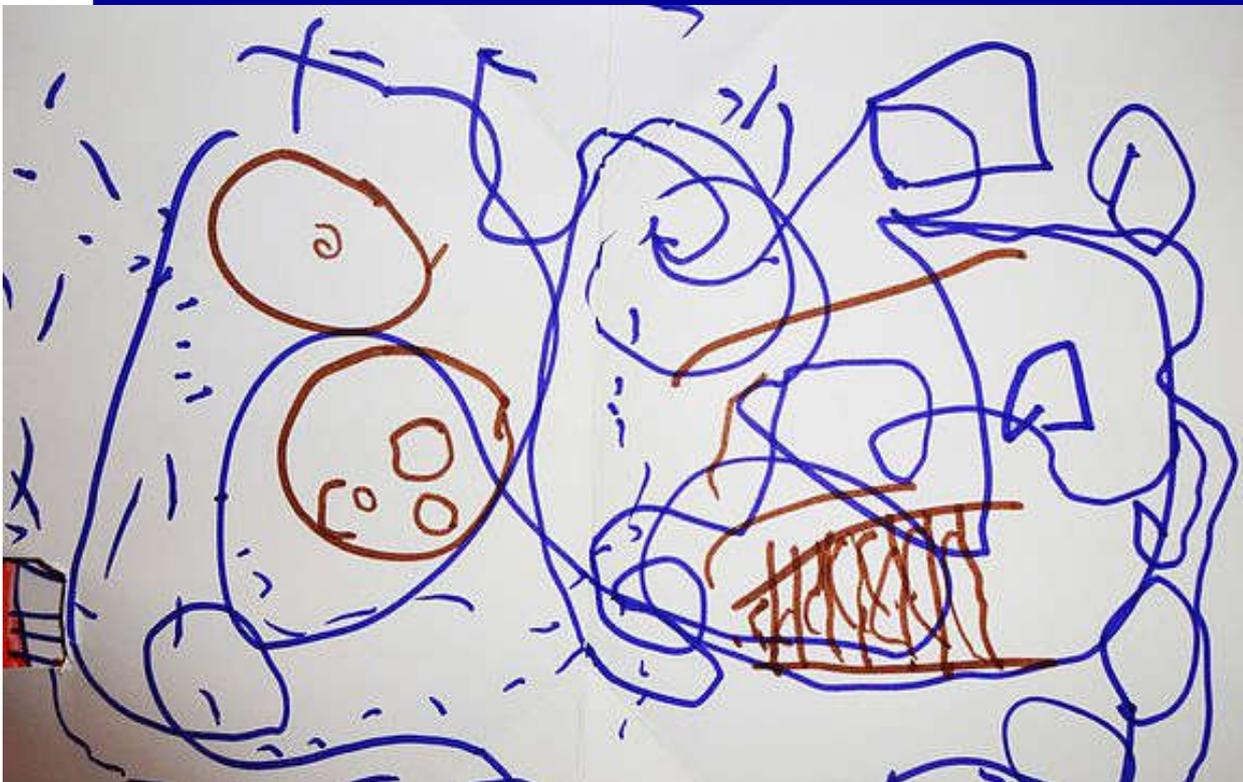


TEACH CVI

Instructions for screening lists

Children with Cerebral Visual
Impairment (CVI)



“My home: stairs, people, and windows”
Drawing by S.H., a five year old girl with CVI.



Erasmus+

<http://www.teachcvi.net>

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Instructions for screening lists

These screening tools are developed as a first step to decide when to refer children with a suspicion of CVI to specialised centres for further assessment. The screening tools cover lower, middle and higher visual functions.

Note: these are screening tools, not diagnostic tools!

Each screening list starts with some general questions about the child (e.g. medical, developmental and visual problems). Next, there is a list of questions that screen for CVI. The parents, teacher, health care professionals or other interested persons need to fill in every question to the best of their ability by indicating the number that is the most applicable to the child. The numbers correspond to: (1) never, (2) occasionally, (3) frequently and (4) always. At the end of the screening list, we have provided some space to allow further comments if necessary and to clarify which questions were hard to answer.

There are three screening lists for three different groups:

- Screening list CVI 1: This screening list is focused on children with a motor disability who are non-ambulant.
- Screening list CVI 2: This screening list is focused on children with a developmental age between two and six years old.
- Screening list CVI 3: This screening list is focused on children with a developmental age between six and twelve years old.

So far there is no ICD-10 code for the diagnosis of CVI. Most often the ICD-10 code H47.6, disorders of visual cortex, and H47.7, unspecified disorder of visual pathways, are used. For your convenience, we refer to CVI diagnosis although this isn't specified in ICD-10.

