

Disability Inclusion Helpdesk Report No: 65

Query title	Identifying children with disabilities in low-income countries
Authors	Kavita Kalsi and Dr Maria Kett
Date	31 st August 2021
Query	<ol style="list-style-type: none">1. What is the current practice for early identification and medical treatment of impairments amongst pre-school age children in low-income countries?2. What is the evidence on effective systems for identifying children with disabilities in schools in low-income countries, for the purpose of providing assistive devices or referring children and adolescents to specialist health services?
Enquirer	FCDO Sierra Leone

Contents

1. Overview
2. Methodology
3. What is the current practice for early identification and medical treatment of impairments amongst pre-school age children in low-income countries?
4. What is the evidence on effective systems for identifying children with disabilities in schools in low-income countries, for the purpose of providing assistive devices or referring children and adolescents to specialist health services?
5. Expert contributors
6. References

1. Overview

This query first provides a review of current practice for early identification and medical treatment of impairments amongst pre-school age children in low-income countries. It then summarises the evidence on effective systems for identifying children with disabilities in schools in low-income countries, for the purpose of providing assistive devices or referring children and adolescents to specialist health services.

Overall there is limited evidence on current practice for early identification and medical treatment of impairments amongst pre-school age children in low-income countries. Most research in this area looks at the prevalence of specific impairments amongst pre-school age children in low-income countries or reviews the effectiveness of diagnostic tools that may then be used for identification of impairments, rather than discussing current practice within countries. **However, most low-income countries offer routine antenatal, postnatal and mother-and-baby checks in clinics or in the home. These are a key opportunity to include screening for impairments alongside other checks.** Various cost-effective examples of these and other checks across countries and impairments are reviewed below.

Whilst in general there is limited evidence of effective systems for identifying children with disabilities in schools in low-income countries for the purpose of providing assistive devices or referrals to specialist health services, some examples stand out. For example, Kenya has recently created Minimum Standards to guide the management of its network of **Educational Assessment and Resource Centres (EARCs)**, which includes standards for the assessment of children with disabilities, the placement of children in appropriate schools, and the provision of assistive devices. Another example is Liberia, which has an effective school-based assessment and treatment programme for children with visual impairment.

Box 1: United Nations Convention on the Rights of Persons with Disabilities (UNCRPD)

The [United Nations Convention on the Rights of Persons with Disabilities](#) (CRPD) is an international human rights treaty intended to protect the rights and dignity of people with disabilities. The UK ratified the CRPD in 2009. The CRPD's human rights-based approach to disability defines people with disabilities as: '*...those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others*' (Article 1, [UNCRPD](#)).

Impairments (e.g., physical, cognitive or sensory) become disabling when they interact with prevailing attitudes, behaviours and policies or physical spaces to effectively bar the individual(s) from participating fully in society. For example, inaccessible communications or buildings and discriminatory attitudes of officials may deny access to justice for individuals with different impairments. Impairments can also combine with other key factors and characteristics to compound the level of marginalisation. These include differences based on age, gender, ethnicity, socio-economic background, rural versus urban locations and other identity markers. There are also differences in marginalisation based on whether impairments are visible or not.

The UNCRPD's human rights-based approach places an emphasis on removing barriers that make impairments disabling. In contrast, a 'medical model' approach focuses on 'fixing' the individual, not upon removing barriers external to the individual, whilst a 'charity model' approach typically positions people with disabilities as separate to mainstream society whose needs are met by others (e.g., housing people with disabilities within institutions).

The UNCRPD was [ratified](#) by Sierra Leone in 2009, following successful advocacy by the disability rights movement. However, it has not ratified the [Optional Protocol](#). The [Persons with Disabilities Act, 2011](#) domesticated the UNCRPD in Sierra Leone and sets out the rights of people with disabilities, including children, to social services such as education, health and early detection of a disability through compulsory screening at health centres ([Mason, 2018](#)). In addition, the rights of children with disabilities are protected in other international and regional human rights frameworks which Sierra Leone has either ratified or domesticated, such as the Convention on the Rights of the Child, the African Charter on the Rights and Welfare of the Child, and the UN Standard Minimum Rules for the Administration of Juveniles.

