 761 665	177 307 693
Cross-cutting health services	98 958 902	519 707 026
Total	**452 376 665**	**2 375 767 385**
% of GDP	**1.7%**	

20. IMPLEMENTATION ISSUES

20.1 The preferred approach requires that consideration be given to the establishment of a formal administrative structure dedicated to the allocation of cash transfers underpinned by a legislative framework clearly laying out the rights and obligations of all concerned. A significant expansion of the cash transfer programme is unlikely without this intervention. Nevertheless, an interim expansion could be considered while the appropriate legislation and administrative structures are put in place.

20.2 The legislative framework is also needed to specify *inter-alia*: the grant entitlements (values and indexation); any criteria for targeting and eligibility assessments; administrative procedures (to ensure fairness); and complaints and adjudication frameworks. The administrative arrangements should have their own dedicated legislative framework from the benefits.

20.3 The targeting regime is an important administrative feature of the social protection regime. The most efficient route forward is to permit the grant to be universal, but based on a formal application process. This will result in the self-selection of those who need the grant claiming it. Higher income earners are unlikely to make an effort over a financial allocation that is relatively small in relation to their income. To the extent that there is likely to be some errors of inclusion, the tax regime should be adjusted slightly to precisely achieve the desired targeting.

20.4 The health service expansion has been costed and focused on specific inputs, outputs and outcomes. However, no apparent structures exist to ensure that any expansion in the budget will realise the required objectives. This is especially important where the maternal and child health aspects of the health budget cannot be clearly distinguished from other health services. To ensure the sustainability of the "programme" therefore consideration has to be given to the integration of the following functions with respect to maternal and child health:

20.4.1 Financial planning;

20.4.2 Service planning;

20.4.3 Workforce planning;

20.4.4 Budget allocations, including conditionalities; and

20.4.5 Reporting frameworks (based on the indicators used for planning and underpinned by the conditionalities tied into the budget allocation process.

20.5 In the absence of the above it will be nearly impossible to ensure that the health interventions are properly governed – with inevitable efficiency consequences. The package for maternal and child health services should also be framed legislatively as a set of minimum entitlements relating to access, the services that should be expected at all service points, complaints processes, community involvement in decision-making and oversight, and the right to information on performance.

20.6 In summary, both the social protection and health platforms require the establishment of a formal institutional framework incorporating legislation, delivery platforms, community involvement, complaints processes, and reporting

frameworks. The ongoing maintenance of the priority area requires that planning processes be integrated with implementation arrangements to permit ongoing programme adjustments. Whereas any programme of cash grants can be expected to involve dedicated institutional structures, health priorities are not always easily differentiable. Special attention is therefore required to ensure that this is achieved in a cost-effective manner.

PART F - SUMMARY OF FINDINGS

Provides a summary of the key project findings.

21. MOTIVATION

21.1 The protection of pregnant women is recognised as an important individual right and social need, as articulated by the International Labour Organisation Convention no. 183 of 2000. However, protection for pregnant women is often poorly prioritised in low- and middle-income countries (LMICs) despite strong evidence for cost-effective interventions.

21.2 Zambia is characterised by widespread poverty, income inequality and poor health outcomes, including maternal and neonatal mortality. However, Zambia has also experienced sustained economic growth, and the expanding fiscal space should enable it to develop interventions to address both income poverty and poor health outcomes.

21.3 The objective of this project is to consider the priorities for Zambia in achieving adequate protection for pregnant women and their newborn babies, as envisaged by Convention no. 183, focusing on those women not able to access contributory schemes.

22. BACKGROUND

22.1 Pregnancy and infancy are periods of increased vulnerability needing:

22.2 Increased income to be able to access goods and services necessary for the general protection of the mother and her child.

22.3 Adequate nutrition to ensure the healthy development of the mother, the foetus, and the child particularly within the first two-years of life.

22.4 Access to Health services for essential health-related interventions and nutritional support.

22.5 Where these need are not met due to social or economic conditions, both the mother and the child are at substantial risk. Failure to provide adequate nutrition and health care to women, newborns and infants from conception to the first two years have permanent effects on the cognitive and health status of children which cannot be compensated for by subsequent interventions.

