# Beyond survival: The role of health care in promoting ECD

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The public health care system reaches more children and their families during the first three years of life than any other service. It thus has a specific responsibility to use these contact opportunities to strengthen families' efforts to promote the health, growth and development of children.

During the early years, children exhibit great plasticity[i] and respond better to intervention and stimulation than at any other time in life. However, the health sector has been slow to recognise its role in delivering an essential package of early childhood development (ECD) services (see the essay on pp. 26 – 33). Many health professionals still confuse ECD services with early childhood education, while others equate ECD with developmental screening.

In reality, ECD services should foster physical growth, social and emotional development, language and cognitive skills. Ensuring children's optimal development across all these domains is a major objective of the health service. Good antenatal care, breastfeeding, growth monitoring and immunisation should be considered core ECD interventions, as should efforts to support neuro-cognitive development.[ii]

The Department of Health does not refer to any of its interventions as ECD services, nor did it explicitly align itself with the vision outlined in the National Integrated Plan for ECD 2005 – 2010. However, recent policy initiatives such as National Health Insurance (NHI) and primary health care (PHC) re-engineering offer opportunities for the health system to assume a lead role in the provision of essential early childhood interventions, particularly in the critical first 1,000 days.[iii]

This essay highlights the pivotal role of the health care system in ECD service delivery, and attempts to answer the following critical questions:

- What are the early risk factors for poor child health and development?
- Why should the health sector play a lead role in ECD services?
- What are essential health sector-led actions for promoting ECD?
- What are the opportunities and barriers to effective service delivery in the health sector?

## What are the early risk factors for poor child health and development?

Many factors disrupt early child health and development. Four risks affect at least a quarter of young children in developing countries: malnutrition that is chronic and severe enough to cause stunting, inadequate stimulation or learning opportunities, and iron and iodine deficiencies.[1] Other recognised risks include malaria, worm infestations, maternal depression, intrauterine growth restriction[iv] and exposure to violence and environmental toxins.[2] Poverty is a pervasive underlying risk.

South Africa's children are unduly affected by HIV/AIDS and tuberculosis, either directly through infection or indirectly through illness or death of their caregivers. Despite antiretroviral therapy, HIV-infected children's growth and development often lag behind their peers.[3] Over a quarter of the country's child population are exposed to (but not infected by) HIV[4] and are at increased risk of economic, social and food insecurity.[5]

A single risk factor does not necessarily lead to poor health and development outcomes.[6] Risk factors are cumulative, interactive and tend to compound each other; the more adversity children experience, the more likely they will suffer poor outcomes. Many risks cluster in the same individuals.

## Why should the health sector play a lead role in ECD services?

There are two main ways in which health and child development interact. One is the effect of poor health on the development of children, and the other is the health sector's potential to promote optimal child development.

The health care system provides the only existing public infrastructure in South Africa to reach all children under three years regularly, and health care encounters offer an ideal opportunity for professionals to have a positive influence on the development of young children. Health care providers can influence the health of the growing foetus through antenatal care, the infant immediately after birth, and the young child through regular clinic visits. Health care encounters can also act as a gateway to other services such as social grants, child protection and psychological care.

i "Plasticity" refers to the brain's ability to change as a result of experience.
ii The development of the brain and thinking skills.
iii Pregnancy and the first two years of life.
iv "Intrauterine growth restriction" refers to the poor growth of a baby while in the mother's womb. Specifically, it means the developing baby weighs less than 90% of other babies at the same gestational age.

The role of the health sector in promoting optimal nutrition, disease prevention and control is well recognised. All infants in South Africa should be immunised four times in the first year of life. Monthly well-baby visits (for services such as growth monitoring, oral health and developmental screening) are encouraged and sick child visits may also occur. Further well-child visits are scheduled for older children, but up-take is poor.

As child survival improves, the health sector increasingly must regard the optimal development of all children as a key outcome. As trusted sources of information and support, skilled health workers can help families understand the importance of child development, and provide guidance and support to caregivers.