In light of this framework, children with disabilities in Sierra Leone should be able to enjoy their rights to access health and social care and support, including early identification of impairments, like all other children. Training of healthcare workers in a rights-based approach to healthcare may be appropriate to ensure it is fully understood and adopted across the healthcare system.

2. Methodology

This rapid research query has been carried out in five days of researcher and expert time. The methodology is described below.

Search strategy: Studies were identified through a variety of strategies:

- FCDO Disability Inclusive Development Programme consortium partners¹ and relevant experts were contacted for evidence recommendations (see Section 5 for experts/organisations who responded).
- Literature suggested by Dr Maria Kett, DID consultant with extensive experience in disability, international development and assistive technology.
- Google and relevant electronic databases (PubMed, Science Direct, and Google Scholar) for priority sources using a selection of key search terms² used in systematic reviews to identify more recent materials.
- Review of key disability portals and resource centres, including the EdTech Hub, AT2013, UCL International Disability Research Centre, Disability Data Portal, Source, International Centre for Evidence in Disability, the Impact Initiative, and Sightsavers Research Centre.
- Medical journals such as the BMJ and National Center for Biotechnology Information (NCBI).

3. What is the current practice for early identification and medical treatment of impairments amongst pre-school age children in low-income countries?

Overall there is limited literature focusing on current practice for early identification and medical treatment of impairments amongst pre-school age children in low-income countries. Most research looks at the prevalence of specific impairments amongst pre-school age children in low-income countries or reviews the effectiveness of diagnostic tools which may then be used for identification of impairments. Findings per country are summarised in section 3.2 below, with different impairments highlighted where relevant. Attempts to draw conclusions about current practice in the early identification and medical treatment of impairments are made where appropriate.

It is important to note that in many low-income countries, NGOs rather than government health services conduct screening and treatment of more complex impairments – such as those requiring surgery – in children of all ages. Whilst many low-income countries have facilities for more general paediatric treatment, these are often limited, are usually only located in urban areas, and are often unaffordable for poorer citizens. NGOs that help to plug this gap usually work in collaboration with existing health structures, often acting as a point of referral. However, reliance on NGOs means that the screening-to-treatment journey in many low-income countries is not systemised and only operates on a small scale.³ Examples of such NGOs include [Smile Train](#), which provides surgical treatment for cleft lip/palate conditions across most of the developing world, and [Mercy Ships](#), which offers a range of surgical procedures (for example for clubfoot) across Sub-Saharan Africa.

3.1 Overview

Both the UN Sustainable Development Goals and the Global Strategy for Maternal, Adolescent

¹ The Disability Inclusion Helpdesk is funded under the DID programme. The DID consortium partners are ADD International, BBC Media Action, BRAC, Institute of Development Studies (IDS), International Disability Alliance (IDA), Humanity & Inclusion, Leonard Cheshire Disability, Light for the World, Sense, Sightsavers and Social Development Direct.

² Key search terms included: Disabled/disability/disabilities, pre-school, children, adolescents, impairment, deaf, blind, mental health conditions, psychosocial, intellectual, AND identification, assessment AND low-income countries, developing countries.

³ Expert contribution (Dr Maria Kett).

and Child Health advocate the need to address newborns' capacity to thrive beyond survival. The first thousand days of life (from conception to age two) are recognised as critically important for child development due to rapid brain growth and greater neuroplasticity during this period, with impact demonstrated on children's educational achievements later in childhood ([Kohli-Lynch et al, 2019](#)). This period is also crucial for the prevention, detection and treatment of impairments which, if left undetected, are likely to become more complex to manage.

The [Nurturing Care Framework for Early Child Development](#), developed by the World Health Organization, UNICEF and the World Bank, identifies three levels of interventional support for child development in general in the pre-school period:

- (1) Universal** – This is nurturing care for everyone, through health promotion and primary prevention. It includes using caregivers' and young children's routine contacts with services to give basic advice and guidance on nurturing care, such as antenatal and postnatal care and home visits.
- (2) Targeted** – This is additional support for children at risk of developing later problems due to poverty, adolescent pregnancy, HIV, etc. It includes the provision of free or affordable day care in communities and participatory support groups for caregivers.
- (3) Indicated** – This is further support for children who have additional needs, including those with disabilities or developmental difficulties. It includes family-centred rehabilitation and community support for children with disabilities ([World Health Organization; UNICEF; World Bank, 2018](#)).

