

Early childhood development and the home-care environment in the pre-school years

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Introduction: objectives and scope

The early years of life are a particularly sensitive period for survival, growth and psychosocial development. If the contexts in which young children grow up are not supportive, their later participation and inclusion in society may be severely compromised. This chapter provides indicators, measures and data sources for monitoring the well-being of young children, including the accessibility and quality of service provision for children under school-going age.

Early Childhood Development (ECD) is defined in the *White Paper on Education and Training* as the processes by which children from birth to about nine years grow and thrive – physically, mentally, emotionally, spiritually, morally and socially (DoE, 1995). The *Interim Policy on ECD* stated that the term ECD:

conveys the importance of a holistic approach to child development and signifies an appreciation of the importance of considering a child's health, nutrition, education, psycho-social and additional environmental factors within the context of the family and the community. (DoE, 1996, Appendix 1, p. 2)

This very broad definition operates across sectors and at national, provincial, district and local levels. It takes in a wide variety of services including health and social services, the school-based reception year, community-based pre-schools and playgroups, home-based childcare (which is usually private), as well as programmes of different kinds targeting primary caregivers, such as child grants, family literacy, home visiting, and health programmes.

ECD service provision therefore falls within the policies and programmes of several departments, the major responsibilities residing with education, social development and health. The health and social development departments focus particularly on children up to five years, while education is concerned with the full 0–9 years. Education policies reflect this, focusing on services for children from five years (Grade R, the reception year).¹ This chapter focuses on 0–5 years (including Grade R) because, although increasing numbers of five year olds are moving into Grade R in the public schooling system, more are in community services and the majority of five year olds are not in any form of ECD service (Biersteker & Dawes, in press).



Indicators of survival, growth and access to preventive health service are so fundamental for young children that they have tended to be the primary focus of monitoring for this age group. As these are discussed in Chapter 5 of this volume, they will only be reflected in this chapter in so far as they relate to the quality of ECD service provision, and in the indicator tables in Part 2 as part of a comprehensive set of indicators for monitoring the well-being of the very young child. Similarly, where young children require interventions from the care and protection system, this is dealt with in chapters 14 and 15 of this volume.

The main goal of this chapter is to draw on findings pertaining to supports for early development in the home environment and ECD facilities to provide indicators that can be utilised for a number of purposes, including:

- Setting standards for government-subsidised provision of alternative care when home and family care is not available;
- Informing government planning by describing the scale, complexity and intensity of problems affecting young children (and where they occur);
- Informing resource planning by determining the availability of existing resources and gaps in service provision;
- Making recommendations for the improvement of ECD indicator systems;
- Providing indicators that can be used by parents and caregivers to track the development of children in the home, while raising awareness of child development and the need for stimulation.

Use of a rights-based approach to monitoring ECD outcomes

The legal and ethical obligations of the state and caregivers to honour children's rights are detailed in the Bill of Rights (see Appendix 2 in this volume) in the South African Constitution, the Convention on the Rights of the Child (CRC – see Appendix 1, this volume) and the African Charter on the Rights and Welfare of the Child (AC – see Appendix 3, this volume). These build on the general principles of the best interests of the child, non-discrimination, survival and development and participation. The use of rights as the basis of a monitoring framework for child well-being has high consistency with policy goals and provides for a very broad perspective on children's lives. As noted in Chapter 2, rights-based monitoring requires:²

- Specification of the rights to children;
- Provision for delivery of these rights in the form of policies and programmes;
- Measurement of child outcomes.

Article 18 of the CRC states that parents have the primary responsibility for bringing up their children, and that states must provide assistance to parents or guardians in the performance of their child-rearing responsibilities. Section 3 of the Article 18 states that the state should take 'all appropriate measures to ensure that children of working parents have the right to benefit from childcare services and facilities'. The notion of 'appropriate' measures could include a range of options. And following Article 4, the extent and limits of a country's resources would be taken into account. In commentaries, the Committee on the Rights of the Child notes in this regard that this article:

reflects a realistic acceptance that lack of resources – financial and other resources – can hamper the full implementation of economic, social and cultural rights in some States; this introduces the concept of ‘progressive realization’ of such rights: States need to be able to demonstrate that they have implemented ‘to the maximum extent of their available resources.’ (2003, Introduction, Paragraph 7)

The committee has also recognised the importance of providing for the needs of the child and protection from neglect and abuse, particularly in early childhood.

As noted in Chapter 2 of this volume, children’s rights are commonly grouped into four domains – survival, protection, development and participation (Ennew, 1999) – as illustrated in Table 9.1 in the case of ECD. These are not legal groupings and of course the boundaries between the domains are not hard – obviously, survival is linked to development. The rights list is not exhaustive.

Table 9.1 Articles of the South African Constitution (SAC), CRC and AC relating to key rights domains

Survival rights	SAC 28(1c); CRC articles 6, 24 & 26; AC articles 5, 14 & 19(2)
Protection rights	SAC 28(1b & d); CRC articles 3(3), 18, 19 & 37; AC articles 18, 19(1) & 20(2c)
Development rights	SAC 28(1b & c) & 29(1a); ³ CRC articles 6, 17, 27, 28, 29 & 31; AC articles 11, 12 & 19(2)
Participation rights	SAC 9(3) & 28(1a); CRC articles 2, 7, 12 & 23; AC articles 3, 6, 7 & 13

The younger the child, the more dependent she or he is on adults to ensure those rights. Yet several monitoring initiatives have excluded younger children in many key areas. So, while World Summit and Millennium Development Goals (MDGs) have a very strong health and survival focus on young children, little attention has been given to the monitoring of development and participation rights in this age group.

South African policies, provisions and delivery challenges

Because early childhood is recognised as a sensitive period for survival, growth and psychosocial development, children in this developmental phase are a target of primary healthcare (PHC), education policy and social development policies.

Education White Paper 5 on ECD (DoE, 2001a) commits government to establishing a reception year (Grade R) for children aged five years and delivering appropriate, inclusive and integrated programmes for children under five years. Improvement of the quality of pre-Grade R programmes, inclusion of health and nutrition aspects and appropriate curricula, as well as practitioner development and career-pathing are aspects of the strategy. Particular targets are ‘our poor rural, poor urban and HIV/AIDS infected and affected communities’ (DoE, 2001a, p. 49) and four year olds with special needs (DoE, 2001a). The White Paper flags particular areas for attention, including:

- The extent of ECD provision;
- Inequalities in existing ECD provision;
- Inequality in access to ECD services;

- Variable quality of ECD services;
- An incomplete, fragmented legislative and policy framework that results in unco-ordinated service delivery. (DoE, 2001a, p. 3)

Education White Paper 6 on Special Needs Education (DoE, 2001b) flags the importance of inclusion of children with special needs in the education system, something very lacking for younger children with disabilities, when early intervention is optimal. The nationwide ECD audit (DoE, 2001c) found that only 1.36 per cent of enrolments at ECD facilities were children with disabilities and this includes specialist facilities. Further, many of the children who were enrolled were of early school-going age (34 per cent were aged five to six years and 31 per cent were over seven years) suggesting the unreadiness of the public schooling system to enrol them, rather than an early intervention strategy (Biersteker & Dawes, in press).

The Department of Social Development (DoSD) recognises provision of ECD services as a strategy for supporting children who might be at risk. The *White Paper for Social Welfare* (DoSD, 1997) targets poor children under five years for ECD services, prioritising 0–3 year olds and children with disabilities. Departmental policy is to provide a range of services to meet the varied ECD needs of families and to do this through supporting and reinforcing programmes offered by existing role-players, and supporting community development interventions.

Health policies target infants and young children, and pregnant and lactating women for the integrated nutrition strategy (DoH, 1997; see Chapter 5 in this volume). Children under six benefit from the free healthcare policy, the basket of services including immunisation, preventive services, health screening, identification of children with special needs, and basic care and treatment of children with chronic illnesses.

While policies prioritising and supporting ECD services are in place, implementation remains a challenge. Any system of monitoring should therefore include measures of access, the range of services offered, as well as the populations who are accessing services. Education White Paper 5 (DoE, 2001a) indicates that access to services has not been equitable. The nationwide audit (DoE, 2001c) found that approximately 16 per cent of children from 0–5 years were in organised ECD provision. It indicates an urban bias in provision of ECD centres, with the poorer rural provinces least well provisioned. While overall enrolment at centres was consistent with national population figures for both gender and population group, this was not so for all provinces.

Attendance is inversely proportional to age, with the majority attending ECD services aged five to six years; access for children under three years is very limited. However, needs of caregivers and children vary greatly for the ECD age range. The fact that most young children are in the care of family members or informal arrangements is related to low numbers of women in the workforce and the general pattern that it is more common for very young children to be cared for at home. In the case of these very young children, additional indicators of their well-being need to be developed to determine whether public responsibility has been taken to ensure that parents have the necessary knowledge, skills and support to carry out this role effectively and, if not, to provide alternative supports. Access would therefore need to be considered in relation to age.

Quality should also be monitored. The ECD audit showed that a disproportionate number of sites serving African children are of lower quality than those serving the rest of the population.

International ECD indicators

In addition to the CRC, the AC and the Constitution, provisions relating to the monitoring of early childhood care and education occur in a number of international agreements. These include the Education for All Declaration (UNESCO, 1990), the Dakar Framework for Action (UNESCO, 2000), and the MDGs.⁴ The New Partnership for Africa's Development initiative also accepts early childhood care and education as an education priority area.