## What are essential health sector-led actions for promoting ECD?

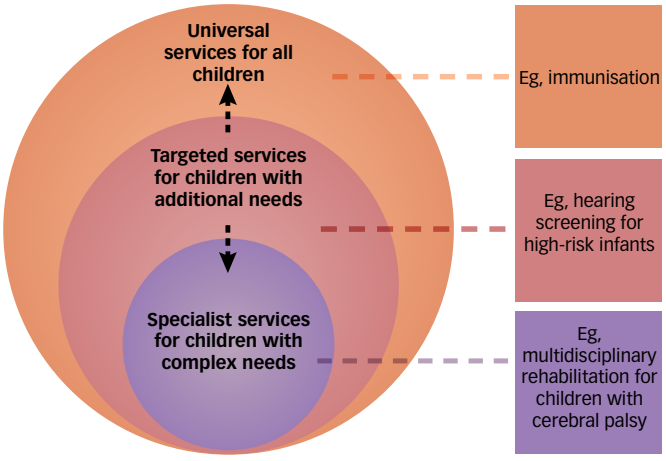
A review[7] of health programmes to support ECD service delivery in disadvantaged settings concluded that effective programmes should:

- focus on the first two to three years of life as this has the greatest impact on future growth and development;
- target children who are most at risk, as improvements are greatest in the poor and undernourished;
- involve parents and other caregivers in improving the child's care; and
- combine interventions such as promoting nutrition, mother–child interactions and psycho-social development.

### Levels of health provisioning for young children

ECD should be regarded as a progressive universal[v] service. It should comprise a universal prevention and early identification service offered to all young children and families, and a smaller subset of specialist services for those with specific needs and risks (see figure 5). Children's needs are not fixed but can alter as circumstances change and children may move back and forth between different levels of service. An effective ECD system should be able to identify children at high risk and ensure their families receive a personalised service.

**Figure 5: Progressive universalism in child health services**




**Case 5: Gauteng initiatives for early childhood intervention**

In 2010, the Rehabilitation Directorate of the Gauteng Department of Health started a consultative process on early childhood intervention (ECI) as many children were not identified or referred early enough for much needed therapeutic and support services.

In response, a provincial multidisciplinary task team on ECI was formed, comprising representatives from the therapeutic professions; social workers; academics in child health and development; and the provincial Health, Social Development and Education departments. The Gauteng Early Childhood Development Institute and the Office of the Premier are also represented.

Over the past two years a framework for delivering ECI in Gauteng has been developed in consultation with health professionals. With no additional financial or human resource investment, most districts in Gauteng have implemented targeted ECI programmes. These range from hearing screening for high-risk infants in tertiary and secondary hospitals, to support groups for parents of children with disabilities and developmental delay, and workshops for parents on how to make toys from recyclable waste.

At district level, therapists have provided screening and intervention for children, and trained early educators to identify and support children with developmental difficulties and disabilities.

The enthusiasm and innovation that health professionals have shown in developing ECI initiatives is encouraging and suggest that such initiatives could be introduced in all provinces if the required strategic framework, guidance, support and resources are provided.

### Early identification and intervention

Current services focus on rehabilitating health and developmental problems. Children with developmental problems or disabilities are often identified too late, and there are numerous difficulties in ensuring that they receive the required intervention and support.[8]

By addressing problems early in life, and intervening as soon as possible, the negative effects of risk factors (eg low birth weight, illness or developmental delay) are likely to be reduced.

At a local level, some coordinated attempts have been made to promote ECD within the public health service, including the Gauteng Early Childhood Intervention task team (see case 5) which aims to strengthen prevention and early intervention services.

### The role of primary health care

The new Road-to-Health booklet includes a simple monitoring chart that clinic staff can use to track children's progress in relation to developmental milestones. This can be used to raise awareness of what a healthy child should be able to do at different stages

v The concept of progressive universalism refers to the provision of support for all along a continuum, with more support for those who need it most.

of development, but it is not clear how well it is implemented. Children who are not progressing should then be referred to early intervention services.

Some international programmes use screening tests to identify children with potential developmental delays.[9] However these tests are difficult to design and standards are affected by cultural and family practices.