Given resource constraints, many low-income countries will only offer universal support, including to children with disabilities. However, this universal care usually includes antenatal and postnatal checks and mother-and-baby home visits that occur during the first few weeks of a child's life. **These routine checks are an important opportunity for health workers in low-income countries to identify impairments and refer children onwards for medical treatment. This could be done by adding certain additional checks and tests to those currently being carried out by health workers during routine mother-and-baby checks.** The findings from countries presented below highlight some practical and cost-effective ways in which Sierra Leone could incorporate screening for impairments as part of existing mother-and-baby checks, particularly in home-based settings. This is especially important for rural and other populations located far from medical facilities who might otherwise miss health checks if home visits are not provided.

It is critical to note that whilst regular developmental checks are common worldwide, in many countries there is a gap between checks that take place during infancy (usually up to the age of three) and potential checks that occur when children start school (usually from the age of five). This means that there is a potential for children to be missed during this transition period and so impairments may not be identified or treated during these years.⁴ It is therefore important for health policy and practice to focus on this age group (as well as younger and older children) when screening for impairments.

Furthermore, even if an infant is identified as having an impairment as a pre-schooler, this information may not be conveyed to the child's school upon entry because most countries lack adequate systems that ensure that medical records follow children when they start school. It is usually incumbent on parents to pass information about impairments onto schools but there is a

⁴ Expert contribution (Dr Maria Kett).

potential for this not to happen if parents lack the knowledge or literacy skills to understand medical diagnoses that have been made during their child's infancy. This emphasises the need for an integrated, systematised approach for medical records to be shared between the health and education services with informed consent by parents or caregivers and ensuring patient confidentiality and child safeguarding, so that the needs of children with disabilities are recognised and responded to by schools.

3.2 Findings by country

Bangladesh

- **Newborn screening programmes** are an essential preventative public health initiative designed to provide timely identification of infants with rare but treatable conditions. However, they are not widely available in low-resource settings. Conditions for which screening is advised will vary depending on country contexts. It will be important for Sierra Leone to include in its newborn screening any contextually relevant commonplace conditions.

Congenital hypothyroidism is a common cause of irreversible **cognitive disability** when left untreated. Pilot screening for it was initiated in Bangladesh in 1999, but by 2018 single disease screening was occurring for less than 5% of newborns. Whilst newborn screening efforts are generally well accepted by government and health officials in Bangladesh, barriers to widespread screening include problems related to sample control and insufficient resources for appropriate staff training. There are also socio-cultural barriers, including the high rate (85%) of home births (related partly to 70% of people living in rural areas far from hospitals), early infant discharge from hospital before a blood sample can be taken, and lack of parental education about newborn screening.

A study of expanded newborn screening for congenital hypothyroidism found that parents showed greater acceptance of blood samples taken from dried umbilical cord at birth rather than from heel pricks conducted 1-2 days after birth. Whilst cord blood is subject to maternal admixture and so may be less reliable than heel prick blood for screening for conditions, it is logistically easier to collect, particularly if babies are discharged before a heel prick sample can be taken ([Murphy et al, 2019](#)). Cord blood may therefore be a more acceptable way of getting a blood sample to screen for congenital hypothyroidism (amongst other conditions) in low-income settings where mothers and babies are discharged from hospital quickly due to a lack of hospital facilities.

- With regards to **developmental delay**, Bangladesh has created the Developmental Screening Questionnaire (DSQ) which is designed to be administered by mothers of children aged 0-2 years and frontline health workers visiting the home to screen for **neurodevelopment**. There are 24 question sets (one for each month up to two years of age) with questions focusing on key skills acknowledged as developmental norms at each month. One question relates to each of the following eight functional domains: gross motor skills, fine motor skills, vision, hearing, cognition, seizures, behaviour and speech. A validation exercise in two urban wards in Dhaka found that, across the eight domains, the DSQ had an overall sensitivity⁵ of 47.1% and an overall specificity⁶ of 97.2% ([Khan et al, 2011](#)). Despite

⁵ *Sensitivity* refers to the ability of a test to correctly identify patients with an impairment (<https://ebn.bmj.com/content/23/1/2>).

