WEB APPENDIX-I: INCLEN DIAGNOSTIC TOOL FOR NEUROMOTOR IMPAIRMENT (INDT-NMI) FOR PRIMARY CARE PHYSICIAN

PERSONAL INFORMATION OF THE CHILD
1. Name of the child:  
2. Age (in completed months):  
3. Sex: (Male -1, Female - 2)  
4. Complete address of the child:  
5. Informant:  1 = Mother,  2 = Father,  3 = Guardian,  4 = Relative:  
6. Anthropometry:  
   A. Weight: Kg.  
   B. Height/ Length: cm  
   C. Head circumference: cm  

Section I: Triage questions for Neuromotor Impairments  
0: No  1: Yes  8: Not applicable  
1. Does your child have difficulty in ANY of the following?  
   A. Sitting  
   B. Getting up from floor  
   C. Standing  
   D. Walking  
   E. Running  
2. Did your child start performing the following activities later than children of his/her age?  
   A. Started sitting without support beyond his/her first birthday  
   B. Started walking without support beyond his/her second birthday  
3. Does your child have ANY of the following?  
   A. Excessive tightness/ limpness of the body  
   B. Toe-walking  
   C. Abnormal posture of any limb  
   D. Decreased/ unequal use of any limb  
   E. Frequent falls  
4. Does your child have difficulty in performing ANY of the following activities? (For children above 4 years age only)  
   A. Bathing/cleaning himself/herself  
   B. Toileting  
   C. Dressing  
   D. Feeding self  

Section II: Observations: Write responses code in the box.  
0: No  1: Yes  
5. Observe for the following when the child is walking  
   A. Limping  
   B. Unsteadiness of gait (Ataxia)  
   C. Toe walking  
   D. Waddling gait  
   E. Scissoring gait  
   F. High stepping gait  
   G. Unable to walk  
   H. Any other gait abnormality (please specify) ___________________
6. Observe for the following when the child is standing up from floor
   A. Requires assistance for standing up from floor / unable to stand
   B. Gowers’ sign positive
   C. Any other abnormality

7. Observe hands and look for the following
   A. Tremors
   B. Unequal power of hand grip
   C. Fisting of one or both hands

Please specify reason for Non-applicability of any item.

Section III: Record findings of detailed neurological assessment as codes in the respective boxes

8. Muscle power
   0: Normal  1: Decreased
   A. Right upper limb (Shoulder abductors & wrist extensors)
   B. Right lower limb (Hip abductors & ankle dorsiflexors)
   C. Left upper limb (Shoulder abductors & wrist extensors)
   D. Left lower limb (Hip abductors & ankle dorsiflexors)

Overall impression: If abnormal, write the power of the abnormal side
   0: Normal muscle power  1: Decreased muscle power

9. Muscle tone
   0: Normal  1: Hypotonia  2: Hypertonia  8: Not applicable
   A. Tone in right upper limb (Elbow & Wrist)
   B. Tone in right lower limb (Hip adductors, knee & ankle)
   C. Tone in left upper limb (Elbow & Wrist)
   D. Tone in left lower limb (Hip adductors, knee & ankle)

Overall impression: If abnormal, write the tone of the abnormal side
   0: Normal muscle tone  1: Hypotonia  2: Hypertonia

10. Deep tendon reflexes (biceps, triceps, knee and ankle jerks)
    0: Normal  1: Diminished or absent  2: Exaggerated
    A. Right biceps jerk
    B. Left biceps jerk
    C. Right triceps jerk
    D. Left triceps jerk
    E. Right knee jerk
    F. Left knee jerk
    G. Right ankle jerk
    H. Left ankle jerk

Overall impression: If abnormal, write the DTRs of the abnormal side
    0: Normal DTRs  1: Diminished or absent DTRs  2: Exaggerated DTRs

11. Plantar response
    0: Flexor response
    1: Extensor response
    2: Withdrawal / Not elicitable
    A. Right side
B. Left side

Impression: Write the plantar response of the abnormal side

12. Balance and coordination
   0: Normal
   1: Poor balance of trunk or limbs (Ataxia)

13. Abnormal movements
   0: No abnormal movements
   1: Abnormal movements

14. Interpretation

A. Neuromotor examination*
   0: No neuromotor dysfunction (Responses to ALL of 8-13 is “0”)
   1: UMN dysfunction (At least TWO out of 9-11 is “2”)
   2: LMN dysfunction (Response to 8 is “1”, AND 9 or 10 is “1” AND 11 is not “1”)
   3: In coordination/ Abnormal movements (Response to 12 OR 13 is “1”)
   9: Indeterminate (If the findings are abnormal but not fitting in any of the above)

B. Onset of symptoms (Not for LMN dysfunction)
   0: At or before 2 years of age
   1: After 2 years of age or cannot be ascertained
   8: Not applicable

C. Course of the child’s illness**
   0: Static or improving
   1: Progressive
   8: Not applicable

D. Is there a clear spinal cord pathology resulting in impairment?
   0: No
   1: Yes

15. Diagnosis
   0: No Neuromotor impairment (Neuromotor examination not indicated i.e. in Section 1 all questions 1 to 4 have all responses 0 and Section 2 questions 5 to 7 have all responses is 0 OR When neuromotor examination indicated: Responses to ALL of 8-13 are “0”)
   1: Cerebral palsy (Response to 14 A is 1 and/or 3 AND B, C, D is “0”)
   2: Neuromuscular disorder (Response to 14 A is “2”)
   3: Other Neuromotor impairment (Response to 14A is NOT “0”, but not fulfilling criteria for CP or NMD)
   9: Indeterminate (Response to 14 A is 9)

*The motor problem should not be solely explained by skeletal/soft tissue abnormality (traumatic deformity, club foot, post burn contractures) or painful skeletal.