International agreements relating specifically to ECD tend to have an education focus.

The Education for All (EFA) indicators developed under the auspices of the United Nations Educational, Scientific and Cultural Organisation (UNESCO) contain ECD provisions (EFA Global Monitoring Report Team, 2004; see also Chapter 8 in this volume). The World Declaration on Education for All included the ECD period in its commitment to basic education, noting that:

Learning begins at birth. This calls for early childhood care and initial education. These can be delivered via arrangements that involve parents, the community or institutional programmes as appropriate. (UNESCO, 1990, Article 5)

The Framework for Action set the target of:

expansion of early childhood care and development [ECCD] activities, including family and community interventions, especially for poor, disadvantaged and disabled children. (1990, Paragraph 8)

The Dakar Framework for Action reinforces the previous ECD commitment, stating the ECD target as follows:

expanding and improving comprehensive early childhood care and education especially for the most vulnerable and disadvantaged children (Goal i). Provisions regarding the expansion of quality in education, though associated with primary schooling (or above) outcomes, can be read as including ECD and will have reinforced the Department of Education's (DoE's) current focus on quality. (UNESCO, 2000, Paragraph 7)

EFA indicators designed for cross-country comparison have been very limited. For the 1996 mid-decade review these were (UNESCO, 1996):

- Enrolment in pre-primary institutions for children aged three to six years;
- The number of pre-primary institutions and the number of caregivers employed in the field.

EFA Year 2000 Assessment Indicators for ECCD (UNESCO Institute for Statistics, 2000) for country reports focused on comparing current and past enrolments, including:

- The gross enrolment ratio in ECCD programmes (as a measure of the general level of participation of young children in ECCD programmes and the country's capacity to prepare young children for primary education);
- Percentage of new enrolments to Grade 1 who have attended some form of organised ECCD programme during at least one year (helps to assess the proportion of new entrants to Grade 1 who presumably have received some preparation for primary schooling through ECD programmes).

Myers (2001, 2004) has raised as problematic the fact that these indicators did not allow for assessment of the *quality* of inputs to early childhood programmes, the efficiency of programmes, the effects on children or the financial contribution made by nations to this part of the educational system. Further, the focus on children aged three to six years and on institutions (that is, non-parental early childhood care and education [ECCE] arrangements) excludes the vast majority of children under five from the monitoring process.⁵

To assess progress on the 1990 World Summit for Children Goals, the United Nations Children's Fund undertook the first multiple indicator cluster survey (MICS) (there have been three surveys since then). The MICS is a household survey and items for childcare and early education include pre-school enrolment of five year olds, and whether or not three and four year olds are in a programme outside home and, if so, for how many hours per week (UNICEF, 2005a).

In 1999 a resolution was approved at UNESCO's General Conference to improve early childhood indicators. A specific concern was to improve data on non-pre-primary early childhood programmes, including different settings and diverse aims such as components for the child's health and nutritional well-being. The considerable gaps in information were seen as due to a lack of operational guidelines to direct the collection of relevant and meaningful data on non-pre-primary programmes.

In response to dissatisfaction with the EFA indicators and general difficulties of adequately assessing the situation of young children with the existing information and monitoring processes, the Consultative Group on Early Childhood Care and Development⁶ formed a working group to identify, develop and undertake some country case studies to pilot country-specific early childhood indicators. The Consultative Group (2001) defined useful indicators in terms of:

- The general status of children during the early years of life;
- Extension and quality of programme initiatives intended to improve that status;
- The quality of contexts that affect child development (Myers, 2001, pp. 3–4).

Myers (2001) offered for discussion 16 possible indicators which might be used for monitoring at a national level, and with policy and planning in mind. These were organised into the following categories: coverage, access and use; programme quality; political will: policy and financing; costs and expenditures; and status of or effects on children and parents.

The reviewing and field-testing of these indicators in different contexts (Namibia, Nepal, Philippines, Jamaica) and by different stakeholders provided the following insights, which are useful for the present initiative:

- The process of arriving at indicators is as important as the indicators created (in the case studies this involved groups of stakeholders and strengthened the lobby for young children);
- Monitoring efforts need to take into account the development level of the country's information systems;
- There was difficulty in arriving at consensus about instruments that purport to measure child development, including environments and risks to children in the assessment;
- A process is needed to help practitioners and advocates arrive at a point where the measurement instruments are validated and mechanisms are in place to assure reliable application;
- The need for systems of indicators to be user-friendly so that those involved in monitoring will be motivated and able to incorporate results into their planning and thinking.

Programme quality

Assessment of ECD programme quality requires a clear statement of the elements that define quality – a construct that is hotly debated. Reviews of the literature on quality indicators and the effectiveness of ECD programmes by Myers (2001), Young (2002) and Coombes (2003) suggest that the following elements should be considered in the assessment of the quality of ECD programmes:

- Effects on children:
 - Measures of child development should cover all dimensions including cognitive and language skills, social competence skills, self-care and life skills, physical co-ordination and dexterity, nutritional and health status;
 - Measures of school readiness are close to measures of child development since development is holistic and integral. In addition, people are interested in assessing how well specific skills are related to readiness for literacy and numeracy;
 - Social well-being – mortality rates, stunting and body wastage rates, literacy rates, delinquency levels;
 - Measures of child development and readiness should be reliable, valid, culture and language sensitive. Repeated measures give a better assessment of children than one single measurement.
- Efficiency (cost per child or parent education participant, number of children/participants completing the cycle).
- Efforts put forth and processes and indicators of quality such as adult-child ratios and programmes. The following inputs are essential ingredients in effectiveness:
 - Definition of aims and objectives by all key stakeholders including children;
 - Curricula that take a holistic view of child development and therefore develop cognitive, social, emotional and physical skills. Experiences should be enjoyable and leave room for play and exploration. These experiences should also help in the acquisition of healthy relations with self, others and the environment. They should be culturally relevant;
 - Education agents including teachers and caregivers who are healthy, sensitive, loving, warm and consistent in the way they interact with children;

- A clean, ventilated, stimulating, healthy, secure physical environment with enough space for learning and interaction;
- Systematic evaluation of methods and services;
- On-the-job training, support and supervision providing for professional and personal growth of teachers/caregivers;
- Programme leadership that provides adequate co-ordination and management but which remains close to children's learning and socialisation. Parent and community participation and involvement in decision-making can support programme implementation.

This chapter builds on these insights. We also draw on work on ECD service access, quality and standards conducted under the auspices of the Human Sciences Research Council (HSRC) in recent years (Dawes, 2003; Dawes et al., 2004a, 2004b; Biersteker & Dawes, in press).

A further and recent initiative that is useful for present purposes is the Learning Cape initiative. As part of policy to strengthen lifelong learning in the Western Cape province, the Directorate Industry Development of the Department of Economic Development commissioned the development of a basket of indicators to guide policy-makers and implementers in developing a Learning Cape. These will include input, output and outcome indicators. The indicators can be used actively to advocate and to mobilise, or more passively to review and take stock.

There are four broad audiences for the Learning Cape indicators – policy-makers, policy implementers (including both government and institutions), local government (through the Integrated Development Plan [IDP]) and the general public, including the media and commentators on public policy.

The Learning Cape approach (and the approach of this chapter) requires that indicators reflect constitutional requirements, provincial and national policy objectives, and provincial strategies, frameworks and targets. Indicators are being developed to cover three categories – the diffuse learning environment, initial learning, and adult learning. The Synopsis Report identified the following ECD-related indicators (DoED, 2005):

- Indicators for which data are available:
 - Bedrock indicators: the proportion of children 0–4 years attending ECD and the proportion of children attending registered Grade R classes;
 - Other indicators: the proportion of children recognised as vulnerable in terms of their weight, cognitive and physical development, HIV/AIDS status or poverty level (initial learning);
- Indicators requiring the collection of new data: establishment and effective functioning of a structured intersectoral body to facilitate more effective provision for all children aged 0–9 years in the Western Cape (initial learning);
- Indicators which would be desirable but have no viable data source: number of parent enrichment groups in existence (diffuse learning).

Articulation of Learning Cape indicators, and those developed for the purposes of this chapter, is essential if the system envisaged here is to be in line with those of the Western Cape province (and probably others that may be informed by the Western Cape process). The Synopsis Report suggests that, 'Different sectors or institutions or

places could be encouraged to expand the indicators in their areas' and is aware that (through this Indicator Project) 'ECD is already doing this' (DoED, 2005, p. 5).

As we experienced in preparing this chapter, the Learning Cape report comments on the poor state of South African statistics. The report notes that, 'Some of the most desirable indicators have no data... Some of the data for the indicators is already neatly captured. Other data will need dedicated data-capturing processes to be set in motion' (DoED, 2005, p. 4).

Apart from data challenges, Walters (2005) raises the challenge of who would be responsible for measurement in a cross-cutting indicator project such as Learning Cape. This applies equally for the ECD sector.

Data sources and challenges for monitoring ECD at home and in public programmes

National surveys

Experience around the world tells us that when developing indicators, particular emphasis should be given to data that are available from administrative data and regular surveys.

Dealing first with households as the environment in which most children are raised, the most convenient sources of information are the Census and regular household surveys such as the General Household Survey (GHS) and the HSRC's South African Social Attitudes Survey (SASAS), currently conducted annually. Apart from these there are specialist surveys such as the Demographic and Health Survey, the Food Consumption Survey, and the National Injury Mortality Surveillance System, which provide health and safety indicators. Government departments dealing with education, health, and social welfare keep administrative data relating to their areas of responsibility.