⁶ *Specificity* refers to the ability of a test to correctly identify people without an impairment (<https://ebn.bmj.com/content/23/1/2>).

this moderate sensitivity score, the DSQ may still be advantageous for use in resource poor such as Sierra Leone settings due to its high specificity⁷ ([Faruk et al, 2020](#)). In terms of validity, agreement between the frontline health workers in the use of the DSQ was high, which indicates that it can be administered reliably by such workers after a one-week training course. This is important in Bangladesh and in other low-income settings where primary health care services are provided to households by health/family welfare assistants who have a similar level of education (high school certificate) as the frontline workers in the validation exercise ([Khan et al, 2011](#)).

In 2008 the Ministry of Health and Family Welfare in Bangladesh established multidisciplinary Child Development Centers in all government medical colleges nationwide with the objective of providing early diagnosis and medical treatment for children with a range of neurodevelopmental delays and disorders. These Centers were expected to link up to a universal system of developmental monitoring in communities via the use of the DSQ screening tool ([Khan et al, 2011](#)). However, this rapid view has not found evidence of widespread community screening of children aged 0-2 years, nor of any linkages between this monitoring service and Child Development Centers. In rural settings in Bangladesh, families reportedly have no access to services for pre-school children with disabilities due to a lack of facilities and knowledge about early detection and rehabilitation, with assessment and education delayed until the child is of school age or older ([Ara et al, 2015](#)).

Box 2: Screening tools for developmental delay

A [systematic review](#) of screening tools for early identification of children with **developmental delay** in low- and middle-income countries (LMICs) notes that one of the biggest challenges for early identification is having *culturally sensitive* screening tools, which include cultural perception of developmental delay and which are easily adaptable across various cultures/countries. As such, there are a limited number of *culturally sensitive developmental screening tools* validated for children aged <5 years in LMICs.

Among the various developmental domains, social development is culturally specific and particularly difficult to adapt, in comparison to the gross motor domain which is easier to adapt culturally. In general, the transfer of Western-based screening tools to non-Western countries is linked to substantial limitations in terms of score interpretation as well as feasibility for their use in resource-constrained settings.

The review also notes that across LMICs in general, most teaching and training for health professionals focuses on acute illness and children's general growth rather than developmental aspects, which results in limited attention on developmental delay as an impairment ([Faruk et al, 2020](#)). Given this oversight, it will be important for low-income countries such as Sierra Leone to include developmental delay in its screening of impairments in pre-school children.

⁷ An alternative monitoring tool with much higher sensitivity has been developed by Turkey for children aged 0-3.5 years in low- and middle-income countries. The Guide for Monitoring Child Development (GMCD) consists of seven open-ended to assess children's abilities in expressive language and communication, receptive language, fine and gross motor skills, social-emotional skills and self-help. In a random sample of 79 Turkish children aged 0-2 years it was found to have an overall sensitivity of 88% and an overall specificity of 93%. For a discussion of this and other screening tools in low-income countries, please see [Faruk et al, 2020](#), noting, however, that this paper reviews the effectiveness of these tools rather than discussing general screening practices across countries.

Yemen

- The Ministry of Public Health and Population uses an [Early Detection Guide](#) for health workers in primary health care which aims to create basic but sufficient awareness of the importance of early detection and treatment of impairments to reduce and mitigate their effects on children. It is an easy-to-use guide which provides primary health care workers with practical screening and diagnostic tools for a range of impairments that may occur before, during or soon after birth, including **Cerebral Palsy, cognitive impairments, developmental delay, hearing problems, visual problems, congenital conditions such as Down Syndrome and Spina Bifida, and physical impairments such as congenital hip dislocation**. It is designed to be used by health care workers when they carry out routine infant immunisations from birth to 18 months. Checklists of developmental milestones and signs of impairment at one month, three months, six months, nine months and one year are provided. Follow-up checks and, if necessary, referral to appropriate services, are recommended for children who show signs of impairment. Some of the material is taken from the 1987 book *Disabled Village Children* by David Werner. However, given the ongoing instability in Yemen, it is not clear to what extent this resource is being used across the country.

