



HCRS-CA

# Home Care Reporting System — Contact Assessment Output Specifications

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2021–2022



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# About CIHI

The Canadian Institute for Health Information (CIHI) collects and analyzes information on health and health care in Canada and makes it publicly available. Canada's federal, provincial and territorial governments created CIHI as a not-for-profit, independent organization dedicated to forging a common approach to Canadian health information. CIHI's goal: to provide timely, accurate and comparable information. CIHI's data and reports inform health policies, support the effective delivery of health services and raise awareness among Canadians of the factors that contribute to good health.

For more information, visit our website at [cihi.ca](http://cihi.ca).

## Privacy and confidentiality

### CIHI's Privacy Program

CIHI has a comprehensive Privacy Program in place to protect the confidentiality and security of our data holdings. A cornerstone of this program is a set of strict principles and policies that govern how CIHI collects, stores, analyzes and disseminates data. These are outlined in the document *Privacy Policy on the Collection, Use, Disclosure and Retention of Personal Health Information and De-Identified Data, 2010* available at [cihi.ca](http://cihi.ca). These policies have been reviewed to ensure they are aligned with Schedule 1 of the federal *Personal Information Protection and Electronic Documents Act* (PIPEDA).

The Privacy Program also includes

- A Privacy Secretariat committed to developing a culture of privacy at CIHI;
- An active Privacy, Confidentiality and Security team that includes representation from across the organization;
- A chief privacy advisor, who provides advice and counsel on privacy matters;
- A Privacy and Data Protection Committee — subcommittee of CIHI's Board of Directors;
- Mandatory staff training to keep health information protection matters front and centre; and
- Outreach activities to keep stakeholders advised.

# About interRAI

interRAI is an international collaborative of researchers working in more than 30 countries. interRAI's goal is to promote evidence-informed clinical practice and policy decisions through the collection and interpretation of high-quality data about characteristics and outcomes of persons served across a variety of health and social services settings.

interRAI has developed assessment instruments for a range of populations in various areas of health care, including but not limited to home care, mental health, community mental health, persons with intellectual disability and palliative care.

## Introduction

This manual provides technical specifications for interRAI's standardized outputs that can be derived from the interRAI Contact Assessment (interRAI CA) © Canadian Version Screening Level Assessment for Emergency Department and Intake From Community/Hospital.

The manual is a companion document to the following products:

- interRAI Contact Assessment (CA) © Screening Level Assessment for Emergency Department and Intake From Community/Hospital Assessment Form and User's Manual, Version 9.1, 2010;
- Home Care Reporting System — Contact Assessment: Administrative Data Elements Coding Manual, 2017–2018; and
- Home Care Reporting System — Contact Assessment: Data Submission Specifications Manual, 2017–2018.

These specifications, for use within Canada only, have been designed to help software vendors build outputs into their interRAI CA assessment software. It will also assist other users to understand the details of how the outputs are calculated by CIHI.

The goal of this manual, released annually to stakeholders, is to make the derivation of the outputs as transparent as possible.

# Specification conventions

The logic used in the specifications is pseudo code. It has been designed to be software neutral and will require translation into a specific programming language.

The logic is provided in a series of “IF–THEN–ELSE” constructs, which have the following general form:

```
IF (first_condition) THEN
    statements
```

```
ELSE IF (second_condition) THEN
    statements
```

```
ELSE
    statements
```

```
END IF
```

The conditions are Boolean expressions, which are evaluated and, if true, executed.

The specifications include nested IF statements; wherever possible, formatting has been used to facilitate the understanding of the logic.

The specifications also provide the range of valid values for all clinical outputs, with labels where the output has discrete categories.

Some outputs are derived using other derived variables (rather than using elements directly from the assessment instrument). Where these variables are other clinical outputs (e.g., the Assessment Urgency uses the Self-reliance Index), the required variables are listed under Prerequisite calculations.

Many of the outputs can also be derived from other interRAI assessment instruments. However, the derivation is instrument-specific due to variations in the data elements used on each instrument.

# Missing values

Each output has a section stating whether and under which circumstances the output can be calculated if any of the data elements used in the algorithm have missing or invalid values. The majority of outputs should not be calculated if there are any missing or invalid values.

# Chapter 1: Outputs for the Community/Hospital Intake module

Outputs are derived from the interRAI CA Canadian version and include a series of indices that can be used to evaluate the clinical status of a client or group of clients.

Algorithms for deriving the following outputs are included:

- Self-reliance Index (SRI)
- Assessment Urgency (AU)
- Service Urgency (SU)
- Rehabilitation (RH)
- interRAI Pain Scale, Version 2 (Pain)
- Changes in Health, End-Stage Disease and Signs and Symptoms (CHESS)
- Personal Support (PS)

This section also contains the algorithm to calculate age.