Unfortunately, with the exception of regular collection of child health data in the PHC system, which itself is subject to several constraints (see Chapter 5 in this volume), and broad socio-economic data – including infrastructure, income, employment and educational status – from the Census and general surveys, data on young children are very limited. Because Census data are collected by 'head of household', determining who the child's parent is presents problems in the case of grandchildren, other relatives and relatives under the age of 18, and variables such as education level cannot easily be matched to the primary caregiver of the child.

There is a need to have more questions aimed at generating monitoring data included in such surveys. This is a challenge though, as enumerators in the Census and interviewers in household surveys are not trained on matters pertaining to children. This was also the case with the national audit of ECD provisioning in 2000.

Administrative data

A major reason for the dearth of information on 0–5 year olds is that the vast majority of this age group are not in regular touch with services. This especially

affects the collection of child status/outcome data but also limits the availability of data on the primary care setting (Type 2 indicators – see Chapter 2 in this volume) to broader quantitative indicators which are easily collected in the context of general surveys. Up until the age of 18 months to two years, most children are reached at least partially by public PHC services, providing an opportunity to gather health data. Then, unless they attend an ECD service or present with problems at a health facility, the next point at which administrative data on young children can be gathered is the school. Household level information would require a general survey or special study of some kind.

Even where children are regularly in contact with services which are responsible for data collection, there are considerable challenges relating to will and capacity. Much would have to be collected at facility level.

The developmental disabilities screening process evaluated in 2003 (Michelson, 2003; Michelson et al., 2004) provides an example of the lack of will and capacity for data collection. Health workers in the Western Cape conduct developmental screening for moderate and severe disability when children visit health facilities for immunisations at 6 weeks, 9 months and 18 months as part of comprehensive PHC service delivery. Each screen should take approximately five minutes and health workers understand that early detection is a strong motivation for this activity. Although developmental screening has been identified as a national priority, it is significant that *none* of the other provinces felt that their PHC services were equipped to introduce the programme. Even in the Western Cape delivery is limited. In Michelson's study (2003) almost a quarter of facilities do not deliver *any* developmental screening, and only 11 per cent conducted screening according to protocol. No register of children who have failed the screening is kept, and as a result a major opportunity to capture the incidence of moderate and severe disability in very young children is lost.

Databases of the departments of education and social services on ECD services focus on facilities receiving subsidisation and do not take advantage of the opportunity to collect and report data on child outcomes and the circumstances of their families. In 2001, 10 per cent of facilities were subsidised by education departments and 15 per cent by social development (Biersteker, 2001, p. 8). If data were collected on child outcomes and the circumstances of their families, it would be of assistance to welfare planning at local level. Furthermore, when monitoring budget allocations, a persistent problem is that ECD service allocations are often not disaggregated from broader line items in provincial and local authority budgets (Biersteker, 2001).

Specialist surveys

Special surveys/evaluations allow for a more textured and composite view. This is valuable information when planning interventions, rather than simply for monitoring overall progress and flagging service gaps. Caregivers and other community members can play an important role in providing data on young children, as is the case with ECD practitioners. These play a vital role in identifying vulnerable children and accessing support. They also provide data on local views of children's development that may be of assistance in developing culturally sensitive developmental standards and indicators (Dawes et al., 2004a, 2004b).

Apart from providing data for monitoring populations of young children, the process of collecting data from caregivers alerts them to the status of their own children and to signs that indicate that the child needs attention. An important added benefit of household environment indicators (Type 2) is therefore to put caregivers in a position to play a more active part in promoting the development of their children in areas where professional help is distant.

The most widely used of these parent participation measures is growth monitoring (Faber et al., 2003). This is particularly important in homes where food is scarce or the nutritional content of the food is poor. Parent ratings of motor, language, social and emotional development have been utilised to good effect for research purposes both in South Africa and Tanzania (Stoltzfus et al., 2001; Kvalsvig et al., 2004; Faber et al., 2005). There are several aspects of the home environment that have been shown to impact strongly on children's emotional and cognitive development, which are not well represented in the measures presently in place. The HOME Inventory (Bradley & Caldwell, 1981; Bradley et al., 1996; Caldwell & Bradley, 2001) is a combination of questions and observations which tackles such important topics as caregiver responsiveness to the child in a series of scales. It has been adapted for use in other developing countries (Austin & Blevins-Knabe, 2003), and has been utilised for research purposes in this country (Richter & Grieve, 1991; Desmond & Kvalsvig, 2005). If robust versions of these scales and others used by researchers in this country were modified further and standardised, they could be utilised by social workers, community health workers and other community care personnel during home visits as individual assessments and as a measure of the level of care available to children in particular neighbourhoods and communities. This is especially important in communities badly affected by the AIDS epidemic, where elderly or very young caregivers may be responsible for more children than they can provide with adequate care, and where the children themselves may be traumatised by the illness and death of their parents, and need specialised attention.

Other indicators which fall into this category of 'available but not well researched for local use', are indices of child problems and caregiver problems which take account of the number of serious life events a caregiver or child has experienced.

Population disaggregation and spatial units for data collection

ECD data are limited unless they are disaggregated by age, poverty levels, disadvantage or disability in order to contextualise provision and to ensure equity. For programme planning purposes it is also extremely important to have data at the lowest possible spatial unit. For example, the Western Cape DoSD is developing a plan for rolling out ECD services. To facilitate development of a contextually appropriate plan, profiles of the ECD context have been developed for each social services region. These include demographic information and indicators drawn from a variety of sources – population by age, access to ECD programmes, economic and poverty indicators, health and nutrition data, HIV prevalence.

This process has presented a number of challenges because different departmental regions are not coterminous, and overlapping boundaries make it difficult to be precise. The increasing use of the ward as a unit of disaggregation and of global positioning system (GPS) mapping will assist in overcoming these obstacles.

However, this may not be the best solution. Electoral wards are political spatial units. They may include areas with heterogeneous populations, for example in terms of poverty. Overrepresentation of more wealthy residents will present a false picture of the poverty situation.

A second challenge is the difficulty in accessing data from different government departments (see Dawes, 2003), and the fact that in many cases key information has not been collected, or not collected in a way that is useful. The reliability of data collected at service sites is also suspect in many cases. Despite these limitations, a district level approach such as described in the case of the Western Cape, has provided a far more textured picture of the service gaps in each district.

Finally, there are many stakeholders who in different ways are capturing data on services and the well-being of young children (for example ECD facility intake forms). There is a critical need to collect this information in central locations where it is accessible. Gauteng province seems to be moving towards a single database of departmental information related to young children. This is planned to include information such as birth registration and grant information as well as information on ECD services.⁷

Indicators of well-being for the ECD phase: an ecological approach

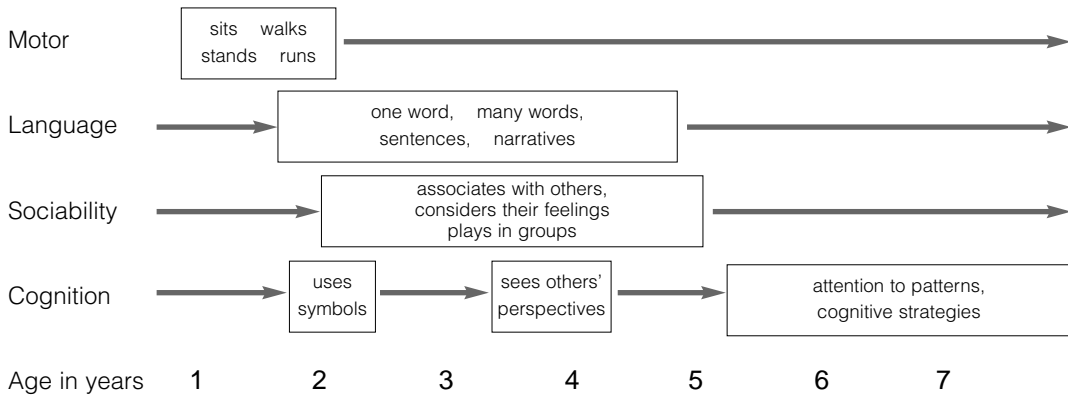
There is wide acceptance that monitoring and assessing child well-being requires an ecological approach that takes account of the child's developmental needs, parent/caregiver capacities to respond appropriately and wider family and environmental factors, including service accessibility and interventions to support those at risk (see for example Woodhead, 1996; Dawes & Donald, 2000; Departments of Health, Education and Employment, & the Home Office, 2000; Dawes et al., 2004a, 2004b; the UNICEF extended model of care). However, challenges relating to appropriate measures and means of data collection have left large gaps in what is monitored.

Monitoring in the ECD sector has focused on neighbourhood/surrounding environment (Type 3) indicators associated with child vulnerability, and service inputs, particularly in terms of access (Type 4) and attempts at assessing some aspects of quality (Type 5). As noted earlier, child outcome data (Type 1) are limited to that routinely collected on health and nutrition in the very early years. For safety and protection information there is little age disaggregated data. Commonly available household environment information collected in surveys focuses on infrastructure and services (for example, water and electricity), employment and levels of education. More qualitative information on care environments and child outcomes is restricted to small-scale research studies.