22.6 Poverty and its consequences are complex and multifaceted requiring holistic or integrated strategies. To be effective, the implementation of an integrated social protection package to support pregnant women, newborns, and children to age two, needs to be delivered at scale and incorporate explicit income, nutrition and health service interventions. This implies formal government programming and the development of a capable governance and delivery framework for maternity protection.

22.7 Programmes for supporting vulnerable pregnant women and their infants have been developed in a number of other LMICs. The evidence we review indicates that such programmes can impact on improving priority maternal and child outcomes.

22.8 The findings suggest that addressing the vulnerabilities associated with pregnancy and infancy provide a pathway for a low- to middle-income country address systemic poverty and promote human and economic development

22.9 The integrated strategic framework and approach we propose includes;

22.10 A general cash transfer to provide a baseline level of support for households and to reduce barriers to accessing the health platform.

22.11 The health platform as the key delivery mechanism for the non-cash components of the package including health services and nutritional support.

23. STRATEGIC CASE

23.1 Pregnancy and infancy are periods of increased vulnerability needing:

23.1.1 *Increased income* to be able to access goods and services necessary for the general protection of the mother and her child.

23.1.2 *Adequate nutrition* to ensure the healthy development of the mother, the foetus, and the child particularly within the first two-years of life.

23.1.3 *Access to Health services* for essential health-related interventions and nutritional support.

23.2 Where these needs are not met due to social or economic conditions, both the mother and the child are at substantial risk. Failure to provide adequate nutrition and health care to women, newborns and infants from conception to the first two years have permanent effects on the cognitive and health status of children which cannot be compensated for by subsequent interventions.

23.3 Poverty and its consequences are complex and multifaceted requiring holistic or integrated strategies. To be effective, the implementation of an integrated social protection package to support pregnant women, newborns, and children to age two, needs to be delivered at scale and incorporate explicit income, nutrition and health service interventions. This implies formal government programming and the development of a capable governance and delivery framework for maternity protection.

23.4 Programmes for supporting vulnerable pregnant women and their infants have been developed in a number of other LMICs. The evidence we review indicates that such programmes can impact on improving priority maternal and child outcomes.

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23.6 The integrated strategic framework and approach we propose includes;

23.6.1 A general cash transfer to provide a baseline level of support for households and to reduce barriers to accessing the health platform.

23.6.2 The health platform as the key delivery mechanism for the non-cash components of the package including health services and nutritional support.

24. SITUATIONAL ANALYSIS

24.1 There is significant need for maternity protection in Zambia. Of the total estimated number of births for 2014 391,913 will be to mothers in poverty and 274,015 to mothers in extreme poverty. The majority of births in poverty occur in rural areas.

24.2 Current programmes for providing social protection, nutritional support and health services to pregnant women in Zambia have had limited impact.

24.3 Central to the challenge of adequate maternal protection within Zambia are the poor general levels of social protection within the country as a whole despite good evidence that non-contributory social protection arrangements are able to substantially mitigate the wide-ranging effects of income poverty.

24.4 The main social protection programmes in Zambia providing cash transfers and nutritional support are: the *Public Welfare Assistance Scheme,* the *Social Cash Transfer Scheme*, and the S*chool Feeding Scheme.* Although these schemes undoubtedly offer some relief to extremely poor families they are criticised for their coverage, depth, and administrative sustainability. No programme of any scale is presently in place and no institutional platform has been developed to expand coverage beyond a minute proportion of the population in need.

24.5 Zambia is one of 36 countries with stunting rates in excess of 20% and is identified by the World Health Organisation as achieving "*insufficient progress*" toward the achievement of nutritional goals. Nutrition strategies lack an effective delivery platform in Zambia and are not integrated with other poverty strategies. Funding is fragmented as are the programmes with the area allocated a low policy priority when assessed against governance and funding decisions.

24.6 With regard to medical care for pregnant women there are a number of significant weaknesses. Maternal mortality is still very high with approximately one maternal death for every 200 deliveries. Maternal mortality is declining but the rate of decline is too slow to achieve MDG-5. Neonatal mortality is also unacceptably high with little improvement in two decades.