Rwanda

- The Rwandan Special Needs and Inclusive Education Policy (2018) sets out an assessment system for children with disabilities but the policy itself notes that the country's education system does not yet have any formal functioning assessment system for early identification of learning needs upon school entry (including pre-school) so that appropriate placements and support can be provided ([Republic of Rwanda, 2018](#)). A field-based study in 2015 across three districts of Rwanda found that it is up to parents to decide where to enrol their child with disabilities since there is no standardised system of assessment in place to implement this ([Education Development Trust, 2015](#)). Whilst parental choice is paramount in school selection, parents need to receive accurate assessments of their child's impairments to be able to make an informed choice in this regard.

Malawi

- In general there is limited early identification and medical treatment of impairments amongst children in Malawi, including pre-schoolers. Findings from a study using the Key Informant Method⁸ in two rural districts suggest that over 75% of **hearing impairment** in children (of all ages) is attributable to conductive hearing loss caused by conditions such as middle ear infections and presence of wax, which are easily treated through primary ear and hearing care services. Such services are limited in Malawi, as in many low-income countries. Potential innovative strategies to address this gap which may also be applicable to Sierra Leone include the training of primary level health workers, such as Health Surveillance Assistants, in the delivery of primary ear and hearing care for pre-school children ([Tataryn et al, 2017](#)).

⁸ The Key Informant Method (KIM) is an innovative method for generating population level data on the prevalence and causes of impairments in children. It provides an important alternative to population-based surveys which can be time consuming and costly. KIM involves training volunteers (Key Informants) to identify children in their communities who may have disabling impairments. The children are then invited to attend a screening camp where they are examined by relevant medical professionals and referred to appropriate services as available ([Tataryn et al, 2017](#)).

Box 3: Effective treatment of clubfoot in several low- and middle-income countries

Clubfoot is one of the most common congenital conditions, affecting 1 in 800 births. If left untreated, it can lead to life-long impairment, reducing a person's ability to participate in society, education, and employment.

Most children with clubfoot can be successfully treated with the **Ponseti method**, which is considered the gold standard treatment protocol for children from birth to age five. It is minimally invasive and combines serial casting, braces, and a minor surgical procedure to lengthen the Achilles tendon. **The Ponseti Method is both low-cost and cost effective:** the cost of treatment for one child outside the costs typically supported by the health system (clinic space, staff, etc) is estimated to be USD 500.

Despite the availability of this affordable intervention, fewer than one in five children born with clubfoot in LMICs currently receive treatment. Low treatment rates are driven by limited awareness about clubfoot, a lack of ownership and prioritisation of the condition by governments and donors, and a lack of systems needed to deliver effective treatment. Clubfoot services require coordination and leadership between different departments within health ministries, both of which are often missing in LMICs. Consequently, in many LMICs, clubfoot treatment is provided by NGOs rather than government health services.

Despite these barriers, several low-income countries have made significant progress in increasing access to treatment for clubfoot via the popularisation of the Ponseti method. In 2017, 58 LMICs reported having a clubfoot treatment programme, up from fewer than 10 in 2007. Most significantly, Bangladesh, Rwanda, Paraguay, Nicaragua and Malawi all have a treatment coverage rate of over 50%.

In Bangladesh, the NGO Walk For Life (WFL) is aiming to increase access to clubfoot treatment through a network of 33 clubfoot clinics. WFL operates a centralised model to produce low-cost, quality-controlled braces from materials found in Bangladesh and manufactured by specialised cobblers, quality controllers and technical experts which it employs and trains. WFL has helped the Government of Bangladesh adopt clubfoot treatment in its national guidelines and established cost-sharing arrangements with it for the network of clinics. This network ensures that parents have to travel a maximum of 70 km to access a clinic.

WFL conducted awareness-raising about clubfoot with healthcare workers in communities and in hospitals. However, the partnership with Government ended in 2020 and WFL is now working with the private sector as this is where 60% of the population accesses health services ([AT2030, 2021](#)).

4. What is the evidence on effective systems for identifying children with disabilities in schools in low-income countries, for the purpose of providing assistive devices or referring children and adolescents to specialist health services?