ECD is holistic and cross-cutting and, as noted above, it is for this reason that it is the responsibility of several sectors, levels of government and agencies. This complexity means that the data environment is not co-ordinated, and there is no mechanism at present to draw information together to inform policy and programming.

It is evident that development proceeds unevenly: individual differences in the timing of growth spurts and the appearance of developmental milestones mitigate against hasty conclusions about developmental delays in individual cases. In general terms, different domains come to the forefront of development at different times and indicators must take account of this.

Figure 9.1 The uneven pace of child development with rapid progress at different times in different domains



For most indicators, particularly community and service-related indicators (Types 3, 4 and 5) and some relating to the care environment (Type 2), it would be important to distinguish two main age ranges:

- Birth to two years – when the child's well-being is extremely dependent on the primary caregiver/s and the supports for development in the home;
- Three to five years – when the child becomes increasingly independent and other influences such as ECD programmes and peers become important mediators of experiences.

Early indicators of child well-being concern the presence of nutritional deficiencies or toxic substances which might affect brain development in utero and in infancy. These give way to concerns about stimulation and emotional well-being. This is not because stimulation and emotional support are unimportant at any age, but because there are few reliable indicators of cognitive and emotional disturbance in infants. These aspects of child development are easier to detect in older children as their behaviour becomes more differentiated and varied. Indicators for development in the three to five age group, for instance, would focus more directly on social and communicative development than on motor development because that is the domain where rapid change is occurring.

Obtaining reliable data on psychosocial outcomes for children is particularly difficult for a number of reasons: the unreliability of outcome measures for very young children (see for example Evans, 2005); the rapid developments of the early years require different indicators and measures both for the changing inputs in the care environment and child outcomes at different ages/stages, making this a large task; and finally, there is the challenge noted by Dawes et al. (2004a) of developing a set of culturally appropriate standards broad enough to capture the capacities that children

require to take advantage of learning opportunities of both their local and wider world (schooling) in the culturally and economically diverse South African context.

Influences in the home are most salient in very young children, and neighbourhood and school influences have more effect later on (see Chapter 4 in this volume). This is an important principle in the construction of indicators for the purpose of designing interventions to alleviate the effects of poverty on children. It has links to the concept of social capital, which emphasises the role of neighbourhood and community as influences on the home environment.

A recent study in Britain (McCulloch & Joshi, 2001) showed that neighbourhood conditions were significant predictors of children's development at around the time they go to school, but both the size and the statistical significance of neighbourhood effects were less than the estimated effects of family level conditions. McCulloch and Joshi conclude that 'families should still be viewed as the key agents in promoting positive development in children' (2001, p. 589).

The relationship between family and community poverty in South Africa functions differently: with the geographic separation of different ethnic communities during the apartheid era, family and neighbourhood poverty still function together in many places because both are based on the purposeful underdevelopment of certain communities. For this reason it is not possible to plot their effects separately. The experience of developed countries can still, however, be a useful reminder of the importance of home circumstances for children's development, and the need to have this reflected in appropriate home-based indicators and interventions, particularly in the birth-to-five age group (Korenman et al., 1995).

Indicator sets for the ECD phase

It is useful to group indicators into sets for particular purposes. Sets may include several indicator types depending on the rationale for their inclusion.

Improvements in conditions for children are usually brought about by the interplay of several interventions and facilitating circumstances (Oyewole, 1984; Kvalsvig, 1998; Romani & Anderson, 2002). This means that although indicator systems should be simple to implement, they should yield sufficient complexity of information to allow analyses which will improve intervention. This necessitates bringing together (grouping) an array of measures so that interventions can be fine-tuned to obtain maximum benefit and coverage.

The outcome of optimal child health (Type 1), for instance, requires at least good hygiene, nutrition and safety in the home (Type 2), combined with access to clean water and sanitation, and a good preventive PHC system (access to an antenatal clinic and a well baby clinic) (Types 4 and 5). This approach permits one to measure outcomes of children living in a particular area (see chapters 3 and 4) in relation to the opportunities and threats to development that exist in the home and community, while also tracking the availability and quality of services.

As a middle-income country, cost is always a factor in South Africa in determining whether an intervention can reach the children who need it, and be sustained. Costs can be contained by analysing the relative contributions of a range of factors.

There are some obvious criteria in determining the most urgent needs for sets of indicators: prevalence of the phenomenon, seriousness of the consequences for the child in later life, and feasibility of intervention.

Top priority for intervention, and therefore for indicators, must always be the conditions which threaten the very survival of children, and although matters have improved, South Africa does not have a good record. A notable exception is the successful control of malaria. Children are especially vulnerable to this parasite infection, and it causes high rates of morbidity and mortality. Ultimately, the funds for an expanded malaria control programme were made available out of concern for economic development, rather than the protection of children's right to health through creating healthy living conditions. Nevertheless, it remains a good example of an intervention based on good geographically referenced indicators, a sound monitoring system and well-researched control principles.

A set of indicators might be devised to detect places which are unsafe as living areas for children, or they might be developed to detect a threat to the care of children in the home.

The following are two examples of sets which can and should be developed and linked to effective action (see also chapters 3 and 4 in this volume).

AN AGGREGATED INDICATOR OF SERIOUS RISK TO CHILDREN

In South Africa there are places of concentrated risk where the proportion of children living in poverty, vulnerable to nutritional deficits and frequent infections, and subject to both physical and mental trauma, remains high. Some of these are urban neighbourhoods (often informal settlements) and others are rural enclaves, where children are at risk simply by living in the area. Some areas have high levels of crime and violence and others are exposed to environmental pollutants; toxic substances like asbestos or pesticides make certain areas dangerous for all who live there, particularly children. Aggregated indicators marking unacceptably high levels of risk for children would assist government departments to assess priorities. These areas of high risk should be geographically referenced and given disaster status so that special funding can be assigned to the problems they face.

A SET OF INDICATORS TO SUPPORT INTERVENTIONS IN THE AIDS EPIDEMIC

The AIDS epidemic is geographically dispersed but presents extremely high risk for large numbers of South African children. Some work has been done but, in view of the scale of the problem, not enough to protect a high proportion of the many thousands of affected children (see Chapter 5 in this volume). A most serious concern from the home-care perspective is mother-to-child transmission of the virus, resulting in a range of risks to child survival, health and well-being. For those children whose parents and caregivers are infected, we require ways of assessing alternative caregiving environments. Institutional living is known to affect the development of children, probably through lack of opportunity and motivational conditions for children to learn new skills (Morison & Ellwood, 2000). What alternative can be offered in overburdened and poverty-stricken community homes, and how are the agencies which support families affected by HIV/AIDS to judge the

extent of assistance needed? These questions do not have simple answers but this should not deter us from seeking out indicators of quality alternative care.

Linking indicator sets to training and action

Primary school educators, pre-school practitioners, community health workers and community ECD workers are all well placed to identify children who are experiencing problems at home, given the right tools and training. Police and welfare agencies, too, have special units for the protection of children. The legislation exists which should encourage reporting of cases of abuse and neglect in the home, but in practice reporting routes are not clear and personnel training is weak in some instances. Practitioners may also be reluctant to report cases because the time lag between reporting and effective police and court action is so great that the child is placed at increased risk by the report.

In ECD sites, follow-up of behaviour problems or absenteeism is needed to identify those pupils whose home circumstances are distressing enough to interfere with their education. Educators themselves could then give advice on accessing grants, so that child-headed households are supported, and education about healthy living with a focus on psychosocial and nutritional support. Much more could be done to train staff in the use of indicators, and to develop school and ECD centre policies for action or referral.

ECD practitioners and other community workers at household level require simple sets of indicators and training in reporting strategies so that statistics can be kept at district level and quickly followed by action when necessary. For community workers who have a basic training in childcare, the foundations have already been laid for more effective action, and their home visits and close ties within the community make them the most valuable resource we have for reaching children in distress. While volunteerism in community work is laudable, good support systems, a reasonable wage, and a planned career path associated with community work would send out a signal that this kind of work is important.

Indicator sets and child rights

Arnold (2004, p. 5) considers that the following aspects of early childhood programmes link to three fundamental areas of a child rights approach:

- Attention to the whole child;
- Working at multiple levels to meet our obligations to children;
- Addressing discrimination and exclusion.

The indicator sets suggested below are based on the child rights categories from the CRC as they were interpreted at a DoE workshop on ECD in Durban in November 2004, where the government's commitment to children's rights was restated with an emphasis on effective service delivery and integration of services.

It is clear that many sets have bearing on more than one category of child rights. Indicators such as income and expenditure refer to poverty, which was characterised by Horowitz (2000) as a set of intensely disadvantaged circumstances that negatively impacts on development (see also chapters 3 and 4 in this volume).

Sets such as the 'Need for stimulation' and the 'Need to play' overlap to a large extent, and the decision to place an indicator in a particular category is largely a matter of emphasis.

In all cases the choice of the sets below has been driven by the need to locate children who are living in suboptimal home circumstances and to understand what the risks are and how these might be changed, in the very practical sense of, 'What is possible? How many children are affected? How serious is this? Who might intervene? What resources would they need?'

BASIC NEEDS SET

In terms of children's rights, children are entitled to a healthy diet, a safe home, clothing, safe water and sanitation, and healthcare. Compared with adults, children are especially vulnerable to poor provision in these areas: they have energy needs for growth, and are immunologically immature. In South Africa the impact of poor health and nutrition on children's psychosocial development is considerable and needs attention if we are also to move on to consider 'positive well-being' in the way suggested by Ben-Arieh (2000).