## Self-reliance Index (SRI)

<b>Version</b>	1.0
<b>Valid values</b>	0 — Self-reliant 1 — Impaired -1 — Missing or invalid
<b>Data elements used and corresponding valid values</b>	C2a ADL Bathing (0, 1) C2b ADL Personal Hygiene (0, 1) C2c ADL Dressing Lower Body (0, 1) C2d ADL Locomotion (0, 1) C1 Cognitive Skills for Daily Decision-Making (0, 1)
<b>Prerequisite calculations</b>	None
<b>Missing values</b>	If any of the data elements used in this algorithm have missing or invalid values, the SRI is set to -1.
<b>Logic</b>	{Computation of output} SRI score: IF C2a = NULL OR INVALID OR C2b = NULL OR INVALID OR C2c = NULL OR INVALID OR C2d = NULL OR INVALID OR C1 = NULL OR INVALID THEN SRI = -1 ELSE IF C2a = 1 OR C2b = 1 OR C2c = 1 OR C2d = 1 OR C1 = 1 THEN SRI = 1 ELSE SRI = 0 END IF

# Assessment Urgency (AU)

<b>Version</b>	2.0
<b>Valid values</b>	6-point scale with scores ranging from 1 (least urgent) to 6 (most urgent) and -1 for missing or invalid values
<b>Data elements used and corresponding valid values</b>	C2b ADL Personal Hygiene (0, 1) C3 Dyspnea (0, 1, 2, 3) C4 Self-Reported Health (0, 1, 2, 3, 8) C5a Conditions/Diseases Make Cognitive, ADL, Mood or Behaviour Patterns Unstable (0, 1) D3 Self-Reported Mood (0, 1, 8) D20b Informal Helper Status: Family or Friends Overwhelmed (0, 1)
<b>Prerequisite calculations</b>	Self-reliance Index (SRI)
<b>Missing values</b>	If any of the data elements used in this algorithm have missing or invalid values, the AU is set to -1.
<b>Logic</b>	{Computation of output} AU score: IF SRI = NULL OR INVALID OR C2b = NULL OR INVALID OR C3 = NULL OR INVALID OR C4 = NULL OR INVALID OR C5a = NULL OR INVALID OR D3 = NULL OR INVALID OR D20b = NULL OR INVALID OR SRI = -1 THEN E1a = -1 ELSE IF SRI = 1 AND D20b = 1 THEN E1a = 6 ELSE IF SRI = 1 AND D20b = 0 AND D3 = 1 THEN E1a = 6 ELSE IF SRI = 1 AND D20b = 0 AND D3 = [0, 8] AND C2b = 1 THEN E1a = 5 ELSE IF SRI = 1 AND D20b = 0 AND D3 = [0, 8] AND C2b = 0 THEN E1a = 4 ELSE IF SRI = 0 AND C4 = [2, 3, 8] AND (C3 = [1, 2, 3] OR C5a = 1) THEN E1a = 3 ELSE IF SRI = 0 AND C4 = [2, 3, 8] AND (C3 = 0 AND C5a = 0) THEN E1a = 2 ELSE IF SRI = 0 AND C4 = [0, 1] AND C5a = 0 THEN E1a = 1 ELSE IF SRI = 0 AND C4 = [0, 1] AND C5a = 1 THEN E1a = 3 END IF



## Service Urgency (SU)

<b>Version</b>	1.0
<b>Valid values</b>	4-point scale with scores ranging from 1 (least urgent) to 4 (most urgent) and -1 for missing or invalid values
<b>Data elements used and corresponding valid values</b>	C2b ADL Personal Hygiene (0, 1) D9a Pain Frequency (0, 1, 2, 3) D15b Treatments: IV Therapy (0, 1, 2, 3) D15d Treatments: Wound Care (0, 1, 2, 3) D16 Time Since Last Hospital Stay (0, 1, 2, 3, 4, 5) D17 Emergency Department Use (0–90)
<b>Prerequisite calculations</b>	Self-reliance Index (SRI)
<b>Missing values</b>	If any of the data elements used in this algorithm have missing or invalid values, the SU is set to -1.
<b>Logic</b>	<pre>{Computation of output} SU score: IF SRI = NULL OR INVALID OR C2b = NULL OR INVALID OR D9a = NULL OR INVALID OR D15b = NULL OR INVALID OR D15d = NULL OR INVALID OR D16 = NULL OR INVALID OR D17 = NULL OR INVALID OR SRI = -1 THEN E1b = -1 ELSE IF SRI = 0 AND (D15b = [2, 3] OR D15d = [2, 3]) AND D17 &gt;0 THEN E1b = 4 ELSE IF SRI = 0 AND (D15b = [2, 3] OR D15d = [2, 3]) AND D17 = 0 THEN E1b = 3 ELSE IF SRI = 0 AND (D15b = [0, 1] AND D15d = [0, 1]) AND D16 = [1, 2, 3, 4, 5] THEN E1b = 2 ELSE IF SRI = 0 AND (D15b = [0, 1] AND D15d = [0, 1]) AND D16 = 0 THEN E1b = 1 ELSE IF SRI = 1 AND D15b = [2, 3] THEN E1b = 3 ELSE IF SRI = 1 AND D15b = [0, 1] AND C2b = 1 AND D9a = 3 THEN E1b = 3 ELSE IF SRI = 1 AND D15b = [0, 1] AND C2b = 1 AND D9a = [0, 1, 2] THEN E1b = 2 ELSE IF SRI = 1 AND D15b = [0, 1] AND C2b = 0 AND D16 = [1, 2, 3, 4, 5] THEN E1b = 2 ELSE IF SRI = 1 AND D15b = [0, 1] AND C2b = 0 AND D16 = 0 THEN E1b = 1 END IF</pre>