Currently, developmental assessments are not routinely carried out at PHC level and there are shortages of appropriately skilled staff and resources to conduct assessments and provide follow-up care. Providing support for children with disabilities or developmental delays is a complex process. It requires high quality assessments by trained professionals; effective information-sharing and collaboration by practitioners; working with parents to develop joint action plans; locating needed services within and beyond the clinic or hospital; arranging successful referrals; and conducting on-going monitoring and evaluation of intervention impacts.[10] Rehabilitation services are thinly spread and not available at over 70% of public health facilities.[11] In the absence of integrated, readily available and accessible early intervention services, the World Health Organisation has recommended the use of a counselling approach. This builds on the integrated management of childhood illness (IMCI) counselling process, by including a Care for Child Development module, as outlined in case 6.[12] In addition, referral mechanisms and specialist services need to be strengthened.

### Community-based health interventions

Many health promotion and prevention strategies are ideally delivered through community-based interventions. Community health workers (CHWs) are a critical component of PHC re-engineering, and it is envisaged that they will support early development, promote good parenting, and refer children to services when required. However, there is a significant risk that these responsibilities may be unrealistic and overwhelming since their roles will not be restricted to maternal and child health.

Non-governmental ECD organisations have successfully used community agents to deliver home-based ECD initiatives to children outside formal ECD centres,[19] which generally have a limited health focus. The ECD community agent operates within an ever-expanding range of mid-level workers providing services at a home- and community-based level. Due consideration would have to be given to the overlap of roles (with other community agents); coordination and regulation of these workers at a district or ward level; as well as whether a discrete package of ECD services delivered by these workers would be most effective when implemented as a vertical or an integrated service.

### Integrated child health services

Over the past two decades there has been a shift from treating diseases to preventing illness by providing a continuum of care from homes and communities to clinics and hospitals. There has also been a move to integrate different child health programmes by linking key interventions into existing services. This approach reduces costs, increases efficiency and achieves better outcomes, particularly for children who "fall through the gaps".[20]

However ECD interventions (such as nutrition, health promotion and child development) are currently provided in separate maternal, reproductive, child health, HIV/AIDS, nutrition and health promotion programmes. A more ambitious and comprehensive approach would be to integrate all these services under a mother and child (or family) umbrella. Figure 6 illustrates one such integrated package delivered at community, primary care and hospital levels. It deliberately differentiates "traditional" services from those with a "developmental" focus (highlighted in *italics*). Traditional services have long been offered by the health service (with variable success), while the developmental interventions would require new and/or specific actions to ensure effective delivery.

### Case 6: Care for Child Development

The Care for Child Development module focuses on what caregivers can do to respond to their children's needs, and introduces activities to stimulate children's physical growth and intellectual and social development. Where specialised services are available, children with difficulties and delays can be referred to professionals for further assessment and support.

Studies have shown the effectiveness of the module in improving the quality of health professionals' interaction with caregivers. Trials in Brazil,[13] South Africa,[14] and Turkey[15] have found that it took relatively little time (7 – 11 additional minutes per consultation), resulted in increased satisfaction with health care visits, and increased participation in other visits. A home visit, one month after the intervention, found significantly more homemade toys, and children being read to.[16] This is an attractive approach for South Africa as it allows health professionals with limited skills and experience in child development to identify and respond to growth or developmental faltering. Using what is already available, and building on the skills and strengths within the family unit, it enables caregivers to provide age-appropriate and responsive care to young children.

Overburdened facility-based health workers do not prioritise child development and assess it routinely,[17] and many health workers display an aversion to counselling activities.[18] So it is worth exploring the feasibility of community health workers using the module at household level.