In an attempt to build a standards approach to child well-being in South Africa (Dawes et al., 2004a, 2004b), we tried to identify the factors which differ in importance and impact from those in developed countries of the north. The most noticeable of these were health and nutrition. In Africa, the lack of basic services to support health places major constraints on the well-being and psychosocial development of children. Macronutrient and micronutrient deficiencies, chronic parasitic infections and frequent episodes of respiratory and diarrhoeal infections, apart from causing pain and discomfort, impact on the socio-emotional and cognitive development of children in ways that are not fully understood. They act as constraints on children's mood and energy, and consequently on their freedom to diversify their activities. This is discussed in detail in Chapter 5 in this volume. The home environment indicators included in the core indicators table in Part 2 of this volume are directed only at identifying protective factors at household level.

Home environment indicators for nutrition should identify trends in preferential access to food and other resources within the household. There is, for example, a possibility that some orphans may not be accorded the same access to food within their replacement homes as members of the more immediate family. The evidence from other countries for poorer nutritional status among orphans as compared with non-orphans, is mixed, with some studies showing no significant differences in stunting (for example Lindeblade et al., 2003, in Kenya) and others showing increased stunting among orphans (for example Ainsworth & Semali, 2000). Overall, at very low levels of income, it would appear that the AIDS epidemic affects households across a community rather than just the households with infected individuals, because food production and the transfer of agricultural skills are disrupted in the area. This seemed to be the case in a recent study in the Drakensberg mountains (Desmond & Kvalsvig, 2005) where a combination of poverty, winter drought and cold, and ill health or bereavement in many families had affected the nutritional status of children throughout the community. These dynamics need to be understood for intervention purposes.

CARE AND SAFETY SET

In an analysis of the concepts and measurement of care and nutrition, Engle et al. (1999) used the UNICEF definition of care which is the practices of caregivers that affect nutrient intake, health and the cognitive and psychosocial development of the child. Engle et al. mention six types of activities practised by caregivers:

- Care for women during pregnancy (rest and nutrition);
- Breastfeeding and feeding of young children;
- Psychosocial stimulation and support for development;
- Food preparation and storage;
- Hygiene practices;
- Care for children during illness.

For these activities caregivers would require 'appropriate education, knowledge, and beliefs, health and good nutritional status; mental health, lack of stress, and self-confidence; autonomy, control of resources, and control of intrahousehold allocation; reasonable workloads and adequate time available; social support from family members and the community' (Engle et al., 1999, p. 1310). Of particular relevance to the question of measures and indicators in the South African situation for women in the communities hardest hit by AIDS is the issue of caregiver mental health. Some local work on this issue has been done in recent years (for example Cooper et al., 1999; Brandt, 2005a; Swartz et al., 2005; Brandt et al., 2006). Further indicators for child injury and safety can be found in Chapter 7 of this volume.

Set 1: Optimal development

Intuitively, an ordered and calm family environment would seem to be advantageous, and there is evidence that this is so. Petrill et al. (2004) report that results from a study of pairs of twins in England and Wales show that growing up in a calm, well-ordered household was a significant predictor of cognitive skills in three and four year olds, independently of the effects of socio-economic status. They used the short form of an instrument called CHAOS (Confusion, Hubbub and Order Scale) (Matheny et al., 1995). In South Africa, the degree of organisation in the home might be an important source of individual differences in children's cognitive abilities in poverty-stricken communities, and one that can be improved through intervention and support from community health workers and community ECD workers or, in the case of children with disabilities, community rehabilitation workers. Although this will require the testing and validation of the CHAOS instrument in a South African setting, or the compilation of a new locally devised scale, it would appear to be a promising line of investigation because it would link directly to interventions already in existence, and give early warning of families under stress.

'Risk' has different meanings in different cultural groups (Liddell, 2002), as does 'optimal development' (Okagaki & Sternberg, 1991). Ogbu (1982), in his ethnographic accounts of the language development of African American children, showed how conventional research practice using white middle-class standards was not useful in understanding language competencies in minority groups. In formulating indicators of optimal development for South African children, Ogbu's work reminds us to avoid simplistic definitions reflective of only one cultural ideal.

A historically segmented society has given rise to groups that are economically and culturally distinct, and that have only recently been exposed to each other's points of view on child rearing.

Set 2: Child responsibilities

The association between parenting style and cognitive development differs across cultural contexts, and probably concerns different goals in the socialisation process (Darling & Steinberg, 1993). Obedience to authority and respect for elders is frequently cited as an important child-rearing goal in many African communities (see for example LeVine et al., 1994) and family structures vary as a function of both culture and environments (urban and rural), as do attitudes towards corporal punishment. Careful selection of indicators is needed so that blame is not attached to practices which are culturally sanctioned.

Many children in poor communities in South Africa are expected to assist to a greater or lesser degree in running the household (Bray, 2003). In a sample of five-year olds in a rural Zulu community in KwaZulu-Natal, children gathered firewood, ran errands to the local store, fetched water, swept the yard, washed dishes and clothes and herded cattle (Kvalsvig et al., 1991). These activities were regarded as children's work, and the children were expected to perform them efficiently, although allowances were made because they were still very young. In another study exploring age-appropriate behaviours, the nine-year-old participants from a rural area in KwaZulu-Natal related stories of their competence in household chores with some pride (Dawes et al., 2004b). This cultural practice of assigning responsibilities may be viewed positively as part of socialisation, as including children in family activities and making them feel valued, and as practices which allow children to be absorbed into other households when necessary, without placing an intolerable burden on the adult caregivers. In the context of an AIDS epidemic it has clear value in enabling grandmothers, aunts, and older siblings to take over the role of caregivers when infected parents become ill and die.

In other societies, different socialisation skills are valued. In many developing countries throughout the world children are included in activities which are regarded as adult responsibilities in developed countries, and there is often much for the child to gain. As described by Robson (2004), Nigerian children not only acquire commercial skills by helping family members buy and sell, but they also increase their general knowledge of their community through running errands.

The practice does, however, come at a cost in a modern world. Children who spend all their after-school hours working at chores do not have time to develop skills and talents more suited to a modern job market when they come of age. Reading skills in particular may suffer. Indicators of where the positive value ends and exploitation starts will have to be validated against performance on educational tasks and evidence of health and mental health, and seen in the light of the family's needs. If children have no time to look at reading materials, play games and are frequently tired and depressed, this would indicate that they were being burdened with too much work. The evaluation should be sensitive to the cultural value placed on these skills and functions, and the family's needs.

Set 3: The need to play and the need to participate

During play activities children get an opportunity to practise behaviours without serious consequence (as in rough and tumble play), to explore and to exhibit high levels of social, cognitive and linguistic skills (Pelligrini, 2001). Consequently, from a rights point of view, a home environment which allows for and encourages these pleasurable activities is also one in which there are opportunities for the child to learn a wide variety of skills safely and effortlessly.

Set 4: The need for identity

The meaning of identity shifts with the child's age. In the 0–2-year age range, the relationship with caregivers, 'attachment' to constant figures in the infant's environment as explored in the work of Bowlby (1969) and Ainsworth et al. (1978), is a key developmental concept. Disruptions of this process have been noted in the case of autism on the one hand and, on the other, the indiscriminate attachment of institutionalised children who have had a series of transient caregivers. By the pre-school ages (three to five years), children explore gender identity through their fantasy play, constructing the world as they experience it, mainly through family role models. It is a time when caregivers set limits and children test their autonomy by challenging these limits. Parenting style is thought to have an important shaping effect on children's behaviour, and may vary from neglectful to indulgent, and be authoritative (clear and firm) or authoritarian (more punitive) (Baumrind, 1966; Pratt et al., 1988). In the basic education phase (six to nine years) children are learning to function outside the immediate family. They start to explain who they are to others, their family names, where they live, what their family members did and said.

Proposed indicators for ECD

Type 1 indicator: Child status

Research and theory about desirable child outcomes, predisposing conditions and their indicators and measures has been from a predominantly western perspective. Even core features may be expressed differently in different communities and there is the 'lively question about measurements used to evaluate children's cognitive, psychosocial and motor progress and whether these can be used outside their country of origin' (Penn, 2004, p. 9).

Physical well-being is critically important in this period when infants and young children undergo the rapid growth of the first five years. Due to the immaturity of the young child's immune system, they are more at risk for developing infection and disease. The birth to five years period is also a sensitive time for emotional development and trust, and for cognitive and language development. Within these years there appear to be periods of particular sensitivity for particular outcomes, for example emotional control from nine months to two years, peer social skills from three to five years, and so on (Evans, 2005). There is cultural and contextual variation in the age ranges but what is implied is that indicators of child outcomes need to be extremely sensitive to age-related changes.

INDICATOR DOMAIN: PHYSICAL WELL-BEING AND MOTOR DEVELOPMENT

On the basis of an extensive literature review and consensus-building process, Pollard and Davidson (2001) of the Center for Child Well-being⁸ identified six critical elements for this domain, of which nutrition, preventive healthcare, physical activity, and safety and security would be most relevant for the birth to five year age range.

Of these, standard health and anthropometric status indicators are covered, as are accident- and violence-related morbidity and mortality in companion chapters (see chapters 5 and 7). Screening for developmental disability (see also Chapter 10) is proposed as a priority, as early identification is key to interventions which will maximise the well-being of children with disabilities.