Overall there is limited evidence of effective systems for identifying children with disabilities in schools in low-income countries for the purpose of providing assistive devices or referrals to specialist health services. Whilst various interventions to identify children with disabilities in schools in low-income countries exist, most are not *systematised*. However, some examples of effective systems stand out, as discussed in detail below.

Kenya

- **Educational Assessment and Resource Centres (EARCs)** have been established in Kenya since 1984 and are managed by the Ministry of Education (MoE). The primary purpose of EARCs is to ensure early identification, assessment, intervention and placement in appropriate learning institutions of children with special needs and disabilities. ([Republic of Kenya, 2009](#)). EARCs are open to all children from birth to age 16 ([Muga, 2003](#)).

However, a situation analysis of EARCs conducted in 2016 by Sightsavers International found that EARCs lacked basic requirements including poor infrastructure, lack of adequate and appropriate assessment equipment, lack of assistive devices, inadequate and inappropriate staffing, and lack of a standardised approach to the assessment of learners with disabilities (Republic of Kenya, 2021).⁹ Furthermore, a visit to Kenya in 2015 by a delegation from the UK Government's All-Party Parliamentary Group for Global Education for All found that children referred to EARCs did not necessarily end up accessing these services due to prohibitive travel costs, parents' employment preventing travel to EARCs, and stigma associated with disability ([Global Campaign for Education, n.d.](#)).

In response, the Kenyan MoE has developed **Minimum Quality Standards for EARCs in Kenya** (forthcoming) to guide the overall management and operationalisation of EARCs and to provide direction to professionals and other persons who offer services to learners and trainees with disabilities and special needs. The standards aim to ensure effective assessment and appropriate placement of learners with disabilities and special needs to improve their learning outcomes. The development of the standards included consultation with key stakeholders such as civil society organisations and the Teachers' Service Commission.

The provision of assessment equipment, materials and assistive devices is one of the six thematic areas covered by the Minimum Standards¹⁰. EARCs are expected to play a significant role in the prescription, fitting and repair of assistive devices, including conducting a thorough assessment process to identify the devices required by each child. The Minimum Standards note that parents and children should be guided in taking proper care of each device and should be made aware of the facility that EARCs provide for repair and maintenance (Republic of Kenya, 2021).

The Minimum Standards include a monitoring tool to audit EARCs and to evaluate the quality of services against the Standards. Indicators under thematic area 6: *Assessment equipment, materials and assistive devices* include that the County EARC has a supply of

⁹ Please note that this document is forthcoming.

¹⁰ The other thematic areas covered are: (1) Management and Accountability; (2) Infrastructure and Environmental Requirements; (3) Roles and Responsibilities of EARC Assessment Officers, EARCs and Outreaches; (4) Staffing and Required Qualifications and Competencies of Assessment Staff; and (5) Assessment Processes.

assistive devices and the County EARC has a technician's workshop (Republic of Kenya, 2021).

It is important to note that, whilst in theory, self-referral to an EARC is possible, in practice referrals are usually made by teachers or social workers. This means that it is mainly in-school children who benefit from EARC services. The Minimum Standards include a section on Outreach Work, which 'will address the needs of school-going children with disabilities and special needs first and foremost of (sic) as well as those who are not attending school or programs' (Republic of Kenya, 2021: 7). This shows an attempt to include out-of-school children in EARC activities but is nonetheless a clear prioritisation of in-school children.

Box 4: Assistive devices

The provision of appropriate assistive devices to children with relevant disabilities should be an integral part of any health department's services. In addition to the need to correctly assess children's impairments and to identify the appropriate assistive devices that they require, health departments should plan for the maintenance and frequent replacement of assistive devices due to children's rapid physical growth.

Children with disabilities may need to use devices of various sizes over a relatively short space of time. It is particularly important for low-income countries to plan for this to assure sufficient resources and facilities are earmarked for the upgrade and replacement of assistive devices for children.

Liberia

- **A pilot school eye health (SEH) programme in 50 schools in Liberia, led by the multisector coalition [Eyelliance](#)**, has been demonstrated as an effective model for identifying children with vision impairment and providing them with corrective glasses. Whilst this programme is still being scaled up nationally (this has been partly delayed due to COVID-related school closures), the Government of Liberia will include SEH in its 2022 National Education Sector Plan and has committed to funding SEH from 2022 onwards ([AT2030, 2020](#)).