**Figure 6: Integrating ECD services into the package of maternal, newborn and child health**

Places of caregiving

| | Pre-pregnancy | Pregnancy | Newborn/postnatal | Childhood |
|---|---|---|---|---|
| Clinical | • Contraception<br>• Sexually-transmitted infections case management<br>• HIV counselling and testing | • Termination of pregnancy<br>• Antenatal care<br>• HIV services, including antiretroviral treatment and prevention of mother-to-child transmission<br>• *Mental health screening*<br>• *Counselling on feeding choice after delivery* | • Institutional delivery<br>• Emergency obstetric and newborn care<br>• Prevention of mother-to-child transmission of HIV<br>• Extra care of pre-term babies (eg kangaroo mother-care)<br>• Contraception<br>• *Maternal mental health screening*<br>• *Social support for parents*<br>• *Breastfeeding support*<br>• *Maternal and neonatal infection prevention (education and screening)* | • Hospital care of childhood illness<br>• HIV care and antiretroviral treatment for mother and child<br>• *Early intervention for children with identified developmental problems or disabilities* |
| Outreach/outpatient | • Contraception<br>• HIV and sexually-transmitted infections prevention<br>• *Folic acid for women of child-bearing age* | • *Nutrition and micronutrient supplementation*<br>• *Counselling on obstetric "danger signs", birth preparedness, post-delivery feeding choices or practices*<br>• *Mental health screening* | • Early detection and referral of maternal and newborn illness<br>• Additional care and support for "high-risk" babies (eg low birth weight, prematurity and those with established disabilities)<br>• Prevention of mother-to-child transmission of HIV<br>• *Nutrition counselling and supplementation (where required)*<br>• *Counselling on key caregiving practices that promote child health, growth and development*<br>• *Integrated management of childhood illness: Care for Child Development module* | • Immunisation<br>• Growth monitoring, nutrition support, vitamin A supplementation and deworming<br>• Integrated management of childhood illness: Chronic illness<br>• *Breastfeeding support*<br>• *Child development screening (Road-to-Health booklet)*<br>• *Integrated management of childhood illness: Care for Child Development module (well- and sick-baby visits)*<br>• *Outreach to early care and education settings to provide screening or assessment; care and support to children with disabilities; and education of staff on appropriate care and intervention*<br>• *School health screening and health promotion* |
| Family/community | • Family planning awareness and education<br>• HIV and sexually-transmitted infections prevention<br>• *Adolescent nutrition*<br>• *Education and promotion on adolescent sexuality and health* | • *Promotion of key caregiving practices*<br>• *Mental health screening*<br>• *Promotion of adequate maternal nutrition* | • *Promotion of key newborn care and hygiene practices*<br>• *Promotion of key caregiving practices*<br>• *Maternal mental health screening* | • Integrated school health programme<br>• *Promotion of key caregiving practices*<br>• *Early detection, referral and intervention for childhood illness and developmental problems*<br>• *Injury prevention* |

Caregiving throughout the lifecycle

**Source**: Adapted from: Kinney MV, Kerber KJ, Black RE, Cohen B, Nkrumah F, Coovadia H, Nampala PM & Lawn JE, on behalf of the Science in Action: Saving the lives of Africa's mothers, newborns, and children working group (2010) Sub-Saharan Africa's mothers, newborns, and children: Where and why do they die? *PLoS Medicine*, 7(6): e1000294. doi:10.1371/journal.pmed.1000294.

Despite calls for integrated care, there are only a handful of efficacy trials and even fewer examples of integrated interventions that have been taken to scale.[20] The re-engineering of PHC, with its focus on district-based specialist teams, school health services and community health workers, provides an ideal opportunity to test new models of integrated delivery in a local context.

## What are the opportunities and barriers to effective service delivery in the health sector?

For integrated ECD interventions to be successful, a variety of challenges must be addressed. These include the work-load of staff and supervisors, especially CHWs, and communication and coordination among different sectors. ECD service delivery in the health system also requires a paradigm shift from a "sick-care" to a "well-care" approach,[2] and a fundamental shift in the way health professionals and health services interact with children and caregivers.

Table 6 identifies what is needed to strengthen the delivery of ECD services across the continuum of care, and outlines the current situation as well as medium- and long-term goals.

Some critical investments required to promote ECD within the health sector are:

- Increased availability of required human resources (all cadres), particularly at clinic and community level.