# Rehabilitation (RH)

<b>Version</b>	2.0
<b>Valid values</b>	5-point scale with scores ranging from 1 (least urgent) to 5 (most urgent) and -1 for missing or invalid values
<b>Data elements used and corresponding valid values</b>	C2d ADL Locomotion (0, 1) D4a IADL Meal Preparation (0, 1) D4b IADL Ordinary Housework (0, 1) D4c IADL Managing Medications (0, 1) D4d IADL Stairs (0, 1) D5 Change in ADL (0, 1, 2, 8) B2c Referral to Initiate or Continue Palliative Services (0, 1)
<b>Prerequisite calculations</b>	Self-reliance Index (SRI)
<b>Missing values</b>	If any of the data elements used in this algorithm have missing or invalid values or if the client is referred for palliative care services, the RH is set to -1.
<b>Logic</b>	{Computation of output} RH score: IF (C2d = NULL OR INVALID OR D4a = NULL OR INVALID OR D4b = NULL OR INVALID OR D4c = NULL OR INVALID OR D4d = NULL OR INVALID OR D5 = NULL OR INVALID OR SRI = -1) OR B2c = 1 THEN E1c = -1 ELSE IF D5 = [2, 8] AND D4d = 1 AND C2d = 1 THEN E1c = 5 ELSE IF D5 = [2, 8] AND D4d = 1 AND C2d = 0 THEN E1c = 4 ELSE IF D5 = [2, 8] AND D4d = 0 AND SRI = 1 THEN E1c = 3 ELSE IF D5 = [2, 8] AND D4d = 0 AND SRI = 0 THEN E1c = 2 ELSE IF D5 = [0, 1] AND D4d = 1 THEN E1c = 3 ELSE IF D5 = [0, 1] AND D4d = 0 AND (D4a = 1 OR D4b = 1 OR D4c = 1) THEN E1c = 2 ELSE IF D5 = [0, 1] AND D4d = 0 AND (D4a = 0 AND D4b = 0 AND D4c = 0) THEN E1c = 1 END IF

## interRAI Pain Scale, Version 2 (Pain)

<b>Version</b>	2.0
<b>Valid values</b>	0 — No pain 1 — Less than daily pain 2 — Daily pain but not severe 3 — Daily severe pain 4 — Daily excruciating pain -1 — Missing or invalid
<b>Data elements used and corresponding valid values</b>	D9a Pain Frequency (0, 1, 2, 3) D9b Pain Intensity (0, 1, 2, 3, 4)
<b>Prerequisite calculations</b>	None
<b>Missing values</b>	If any of the data elements used in this algorithm have missing or invalid values, the Pain Scale is set to -1.
<b>Logic</b>	{Computation of output} Pain score: IF D9a = NULL OR INVALID OR D9b = NULL OR INVALID THEN PAIN = -1 ELSE IF D9a = 0 THEN PAIN = 0 ELSE IF D9a = [1, 2] THEN PAIN = 1 ELSE IF D9a = 3 THEN DO IF D9b = [1, 2] THEN PAIN = 2 IF D9b = 3 THEN PAIN = 3 IF D9b = 4 THEN PAIN = 4 END ELSE PAIN = -1 END IF

## Age (years)

<b>Version</b>	1.0
<b>Valid values</b>	1–115
<b>Data elements used and corresponding valid values</b>	A3 Birth Date — Valid date B1 Assessment Reference Date — Valid date
<b>Prerequisite calculations</b>	None
<b>Missing values</b>	If any of the data elements used in this algorithm have missing or invalid values, then Age is set to MISSING.
<b>Logic</b>	{Computation of output} Age: IF A3 = NULL OR INVALID OR B1 = NULL OR INVALID THEN Age = MISSING ELSE Age = INT ((B1 – A3) ÷ 365.25) END IF
<b>Notes</b>	The INT (INTEGER) function truncates the decimal portion of the value.