A lack of SEH screening means that children with visual impairment are less likely to ever enrol in school, complete primary education or achieve literacy. SEH programmes can therefore be used to increase access to inclusive education for children with visual impairment. Furthermore, the World Bank has carried out a costing analysis of SEH and deems that it would be an affordable intervention for many governments ([Wodon et al, 2019](#)).

SEH is based on three activities:

- 1) Teachers, school nurses, or other trained personnel screen children for vision problems on-site at schools.
- 2) Children identified with vision problems are examined by an eye health professional who determines the eyeglasses prescription or refers them for more advanced care.
- 3) Children who need eyeglasses are provided with a pair.

This pilot intervention in Liberia has demonstrated that SEH can be successfully scaled nationally within a short period of time, even in under-resourced and under-capacitated contexts such as Sierra Leone. Prior to this pilot intervention, SEH rollout in Liberia had been fragmented and underfunded, with problems including insufficient trained

staff, lack of guidance, lack of basic screening tools, and weak surveillance systems. SEH was carried out by NGOs working in a disjointed way with little communication on plans and activities, leading to fragmented approaches to procurement and provision of glasses. ([AT2030, 2020](#)).

5. Expert contributors

Dr Maria Kett, Associate Professor in Humanitarianism and Disability, UCL Institute of Epidemiology and Healthcare.

International Disability Alliance

6. References

Ara U.K.M.N., Rahman M.E., Khan N.Z., Ullah M.S.S., and Yusuf M.A. (2015) *Screening for Neurodevelopmental Impairments among less than 2 Years Old Children in a Tertiary Care Hospital in Dhaka city*, J Natl Inst Neurosci Bangladesh, 2015;1(2): 57-61

<https://pdfs.semanticscholar.org/7a4e/8f233b2685703c0d5309942bf3423272d2f6.pdf>

AT2030 (2020) *The Liberia Evidence Lab: A new scalable model to deliver School Eye Health*

https://at2030.org/static/at2030_core/outputs/Case_study_-_Liberia_School_Eye_Health.pdf

AT2030 (2021) *Preventing Lifelong Impairment: Access to Clubfoot Treatment in Low- and MiddleIncome Countries*

https://at2030.org/static/at2030_core/outputs/AT_Clubfoot_Narrative_April_2021_Final.pdf

Education Development Trust (2016) *A study on children with disabilities and their right to education: Republic of Rwanda*

<https://www.educationdevelopmenttrust.com/EducationDevelopmentTrust/files/36/36a56288-d541-47d8-a14c-c3e07f713ef4.pdf>

Government of Sierra Leone (2011) *The Persons with Disability Act, 2011* <http://www.sierra-leone.org/Laws/2011-03.pdf>

Global Campaign for Education (n.d.) *Accessing Inclusive Education for Children with Disabilities in Kenya* <https://www.globaleducationappg.co.uk/wp-content/uploads/2017/02/Accessing-inclusive-education-for-children-with-disabilities-in-Kenya.pdf>

Faruk T., King C., Muhit M., et al. (2020) *Screening tools for early identification of children with developmental delay in low- and middle-income countries: a systematic review*. BMJ Open 2020; 10:e038182. doi:10.1136/bmjopen-2020-038182

<https://bmjopen.bmj.com/content/bmjopen/10/11/e038182.full.pdf>

Khan, N.Z., Muslima, H., Shilpi, A.B., Begum, D., Akhtar, S., Parveen, M., Ferdous, S., McConachie, H. and Darmstadt, G.L. (2011) *Validation of a home-based neurodevelopmental screening tool for under 2-year-old children in Bangladesh*

https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1365-2214.2012.01393.x?saml_referrer

Kohli-Lynch, M., Tann, C.J., and Ellis, M.E. (2019) *Early Intervention for Children at High Risk of Developmental Disability in Low- and Middle-Income Countries: A Narrative Review*,

International Journal of Environmental Research and Public Health,
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6888619/>

Mason, H. (2018) *In Sierra Leone, supporting children living with disabilities*, News and Press Release, 4 February 2018, UN Country Team in Sierra Leone
<https://reliefweb.int/report/sierra-leone/sierra-leone-supporting-children-living-disabilities>