**Table 6: Strengthening the delivery of ECD services in maternal and child health**

| | Current situation | Possible situation (medium term) | Future situation (long term) |
|---|---|---|---|
| Prioritising child health | Limited focus on maternal and children's primary care services, despite political commitment. | A special focus on improving maternal (antenatal) and children's health services. | Maternal and child health considered an explicit priority in all health system planning. |
| | No core programme or package of services supporting maternal and child health and development. | Minimum core programme or set of interventions (universal package of services). | Universal core package, plus programme and services to meet different needs and risks (progressive universalism). |
| | Variation of service provision according to location. | Less provincial and district variation in service provision (greater equity). | Variation in provision according to individual need. |
| Coordination | Separation of maternal and child services, and different types of services (eg growth monitoring, immunisation, developmental screening). Changes introduced independently, responsible to different directorates, with little overlap. | Integration of various maternal and child clinical services and programmes, within an age-specific package, in a continuum of care framework. | Better integration and information-sharing between maternal and child services, as well as reproductive, school health and mental health services. |
| Redefining health: from treatment to prevention | A focus on treatment. | A focus on surveillance and health promotion and prevention. | A greater focus on parenting/caregiving support, as well as surveillance and health promotion/prevention. |
| | Limited needs assessment. | Active assessment of current need. | Assessment of current need and future risk. |
| | Little attention to individual needs during consultation. | A focus on individual health promotion during face-to-face contact in various settings. | Consultations use skills and tools that promote behaviour change. Better use of media and social communication tools. |
| | A programme that deals opportunistically with problems. | A programme that identifies and addresses problems, deficits and risks. | A programme that seeks and builds on individual strengths and protective factors – as well as ameliorating risks. |
| | Well-child service centred on immunisation. | Well-child schedule influenced by physical developmental stages and screening tests. | Schedule determined by social and emotional developmental stages, parental receptiveness and parents' priorities. |
| Capacity-building | Programme delivered by nurses (and by doctors for a few). | Programme delivered by a team of health practitioners (eg doctors, dentists, nurses, allied professionals, community health workers). | Programme managed by home visitors (nurses, community health workers), drawing on a range of practitioners, and delivered through homes, primary health care centres and children's centres. |
| | Poor supervision of staff. Little focus on quality improvement and outcomes. | Increased supervision and mentoring. Focus on quality improvement and outcomes. | Regular supervision and mentoring. Monitoring of quality and outcomes of individual practitioners and teams. |

- Expansion of prevention and health promotion programmes, such as the Care for Child Development module of the IMCI, at a facility or community level.
- Coordinated efforts to deliver the majority of ECD services at community level.
- Stronger linkages with early learning programmes to ensure health services (eg screening, immunisation) reach preschool children.
- Reduction of environmental risks to child health, especially through the provision of adequate water, sanitation and electricity.

In particular, the following three actions are critical to improve the reach and quality of essential ECD health services:

- Greater efforts to strengthen services for pregnant women and children in the first 1,000 days of life, with a particular focus on caregiving, community- and home-based care, and support for young children not in ECD centres.
- Improved mechanisms for early identification, referral and intervention for children at risk, especially those with disabilities, and those with emerging conditions or illnesses.
- Creative thinking about how to effectively integrate and package interventions both within the health sector and between the health sector and external partners.

Both the NHI and PHC re-engineering offer opportunities to prioritise the ECD agenda within the health sector and to explore innovative delivery mechanisms for key ECD interventions or services. While the benefits of ECD services are easily recognisable, it is not obvious how best to establish these interventions within an NHI framework. Undoubtedly, this requires champions to develop innovative solutions, demonstrate their feasibility and effectiveness, and to advocate for wider implementation. Although opportunity clearly exists, there are too few champions at present.

## Conclusion

This essay has explored how stronger linkages for the promotion of ECD can be created within and outside the health system. The early intervention task team in Gauteng shows that early intervention services can be strengthened without huge investment if the necessary strategic coordination and guidance are in place. However, for successful outcomes and longevity, ECD services need to be backed with the necessary financial and human resources, and political will to make them priority in the health sector.

With the expansion of community-based services currently underway, much more discussion and advocacy is needed about how to incorporate an ECD lens into the primary health care re-engineering focus on maternal and child health. This essay promotes a vision to work in the long term towards progressive universalism where every child will benefit from the support and services that s/he requires at the right time and in the right place, with seamless transitions of care across the life course.

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