INDICATOR DOMAIN: SOCIAL AND EMOTIONAL WELL-BEING

Key elements mentioned in the literature include development of emotional regulation; self-control; development of trust and autonomy (related to secure attachments); development of self-system including identity, self-concept, and self-esteem; development of empathy and sympathy; and formation of positive social relationships (Departments of Health, Education and Employment & the Home Office, 2000; Pollard & Davidson, 2001; Rhode Island Kids Count, 2005). Because of the difficulties of reliable measurement for children under three years, measures in this domain will be restricted to children from three to five years:

- Age-appropriate interactions with peers;
- Positive sense of self-confidence, participation;
- Self-regulation appropriate for age.

INDICATOR DOMAIN: COGNITION AND LANGUAGE

This domain includes perceiving, remembering, conceiving, judging and reasoning in order to obtain and use knowledge as well as language skills. As for social and emotional well-being, measures in this domain will be restricted to children from three to five years:

- Curiosity/exploration;
- Approach to learning – motivation, persistence, concentration;
- Problem solving;
- Receptive language;
- Expressive language;
- Literacy and numeracy skills.

The focus for cognitive well-being has been on approaches to learning (which is recommended by Myers [2001] though seldom included in United States standards) and communication skills rather than specific concepts, though these are often the focus of ECD curricula and parent aspirations. However, in view of recent concerns about the poor literacy and numeracy outcomes of children at grades 3 and 6 levels – outcomes which are attributed to the lack of early literacy and numeracy experiences prior to school – these should be an indicator area.

Myers (2001) notes that the focus in standards for child outcomes has been on children aged three to five. This is because for children younger than three,

measurements other than physical assessments tend to be unreliable (Evans, 2005). For younger children the focus in the choice of indicators has therefore been on physical indicators. These include the proportion of children under two years who require referral after developmental screening, and the proportion of children 18 months to three years with age-appropriate gross and fine motor skills and those with age and culturally appropriate self-help skills (for example, feeding/dressing self).

The DoH's Developmental Disability Screen is proposed as a measure of child development outcomes for children under two years. This should be routinely done for all children at the target ages of six weeks, nine months and 18 months. PHC statistics on an annual basis would be the data source. Additional physical and self-help indicators are proposed for children aged 18 months to three years, to be surveyed from time to time.

For children aged three to five years the following indicators are good predictors of child outcomes and indicators of well-being: age-appropriate fine motor skills, appropriate social behaviours with adults and peers, age-appropriate participation, interest in or a positive approach to learning, early numeracy skills and language and literacy development.

Fine motor skill is used as a physical indicator in the 17-state Getting Ready project (Rhode Island Kids Count, 2005). This is more sensitive than indicators of gross motor outcomes and relates to skills needed in the schooling system. Social behaviours and age-appropriate participation, which is linked to socialisation, self-esteem and confidence, and self-regulation are key indicators and relate to the OECD's (OECD, 2004) key competency areas of 'Interact in heterogeneous groups and act autonomously.'

Poor language, literacy and numeracy outcomes for children in South African schooling, which impacts on their ability to succeed both in the schooling system and the globalising economy, are a particular concern. Lack of appropriate early numeracy and literacy experiences is a strongly contributing factor. Indicators to track these have therefore been included. These relate to the OECD (2004) key competence area 'use tools effectively'.

With regard to measures of child outcomes, preliminary work and consensus building for the development of appropriate indicators for South African children aged three to nine years has generated a series of psychosocial indicators (Dawes et al., 2004a, 2004b). These indicators cover several areas in the domains listed above and with further development could be tested as a measure of psychosocial well-being of children aged three to five years. ECD practitioners and caregivers involved in other organised projects could, once trained, routinely assess whether or not children meet these standards. This could assist them in adjusting their interactions with children to focus on developing or extending different capabilities, and be included as part of established reporting to parents on child progress.

Special surveys of children who do not access ECD services should be undertaken from time to time.

An alternative, as an interim measure until more children have access to ECD services, would be to undertake screening on entry to Grade 1. As well as giving an

indication of child outcomes, there could be a comparative study of children who attended ECD centres or programmes (by years of attendance), who attended Grade R only, or who had no access to ECD services. This would be a strategy to track the improving quality of children coming into school. The Western Cape education department is developing an activity programme for Grade R children to be completed in the first three weeks of school which will enable educators to assess developmental status across these areas.

Type 2 indicator: Family and household environment

In the pre-school period, the main influences on the young child are home-based, and family members are the principal mediators of community influences (Dawes & Donald, 2000). Whatever the specific cultural childcare practices, healthy neuro-physiological, physical and psychological development of a child requires nurturant, consistent caregiving by responsive caregivers (Richter, 2004). Inadequate, disrupted and negligent care has adverse consequences for the child's survival, health and development.

Numerous factors can influence the quality of caregiver-child relationships, for example, maternal health (including HIV/AIDS), depression, stress, mood and emotional state (Richter, 1994, 2004; Brandt, 2005a). Household income and the structure of the household will influence the capacity of adults and availability and time to care for young children and provide indications of whether the household may be in need of social support. For example, households with single caregivers with children or child-headed households may be income-poor and vulnerable to stress.

Family environments which lack social support and integration (Dawes & Donald, 2000; Departments of Health, Education and Employment & the Home Office, 2000), are HIV affected, where there is domestic violence and/or substance abuse, or where children are very demanding through illness or disability are especially at risk and in need of targeted interventions (Brandt, 2005a).

Living conditions such as availability of shelter, water, sanitation and a safe, clean power source will have health and safety consequences for the child, and the knowledge and capacity of their caregivers to protect them in adverse environmental conditions is key.

Maternal/primary caregiver education levels are strongly associated with children's survival and development. Children's capacity to learn is supported by families with the necessary interest, knowledge, materials and resources to support emergent literacy (Woodhead, 1996; Willenberg, 1997).

While the same broad development principles apply to children wherever they are, their relative importance differs across and within countries. In addition, in South Africa a particular history, social, economic and political milieu, geography and a terrible epidemic have brought some aspects of the home-care environment for children into sharp relief and have implications for a child rights approach as described in chapters 1 and 2 of this volume. Taking these into account, it is possible to identify groups of children whose family and home circumstances compromise their rights under the CRC and the Constitution. They have been termed 'orphans

and vulnerable children' and usually come from formerly disenfranchised communities where basic services have not been established.

Certain conventions have been observed in constructing the indicators in Part 2 of this volume. Because the home-care environment has its most powerful influence on young children, indicators are discussed for the 0–5 age group. The intention is not to ignore the importance of the home environment for older children – adolescence, for example, is an important transitional period – but the parameters of support for older children are different.

So while there are obvious interconnections with other chapters in this volume, the indicators developed for ECD are concerned with *the home conditions thought to promote child well-being* as opposed to indicators of poor physical and mental health, and developmental delays such as birth defects, infections and child abuse. In this sense they are distal rather than proximal (in the health terminology utilised by Sanders and Chopra, 2004), and strongly concerned with promoting resilience in the tradition of Werner (1989; see also Werner & Smith, 1982) and Rutter (1979).

Nevertheless, it is important to note that most of the individuals living in poverty in this country are children, and that there are more low birth weight babies, children affected by AIDS, and children with disabilities in poverty-stricken homes than there are in more prosperous circumstances. Consequently, rights-based indicators for the home environment must be sensitive to the rights of all these children, and should maintain a cautious watch on risks in the home.

A rights-based approach carries with it the corollary that if a child's rights have not been met, then someone is to blame. The individual or institution can be charged and the court's recommendations can be enforced through the judicial system. This has advantages, particularly in cases of abuse and deliberate exploitation of children. In the context of homes and families in desperate circumstances, however, children's rights are disregarded through a lack of resources or through a poor understanding of how to proceed. Indicators will cease to be effective if parents and caregivers feel threatened and blamed when they are doing the best they can under the circumstances. A fundamental principle in developing and using indicators for the home environment is that caregivers participate in the process and see the benefit.

The mediation of health and nutritional status and safety factors at household level is not considered here as they are covered in other chapters in this volume (see chapters 5 and 7). There is also an overlap on some of the focus issues here, including on caregiver–child relationships and home indicators which optimise development, as well as on vulnerability measures.

Proposed indicators for this section include caregiver warmth and responsiveness to the child; guidance and control; age-appropriate and positive forms of discipline; caregiver education levels; opportunities to play, explore and interact with different objects in the environment; opportunities to participate in simple household tasks with caregivers; exposure to print and writing materials; and verbal interaction with caregivers. Caregiver health and well-being is also a key indicator and is linked to a proposed indicator of household vulnerability.

Measures of caregiver interactions that promote child well-being and opportunities for social and cognitive development in the household could be items included in a

household observation scale and interview. Alternatively, as discussed above, many of these indicators could be measured using an adaptation of Caldwell and Bradley's HOME Inventory.

For measuring household vulnerability, adaptation and use of a vulnerability measure such as that developed by Speak for the Child in the context of AIDS-ravaged western Kenya is suggested (AED, 2002).¹⁰ It comprises a vulnerability scoresheet which helps them target interventions where they are most needed. The interview/observation picks up stress factors such as illness, lack of food security, whether carers of under fives are older or children, as well as whether children have the necessary documents, signs of emotional distress, experience of stigma, and so on. This could be administered in house-to-house surveys in neighbourhoods where there is high vulnerability, and/or as part of the Home and Community Based Care Programme, or by other auxiliary/family workers employed by the public sector or non-governmental organisations (NGOs).