The following offers a guide on how to apply the screening lists:

1. Parents, teachers, health care professionals and other interested persons fill in the screening list.
 - On the introductory page questions 1 and 2 are for parents, teachers, health care professionals and other interested persons. Questions 3 to 5 only apply to parents.
 - It is important to emphasise that the screening list needs to be filled in to the best of participants knowledge. Considered responses will provide the most useful information.
 - Provide an opportunity to discuss the screening lists with the parents/teachers/health care professionals/other interested persons, particularly about questions they are not sure about. This will maximise the likelihood that every question can be filled in to the best of each participants knowledge.

2. Healthcare professionals score and review the screening tools.
- At the moment there is no scientific research carried out on these screening lists. The scoring is based on previous research¹ and professional experience.
 - The answers that are indicative for CVI are marked bold for each question and specific screeners are indicated for each screening list:
 - Scoring list 1
 - Scoring list 2
 - Scoring list 3
 - Healthcare professionals need to count the number of bold answers.
 - The healthcare professionals should also check whether or not screeners are marked:
 - **Screeners list 1: 6 screeners**
 - Item 6: Use of vision can fluctuate.
 - Item 10: Does not recognise common objects.
 - Item 12: Can find a favourite toy easily when it is amongst other toys.
 - Item 14: Looks away while reaching out for an object.
 - Item 17: Notices an object only when it moves.
 - Item 19: Reacts to sound rather than to visual stimuli.
 - **Screeners list 2: 8 screeners**
 - Item 4: Tilts head to look at something.
 - Item 15: Looks away while reaching out for an object.
 - Item 20: Does not recognise common objects.
 - Item 22: Recognises common objects only when drawn in colour.
 - Item 25: Has difficulties with interpreting more complex drawings (e.g. overview picture/situation picture).
 - Item 26: Can find a favourite toy easily when it is amongst other toys.
 - Item 31: Has difficulty walking down steps.
 - Item 34: Touches an object in preference to looking at it.
 - **Screeners list 3: 8 screeners**
 - Item 4: Tilts head to look at something.
 - Item 15: Looks away while reaching out for an object.
 - Item 22: Does not recognise common objects.
 - Item 27: Can find a favourite toy easily when it is amongst other toys.
 - Item 32: Has difficulties with interpreting more complex drawings (e.g. overview picture/situation picture).
 - Item 33: Has difficulties with following the line when reading.
 - Item 39: Has difficulties walking down steps.
 - Item 43: Has difficulties perceiving the movement of objects (e.g. movement of a car or movement of a ball).
 - A positive screen is based on the number of marked screeners and/or the number of marked items:

¹ Ortibus, E., Laenen, A., Verhoeven, J., De Cock, P., Casteels, I., Schoolmeesters, B., et al. (2011). Screening for cerebral visual impairment: value of a CVI questionnaire. *Neuropediatrics*, 42(2), 138-147. doi: 10.1055/s-0031-1285908

- Screening list CVI 1 – There is a positive screen if:
 - 3 out of 6 screeners are indicated with or without additional marked items;
 - Or 6 or more items are marked (1/3 of the screening list).
 - Screening list CVI 2 – There is a positive screen if:
 - 4 out of 8 screeners are indicated with or without additional marked items;
 - Or 11 or more items are marked (1/3 of the screening list).
 - Screening list CVI 3 – There is a positive screen if:
 - 4 out of 8 screeners are indicated with or without additional marked items;
 - Or 15 or more items are marked (1/3 of the screening list).

- 3. Healthcare professionals provide feedback of the screening results to the parents.

- 4. The following offers guidance on how to address the findings from the screening:
 - Negative screen:
 - No further assessment for CVI needed: No immediate concern for CVI and further assessment is not needed. Some reassurance may be needed and other worries must be taken care of. Re-screen after 6 months if clinical concerns persist.
 - High risk for CVI: No immediate CVI diagnosis but there are grounds for concern (e.g. prematurity, cerebral palsy ...) that given the presence of certain characteristics a CVI diagnosis might emerge in the future, suggesting the need for ongoing monitoring and assessment. Re-screen after 6 months if clinical concerns persist.
 - Positive screen: This requires immediate assessment by a multidisciplinary team. This team should have involvement from a number of specialisms, such as paediatrician or paediatric neurologist, ophthalmologist, low vision therapist, (neuro)psychologist, physiotherapist ... to assess the child's general developmental abilities. For more information about the multidisciplinary team, see www.teachcvi.net/.
 - No CVI diagnosis: Visual perceptual and functional visual abilities are within normal range. Reasons for clinical problems should be sought elsewhere and, if possible, guidance for the child and his caregivers.
 - CVI diagnosis: Visual perceptual and functional visual abilities are impaired. Healthcare providers need to anticipate the need for guidance and start the (re)habilitation plan.
 - CVI working hypothesis: Suspicion of CVI remains, but the assessment does not reveal clinical results. Therefore it is important to monitor the development of the child and re-screen and re-assess the child after a certain period. Follow-up and guidance is needed.

SCREENING MODEL FOR CHILDREN WITH A SUSPICION OF CVI