24.7 The package of maternal health services required to address maternal health is well understood, internationally and for Zambia. However, the coverage of the package is inadequate at present. The majority of pregnant women do not receive the optimal package of care with identified high impact interventions. There are problems along the entire continuum of care but particularly important are late antenatal care attendance and low rates of delivery by a skilled birth attendant that have also not improved in two decades. There are also significant inequalities in access to an optimal maternal health package. The coverage gaps are most marked in rural areas and for the poorest women.

24.8 The main weaknesses derive from failings in the underlying health service delivery platform including: persistent geographical and financial barriers to access, particularly for poor and rural women; insufficient numbers of health care facilities providing maternity care; large shortages in health workers particularly in rural areas; and inadequate health care financing to provide an essential package of care

25. PACKAGE OPTIONS

Social protection

25.1 The four scenarios are considered:

25.1.1 *Scenario 1*: Total population in poverty - which provides an indication of a broad-based programme able to directly or indirectly target the population shown to be in poverty.

Indirect targeting would see the implementation of a universal benefit with a tax clawback for income earners. A means-tested system will involve costly administrative procedures with inevitable errors of inclusion and exclusion.

25.1.2 *Scenario 2*: Rural population – which focuses on a population group that is explicitly facing systemic poverty challenges. To minimise the need for an expensive targeting mechanism it is proposed that a benefit be offered to all rural inhabitants regardless of income.

The benefit should require a formal application process to access it. Self-selection would result in fewer well-off applicants.

However, as the population is fast urbanising, with the inevitable development of widespread urban-based poverty, this option should only be seen as an initial target.

25.1.3 *Scenario 3*: Rural population in poverty – which requires that eligible rural communities are identified who are permitted to apply for the support. This scenario is broadly similar to scenario 2 except that an effort would be required to exclude better off rural households.

25.1.4 *Scenario 4*: Rural population in extreme poverty – which is similar to scenario 3 except that only those in extreme poverty are prioritised. Distinguishing between those in poverty and extreme poverty will prove difficult in practice – and potentially counterproductive.

25.2 Within each scenario three cost options on the grant value are proposed with the variation based on the percentage of a crude poverty line set. These options recognise that the grant is in fact allocated in respect of both the mother and the child – and should be evaluated against a poverty line based on the individuals covered. However, as the children covered are extremely young the value is set as if only a single person is covered.

25.3 In the short-term this distinction may be immaterial due to fiscal constraints. It is nevertheless appropriate that grant values be set in relation to the full value of multi-dimensional poverty (not merely the crude poverty line) in time. Three options for each scenario are consequently considered:

25.3.1 *Option 1*: 120% (US$72 per family per month) of the crude poverty line – in order to provide for both the mother and the child.

25.3.2 *Option 2*: 50% (US$30 per family per month) of the crude poverty line; and

25.3.3 *Option 3*: 25% (US$15 per family per month) of the crude poverty line.

25.4 The administration of the cash grants are set at 10% of the grant expenditure in all scenarios and options.

25.5 The results summarised in **Table 17.1** indicate that the cost differences between near universal targeting of everyone in poverty (scenario 1) does not differ substantially from scenario 4, which targets only extreme poverty in rural areas. To the extent that fiscal constraints exist, therefore, it makes sense for universality to be prioritised over the grant value.

25.6 With this in mind option 3 for scenario 1, which results in a total grant expenditure equivalent to 0.9% of GDP, can be considered as a start-up programme. An administration cost of ZMW 107 million is indicated – which should be allocated on a recurrent basis to a formal agency established to administer cash grants.

Health package

25.7 Zambia is in the process of implementing a comprehensive health and nutrition package including for maternal and child health (see **Table 11.8** and**Table 14.**4). The costing for the expanded package is outlined in **Table 14.5.** The package components involve:

25.7.1 Maternal and neonatal health;

25.7.2 Child health; and

25.7.3 Cross-cutting services (including nutrition supplementation).

25.8 Using the analyses of the MCDMCH and the MOH (2013) the shortfall in the 2016 target is estimated and extrapolated to the full cost on a pro-rata basis. The shortfall from a complete package is provided in **Table 18.1** (last column) indicating that the proposed 2016 target package is roughly 82.9% of a complete package.