Type 3 indicator: Neighbourhoods and the surrounding environment

As noted in Chapter 4 of this volume, child well-being is affected by a wide range of neighbourhood factors; three in particular are key to their well-being. These are child poverty levels disaggregated by region and local unit, public violence, and crime and accident statistics for the area. These issues will not be dealt with here as they are covered in other chapters in this volume.

Type 4 indicator: Service access

Important service access indicators for children, in addition to health-related and child protection services (see chapters 12, 13, 14 and 16 in this volume), include birth registration, social grant access, access to early childhood services of different kinds, including access to additional support for children with special needs, and budget allocations to ECD services.

Access to ECD services is limited, particularly as a consequence of the lack of funding, especially in poor and rural communities. Budget studies reflect low funding allocations to ECD as a major concern (for example Biersteker, 2001; Nomdo & Mbebetho, 2004; Biersteker & Dawes, in press). Budget allocations for ECD services should therefore be examined in the same set as that which includes access (even though for other purposes they may be used to assess service quality; quality is fundamentally – but not entirely – related to financing).

For children who are able to access ECD centres, the distinction between enrolment and attendance is important. For example, in many areas of South Africa the authors have observed that parents only send children regularly if the facility provides food. Where families are stressed and lack income, children may attend less often or drop out.

The inclusion of an indicator for children who are not in a facility but whose caregivers participate in a programme aimed at supporting their parenting is important. This follows on Myers's (2001) suggestion and is appropriate in South Africa which, like many other countries in the south, is increasingly exploring

programmes which focus on educating and involving parents and other family members. Once implementation of the Social Cluster's Expanded Public Works Programme and the National Integrated Plan for Early Childhood Development is under way, parent programmes are likely to scale up considerably (Biersteker & Dawes, in press). Evidence of positive child outcomes from such programmes is related to regular inputs (Evans, 2005) and it is proposed that programmes only be included where participation had practical as well as theoretical inputs, with regular sessions for at least four months.

To be useful in monitoring non-discrimination in access to services and whether policy targeting to specific groups is rolling out, service access data will need to be disaggregated by several variables. Age is highly relevant as one would not expect many infants to be placed in out-of-home care, unless parents were working or sick, but by the age of five years, high service uptakes would reflect that public policies are being implemented. In view of the increasing needs for household support in the context of HIV and AIDS, the availability and usage of day care by younger children should also be monitored. Increased child support grant uptake with age suggests that there may be a delay with the applications process, possibly due to difficulties in accessing birth registrations (ELRU, 2004).

As Myers (2004) notes in his background paper on ECCE for the 2005 EFA report, part of assessing ECCE provision is determining how well programmes reach the most vulnerable and disadvantaged children. In South Africa it is well documented that services are harder to access by poor, rural and marginalised communities. White Paper 5 on ECD (DoE, 2001a) targets children with disabilities, poor children, and those infected with or affected by HIV. Regional disaggregation of data is recommended to assist with programming and overall monitoring of participation, including social groups likely to be excluded. Data categories should include gender, population group, children with disabilities, refugee children, children living in poverty and those with compromised care circumstances.

For service access, both availability and affordability are important. Service cost is recommended as an access indicator in India (M. S. Swaminathan Research Foundation, 2000). This may mean, in the case of home affairs and health services, that they are located close to communities as transport may make them unaffordable even if the service itself is free. In the case of ECD centres, the majority of them depend on income from fees, which makes them inaccessible to children from poor families (Biersteker, 2003a).

Proposed service access indicators therefore include the proportions of children with birth registration documents; proportion of eligible children (0–5 years) in receipt of social grants; enrolments and attendance at ECD centres and in Grade R classes; proportion of children whose attendance in ECD programmes is subsidised; access to preventive and emergency health services; access for children with additional support needs,¹¹ who are receiving this (either through health services or Grade R); proportion of children whose parents have participated in parenting/parent support programmes; and budget allocations to ECD services by national, provincial and local government. Most data sources for this information will be regular departmental records.

Type 5 indicator: Service quality

As Myers (2004) points out, assessing the quality of provision in ECCE is more challenging than for schooling. Achievement tests and competency assessments are largely absent at this level. Further, a wider range of outcomes than those related to learning achievement is needed to judge programme quality, especially in developing countries.

While all children have basic needs to be addressed in a service that claims to provide quality, decisions about what constitutes quality are complex and contested. Pence and Moss note that 'quality in early childhood services is a constructed concept, subjective in nature and based on values, beliefs and interest, rather than an objective and universal reality' (1994, p. 172). Woodhead (1996) takes the position that while quality is relative it is not arbitrary and that it is important to make values explicit. Western value-orientated Developmentally Appropriate Practice (DAP) (Bredekamp, 1987), which is criticised for insensitivity to cultural diversity in parenting practices (for example Penn, 2005), has had enormous influence on notions of quality, and therefore on dimensions of quality measured and studied. However, elements commonly found to be associated with quality outcomes in a range of countries and circumstances have been suggested by Myers (2001). Hyde and Kabiru (2004), in their paper on improving the quality of basic education in sub-Saharan Africa, also use these as a reference point. Key elements are listed below together with reference to other studies and monitoring projects that have used them.

FACILITIES AND THEIR SURROUNDINGS/PHYSICAL ENVIRONMENT

These include infrastructure, access to water and sanitation, safe and secure premises, cleanliness, and space to play. This was also used as a quality index in the nationwide audit of ECD provisioning (DoE, 2001c).

MATERIALS AND EQUIPMENT

This category includes play equipment for inside and outside, learning materials, consumables such as paper, paint, and so on. Recent studies have found this to be associated with positive child outcomes (High/Scope Educational Research Foundation, 2004).

TRAINED CAREGIVERS/EDUCATION AGENTS

Assumptions are that trained caregivers will be knowledgeable about how children develop, and that they will interact with children in a consistent, respectful, supportive, and unthreatening way. Dlamini et al. (1996) support this as a quality element.

Qualification level is often used as a quality indicator but this is not always associated with better outcomes. Weikart et al. (2003) found better cognitive and language outcomes related to the teacher's educational level. Rhode Island Kids Count (2005) use teacher credentials as a measure, as did the DoE (2001c) in its Educator Index of Quality. The Head Start Family and Child Experiences Survey found that the higher a teacher's educational level, the better the classroom quality (Tarullo, 2002). However, Dlamini et al. (1996) and the DoE's (2001d) reception year

pilot project found that training was important but level of training was no guarantee of a quality service.

SERVICES/CURRICULUM

A curriculum that takes a holistic view of a child's development; provides a variety of relevant, stimulating and enjoyable learning experiences; encourages children to play, explore, and initiate their own learning activities; and adapts to the capacity of individual children is proposed as one which is associated with positive outcomes. To take account of the child's right to participation, the curriculum/service should be responsive to input from the children (Lansdown, 2004). The DoE (2001c) and Dlamini et al. (1996) focus on the holistic nature of development and on the need for a variety of learning experiences.

INTEGRATION OF EDUCATION AND CARE

Programmes should attend to children's physical, social, and emotional needs, as well as to their cognitive and intellectual needs. In particular, health and nutrition elements are important for children from poor communities and have been a focus for many initiatives (for example Dlamini et al., 1996; DoE, 2001c; Tarullo, 2002; Dawes et al., 2004a).

RATIO OF CHILDREN TO ADULTS

This indicator is less clear. Lower ratios have often been associated with higher quality (for example Tarullo, 2002) and maximum ratios are usually set in national, provincial or local standards. However, international studies (for example Siraj-Blatchford & Wong, 1999) have shown that excellent outcomes can be achieved with far higher numbers of children than are considered acceptable in North America, depending on the curriculum approach. Nevertheless, very poor (i.e. low) adult-to-child ratios tend to reduce the adults' role to group management, limit opportunities for interaction with smaller groups of children and may even compromise safety elements.

PARTNERS/PARENTAL AND COMMUNITY PARTICIPATION

This includes involvement and participation of families and communities as partners in the programme, helping the programme to set appropriate standards and function well within the context, as well as supporting their children's learning at home. Kagitcbasi's (1996) parent programme and the Home Instruction Programme for Preschool Youngsters (Lombard, 1996) are examples of projects where mothers' involvement has supported positive child outcomes.

FINANCE/RESOURCES/MANAGEMENT

A consistent, permanent financial and material resource base, sufficient to support working in an appropriate way with children and to sustain the programme, is necessary. The level of investment in ECD services has to be at a high enough level before child effects become significant (Liddell & Kemp, 1995; Penn, 2004). Rhode Island Kids Count (2005) uses childcare subsidies as an indicator associated with school readiness. The DoE (2001c) Support Index contains financial indicators as well as support and monitoring from the appropriate bodies.

TEACHING STRATEGIES

This involves learning programmes which include questioning, direct instruction and scaffolding, matching tasks to the children's capabilities, and responsiveness to children's interests, family and community. Many of these strategies require individual and small group learning experiences. Dlamini et al. (1996), High/Scope Educational Research Foundation (2004), Siraj-Blatchford and Wong (1999), Siraj-Blatchford et al. (2002), and Weikart et al. (2003) have all focused on the association of these particular teaching strategies with positive outcomes.