Muga, E. (2003) *Screening for disability in a community: the 'ten questions' screen for children, in Bondo, Kenya*, African Health Sciences 2003 Apr; 3(1): 33–39,
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2141587/>

Murphy, M.S.Q, Chakraborty, P., Pervin, J., Rahman, A., Wilson, L.A., Lamoureux, M., Denize, K., Henderson, M., Hawken, S., Potter, B.K., Little, J. and Wilson, K. (2019) *Incidental screen positive findings in a prospective cohort study in Matlab, Bangladesh: insights into expanded newborn screening for low-resource settings* Orphanet Journal of Rare Diseases (2019) 14:25
<https://ojrd.biomedcentral.com/track/pdf/10.1186/s13023-018-0993-1.pdf>

Republic of Kenya, Ministry of Education (2009) *The National Special Needs Education Policy Framework*
<http://www.unesco.org/education/edurights/media/docs/446808882707702aafc616d3a2cec918bfc186fc.pdf>

Republic of Kenya, Ministry of Education (2021) *Minimum Quality Standards for Educational Assessment and Resource Centres (EARCs) in Kenya*

Republic of Rwanda, Ministry of Education, *REVISED SPECIAL NEEDS AND INCLUSIVE EDUCATION POLICY*
https://www.mineduc.gov.rw/fileadmin/user_upload/Mineduc/Publications/POLICIES/Special_Needs_Strategic_Plan.pdf

Tataryn, M., Polack, S., Chokocho, L., Mulwafu, W., Kayange, P., Morgon Banks, L., Noe, C., Lavy, C. and Kuper, H. (2017) *Childhood disability in Malawi: a population based assessment using the key informant method*, BMC Pediatrics (2017) 17:198
<https://bmcpediatr.biomedcentral.com/track/pdf/10.1186/s12887-017-0948-z.pdf>

Wodon, Q., Male, C., Nayihouba, A. and Smith E. (2019) *Looking Ahead: Visual Impairment and School Eye Health Programs. The Price of Exclusion: Disability and Education Notes Series*. Washington, DC: The World Bank.
<https://pubdocs.worldbank.org/en/880171575325123775/WorldBank-InclusiveEducationVisualImpairment-v7-WebReady.pdf>

World Health Organization, UNICEF and World Bank (2018) *Nurturing Care for Early Childhood Development: A Framework for Helping Children Survive and Thrive to Transform Health and Human Potential*; World Health Organization: Geneva, Switzerland, 2018
<https://apps.who.int/iris/bitstream/handle/10665/272603/9789241514064-eng.pdf>

About Helpdesk reports: The Disability Inclusion Helpdesk is funded by the UK Foreign, Commonwealth and Development Office, contracted through the Disability Inclusion Team (DIT) under the Disability Inclusive Development Programme. Helpdesk reports are based on between 3 and 4.5 days of desk-based research per query and are designed to provide a brief overview of the key issues and expert thinking on issues around disability inclusion. Where referring to documented evidence, Helpdesk teams will seek to understand the methodologies used to generate evidence and will summarise this in Helpdesk outputs, noting any concerns with the robustness of the evidence being presented. For some Helpdesk services, in particular the practical know-how queries, the emphasis will be focused far less on academic validity of evidence and more on the validity of first-hand experience among disabled people and practitioners delivering and monitoring programmes on the ground. All sources will be clearly referenced.

Helpdesk services are provided by a consortium of leading organisations and individual experts on disability, including Social Development Direct, Sightsavers, Leonard Cheshire Disability, ADD International, Light for the World, Humanity & Inclusion, BRAC, BBC Media Action, Sense and the Institute of Development Studies (IDS). Expert advice may be sought from this Group, as well as from the wider academic and practitioner community, and those able to provide input within the short time-frame are acknowledged. Any views or opinions expressed do not necessarily reflect those of FCDO, the Disability Inclusion Helpdesk or any of the contributing organisations/experts.

For any further request or enquiry, contact enquiries@disabilityinclusion.org.uk

Suggested citation:

Kalsi, K. and Kett, M. (2021) *Identifying children with disabilities in low-income countries*, Disability Inclusion Helpdesk Research Report No. 65. London, UK: Disability Inclusion Helpdesk.