25.9 The required complete package is reflected for both 2016 and 2014, with the difference in expenditure attributable to population growth. The resulting per capita cost is US$15.12 compared to the existing target of US$12.53.

25.10 It is assumed that once this package is achieved a substantial reduction in maternal and newborn morbidity and mortality is probable. Importantly, the improved access to nutrition and ANC services will substantially improve the development of foetus and infants with long-term implications for poverty.

25.11 If the complete package were implemented in 2014 expenditure will rise by 170.1% from the 2012 baseline of US$84 million (ZMW442 million) to US$227 million (ZMW1,193 million). Overall expenditure in this package will rise from 0.4% to 0.9% of GDP.

26. PREFERRED OPTION

26.1 Zambia has an existing health service platform which can be expended to offer a complete healthcare package for maternal and newborn health care. However the social protection platform still needs to be developed to allow it to allocate grants on a scale required to deal with the prevailing social and economic conditions.

26.2 Consideration can therefore be given to boosting the supply of maternal and child services to 0.9% of GDP over time while implementing an entry-level cash grant scheme focused on maternal and child health with minimal targeting (i.e. consistent with scenario 1). The cash grant scheme can be deepened over time as economic growth provides fiscal space.

26.3 Annually the cash grant scheme will provide income support to roughly 1.4 million families at any point in time together with a scheme guaranteeing universal access to a good quality maternal and child health and nutrition package. Both programmes would cost roughly 1.8% of GDP.

26.4 The combined impact of these programmes targeted on the critical periods of pregnancy and infancy will, assuming good governance of implementation, achieve a systemic improvement in child health in the medium term and impact on poverty in the long-term.

27. IMPLEMENTATION ISSUES

27.1 The preferred approach requires that consideration be given to the establishment of a formal administrative structure dedicated to the allocation of cash transfers underpinned by a legislative framework clearly laying out the rights and obligations of all concerned. A significant expansion of the cash transfer programme is unlikely without this intervention. Nevertheless, an interim expansion could be considered while the appropriate legislation and administrative structures are put in place.

27.2 The legislative framework is also needed to specify *inter-alia*: the grant entitlements (values and indexation); any criteria for targeting and eligibility assessments; administrative procedures (to ensure fairness); and complaints and adjudication frameworks. The administrative arrangements should have their own dedicated legislative framework from the benefits.

27.3 The targeting regime is an important administrative feature of the social protection regime. The most efficient route forward is to permit the grant to be universal, but based on a formal application process. This will result in the self-selection of those who need the grant claiming it. Higher income earners are unlikely to make an effort over a financial allocation that is relatively small in relation to their income. To the extent that there is likely to be some errors of inclusion, the tax regime should be adjusted slightly to precisely achieve the desired targeting.

27.4 The health service expansion has been costed and focused on specific inputs, outputs and outcomes. However, no apparent structures exist to ensure that any expansion in the budget will realise the required objectives. This is especially important where the maternal and child health aspects of the health budget cannot be clearly distinguished from other health services. To ensure the sustainability of the "programme" therefore consideration has to be given to the integration of the following functions with respect to maternal and child health:

- 27.4.1 Financial planning;
- 27.4.2 Service planning;
- 27.4.3 Workforce planning;
- 27.4.4 Budget allocations, including conditionalities; and
- 27.4.5 Reporting frameworks (based on the indicators used for planning and underpinned by the conditionalities tied into the budget allocation process.

27.5 In the absence of the above it will be nearly impossible to ensure that the health interventions are properly governed – with inevitable efficiency consequences. The package for maternal and child health services should also be framed legislatively as a set of minimum entitlements relating to access, the services that should be expected at all service points, complaints processes, community involvement in decision-making and oversight, and the right to information on performance.

27.6 In summary, both the social protection and health platforms require the establishment of a formal institutional framework incorporating legislation, delivery platforms, community involvement, complaints processes, and reporting

frameworks. The ongoing maintenance of the priority area requires that planning processes be integrated with implementation arrangements to permit ongoing programme adjustments. Whereas any programme of cash grants can be expected to involve dedicated institutional structures, health priorities are not always easily differentiable. Special attention is therefore required to ensure that this is achieved in a cost-effective manner.

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