The quality indicators above relate to services targeting children directly rather than those aimed at the primary caregivers. For programmes targeting parents and other primary caregivers evidence of child outcomes is less clear (Evans, 2005), as is what aspects of the programmes support child well-being. Programme experience suggests the following:

HELPING FAMILIES TO ACCESS RESOURCES

This involves helping families to obtain necessary documents such as birth registrations, social grants, nutritional and health support, and so on (Scott-McDonald, 2002; Newman et al., 2003).

BUILDING CAREGIVERS' SELF-ESTEEM AND CONFIDENCE

Supportive programmes which take a strengths-based approach, and which affirm and build on indigenous child-rearing practices have been found to have more value for their participants and positive child outcomes (Kagitçbasi, 1996; Scott-McDonald, 2002; Newman et al., 2003; Evans, 2005).

KNOWLEDGE AND PRACTICES TO SUPPORT CHILDREN'S DEVELOPMENT

Health and stimulation messages, encouraging caregivers to support early literacy, and other initiatives are another component of services aimed directly at the primary caregiver (Kagitçbasi, 1996; Newman et al., 2003; Rhode Island Kids Count, 2005).

SYSTEMIC SUPPORTS TO QUALITY

It is widely recognised (for example DoE, 1996, 2001a, 2001d; Arnold, 2004) that when working at multiple levels, in all the environments that impact on children, one is more likely to meet obligations to children and to address discrimination and exclusion. Indicators of intersectoral servicing are therefore included to cover both access and quality.

Proposed service quality indicators focus on three areas – those relating to ECD services in centres, those relating to services for parents/caregivers and those tracking the quality of and commitment to ECD programmes by the public sector.

For ECD services, the proportion of services complying with departmental registration norms and guidelines and educator qualifications, as well as the proportion of facilities in receipt of a state subsidy for their operational costs, are indicators of programme quality for which data are relatively accessible.

For ECD services through parents/caregivers, quality indicators include assisting caregivers to access grants, registration, health services and nutritional support;

caregiver knowledge and motivation to support their children's development; an assessment by parents/caregivers of the relevance for them of the parent support service; and whether these programmes are monitored and evaluated. Public sector quality indicators include monitoring of public policies in support of ECD against departmental plans, programmes, budgets and service delivery; the proportion of IDPs making specific provision for ECD services per province; and the existence of an efficient intersectoral administrative data system containing information on young children from the departments of health, education and social services.

POTENTIAL MEASURES OF SERVICE QUALITY

There are a number of tools used to measure the quality of settings where young children are cared for, covering different aspects of provisioning and staffing. These include the Early Childhood Environmental Rating Scale (ECERS) (Harms & Clifford, 1980), which has been adapted for Tamil Nadu (Isley, 2000) and a number of middle- to high-income countries;¹² guidelines from the National Association for the Education of Young Children, which reflect the DAP guidelines; High/Scope Program Quality Assessment and the observational instrument for the Improving Educational Attainment Preschool Project. Given the South African context and the lack of resources, a gross but more workable measure would be the extent to which services comply with DoSD guidelines required for registration (or any revision that takes place in view of the planned National Integrated ECD Plan). These cover physical standards, health, parent management, programme, nutrition, and staff training and responsibilities and quality assurance. Dawes et al. (2004a) make the point that these are helpful but too broad for measurement purposes and may need operationalisation. There are two processes which could be used to operationalise the broader areas of the guidelines. Firstly, once the guidelines receive ministerial approval, the DoSD will train provincial staff in their use, which could provide the opportunity to be more specific. Secondly, the use of the guidelines has been proposed as regulations for the Children's Amendment Bill 19 of 2006 (before the National Council of Provinces at the time of writing). Should this be accepted, this would present an opportunity to concretise them.

Educator qualifications based on the ECD unit standards from Levels 4 and 5 require that educators demonstrate competence in all of the process indicators listed above, as well as inputs such as providing resources and materials. If possible, monitoring and support checklists for provincial DoE staff should be adapted to include selected quality indicators.

Access to subsidies from the departments of social development or education would give an indication of the financial sustainability of services, state subsidies being a key factor in creating sustainability (Biersteker, 2001; Unit for Social Research, 2003). This data would be relatively available from departmental sources. These indicators would not take account of finer aspects of teaching strategies or child participation, which might be the subject of smaller research studies.

The success of parent programmes would mostly be measured by changes on family environment measures and service quality factors using small-scale surveys. Data on whether programmes are monitored and evaluated are likely to be difficult to obtain for those run by community groups, faith-based organisations and NGOs. However,

policy developments for ECD, such as the integrated plan for 0–4 year olds and the Expanded Public Works Programme for the Social Cluster, will mean that there is more public funding for this type of programme and that some form of monitoring and evaluation data should become available through departments.

Conclusion

There are many measurement and data challenges for monitoring ECD outcomes, particularly at the child and home environment level. While research has validated many indicators of young child well-being, measures and the capacity to collect data on a large scale remain a huge challenge except for basic health indicators. Indicators of service access are most readily measured through routine departmental data collection processes or national surveys. Certain indicators of service quality, such as the numbers of registered services, are accessible and others could be built into regular departmental monitoring systems. Data on the very many programmes that aim to reach young children through supporting and educating their parents, run by NGOs, faith-based and community organizations, are not readily available or even collected. Here special surveys would need to be undertaken.

The home environment is the place where child development starts and where the foundations are laid for the child's life. Improvements at this level can relieve present suffering, and provide children with the resources, strength and resilience to rise above the vicissitudes of life. They can obviate much of the need for later remediation or rehabilitation. Some rights indicators are already in place in surveys but require collating within systems or sets devised for particular purposes. Others need more research, taking account of local norms and cultural practices so that they may be utilised with confidence by intervention agencies.

There have been several recent local initiatives designed to involve concerned community members in monitoring child well-being in their neighbourhood. This would make it possible for them to refer child-related issues or cases needing attention to local authorities for action. Although these community childcare systems are not yet in general practice, they are an encouraging reminder of what can be achieved at local level.

The least developed indicators are those which relate to household dynamics as they affect young children. These are potentially the most powerful for intervention purposes, and need understanding and support within the communities they are designed to assist. Time, skill and care are needed to develop indicators that are uniquely applicable to the rights issues for South African communities under stress. This means, in many instances, starting from first principles, looking at what children and families are doing, listening to the interpretations they place on their rights, and understanding the information and support they will need to bring about improvements.

ECD as a life stage cross-cuts many of those sectors of child well-being dealt with in other chapters in this volume. To reflect an integrated approach to ECD a limited number of key health, safety and neighbourhood indicators are included in the indicator tables in Part 2. The first table contains the core indicators that are regarded as absolutely essential if we are serious about monitoring the situation of

young children. Some of this data are readily accessible but certain child and household indicator data will require specific studies. Regarding core indicator table entries, data from national surveys such as the Census, the GHS and SASAS are readily available and are collected either annually or at longer intervals; administrative data are collected continuously. Measures in large area surveys such as the KwaZulu-Natal Income Dynamics Study could be extended into national surveys where appropriate or remain as indicators in key areas. They are typically conducted at greater than annual intervals. Local Plan of Action surveys are not yet well developed. They should be continuous.

The second table in Part 2 contains additional indicators which provide more detailed and textured information about the well-being of children. Data are more difficult to collect and would require special research studies conducted from time to time.

NOTES

See Chapter 2 and Part 2 in this volume for an explanation of the five indicator types used for indicator design.

- 1 A National Integrated ECD Plan for 0–4 year olds, developed by the departments of education, social services and health, will provide the framework for service delivery to the youngest children and fulfils the undertaking for this age group in White Paper 5 on ECD (DoE, 2001a).
- 2 We are grateful to Mira Dutschke of the University of Cape Town's Children's Institute for her helpful comments on child rights included in this chapter.
- 3 The Constitution guarantees the right to basic education. To date there is no clarity that this includes ECD services but in view of the access to education provisions, ECD services have been shown to facilitate access to and progression in schooling and could be seen as an access and equal opportunity issue (see also CRC Article 28 and AC Article 11).
- 4 MDG goals which affect the ECD period are survival and health-related (reduction of under-five mortality, immunisations, improvement of maternal health, combating HIV/AIDS and other diseases, eradication of extreme poverty and hunger and improving access to basic services) as the education goals refer to universal primary education and provisions for gender equity in primary, secondary and tertiary education.
- 5 The International Standard Classification of Education (ISCED) defines pre-primary education ISCED level 0 as comprising programmes that offer structured, purposeful learning activities in a school or a centre (as opposed to a home) to children aged at least three years.
- 6 This group is a consortium of concerned donor agencies, foundations, and international NGOs working with regional ECCD networks.
- 7 Information shared by Gauteng DoE ECD staff at the DoE conference, Unlocking the Future, Johannesburg 28 February to 2 March 2005.
- 8 The Center for Child Well-being is a programme of the Task Force for Child Survival and Development, <<http://www.taskforce.org/>>.
- 9 The OECD collates and presents a number of indicators on the performance of education systems.
- 10 See Academy for Educational Development, <www.aed.org>.
- 11 The DoE uses this term to include all learners who need additional support to benefit from the education system, not only those with disabilities.
- 12 ECERS was developed at the Frank Porter Graham Child Development Institute, University of North Carolina at Chapel Hill. Many research projects in the US, Europe and elsewhere have used ECERS to assess global quality and found significant relationships between ECERS scores and child outcome measures, and ECERS scores and teacher characteristics, behaviours and compensation. See <<http://www.fpg.unc.edu/~ecers/>>.