# Changes in Health, End-Stage Disease and Signs and Symptoms (CHESS)

<b>Version</b>	1.0
<b>Valid values</b>	0 — No health instability 1 — Minimal health instability 2 — Low health instability 3 — Moderate health instability 4 — High health instability 5 — Very high health instability
<b>Data elements used and corresponding valid values</b>	B2c Referral for Palliative Services (0, 1) C3 Dyspnea (0, 1, 2, 3, 8) D1 Change in Decision Making (0, 1, 2, 8) D5 Change in ADL Status (0, 1, 2, 8) D8c Peripheral Edema (0, 1, 2, 3, 4) D11a Decrease in Food or Fluids (0, 1) D11b Weight Loss (0, 1)
<b>Prerequisite calculations</b>	None
<b>Missing values</b>	If any of the data elements used in this algorithm have missing or invalid values, the CHESS is set to -1.
<b>Logic</b>	{Computation of output} CHESS score: IF B2c = NULL OR INVALID OR D1 = NULL OR INVALID OR D5 = NULL OR INVALID OR D8c = NULL OR INVALID OR C3 = NULL OR INVALID OR D11a = NULL OR INVALID OR D11b = NULL OR INVALID THEN CHESS = -1 ELSE DO CHESS_TEMP=0 IF D8c = [3, 4] THEN CHESS_TEMP = CHESS_TEMP + 1 IF C3 = [1, 2, 3] THEN CHESS_TEMP = CHESS_TEMP + 1 IF D11a = 1 THEN CHESS_TEMP = CHESS_TEMP + 1 IF D11b = 1 THEN CHESS_TEMP = CHESS_TEMP + 1 CHESS=0 IF D1 = 2 THEN CHESS = CHESS + 1 IF D5 = 2 THEN CHESS = CHESS + 1 IF B2c = 1 THEN CHESS = CHESS + 1 IF CHESS_TEMP = [0, 1] THEN CHESS = CHESS + CHESS_TEMP ELSE IF CHESS_TEMP >= 2 THEN CHESS = CHESS + 2 END

# Personal Support (PS)

<b>Version</b>	1.0
<b>Valid values</b>	<p>1 — Very low need</p> <p>2 — Low need</p> <p>3 — Mild need</p> <p>4 — Moderate need</p> <p>5 — High need</p> <p>6 — Very high need</p>
<b>Data elements used and corresponding valid values</b>	<p>C1 Cognitive Skills for Decision Making (0, 1)</p> <p>C2a ADL Bathing — Performance (0, 1)</p> <p>C2b ADL Personal Hygiene — Performance (0, 1)</p> <p>C2c ADL Dressing Lower Body — Performance (0, 1)</p> <p>C2d ADL Locomotion — Performance (0, 1)</p> <p>C5a Conditions/Diseases Make Cognitive, ADL, Mood or Behaviour Patterns Unstable (0, 1)</p> <p>C5b Experiencing an Acute Episode or Flare-up of a Recurrent or Chronic Problem (0, 1)</p> <p>D2 Ability to Understand Others (0, 1, 2, 3, 4)</p> <p>D4a IADL Meal Preparation — Capacity (0, 1)</p> <p>D4b IADL Ordinary Housework — Capacity (0, 1)</p> <p>D4c IADL Managing Medications — Capacity (0, 1)</p> <p>D4d IADL Stairs — Capacity (0, 1)</p> <p>D20a Informal Helper Status: Primary Informal Helper Feelings of Distress, Anger or Depression (0, 1)</p> <p>D20b Informal Helper Status: Family or Friends Overwhelmed (0, 1)</p>
<b>Prerequisite calculations</b>	Self-reliance Index (SRI)
<b>Missing values</b>	If any of the data elements used in this algorithm have missing or invalid values, the PS is set to -1.
<b>Logic</b>	<pre>{Temporary variables} T_ADL_COUNT = SUM[C2a, C2b, C2c, C2d] T_IADL_COUNT = SUM[D4a, D4b, D4c, D4d]  {Computation of output} PS score: IF SRI = 0 THEN PS = 1 ELSE DO   IF SRI = -1 OR C1= NULL OR INVALID OR   C2a = NULL OR INVALID OR C2b = NULL OR INVALID OR   C2c = NULL OR INVALID OR C2d = NULL OR INVALID OR   C5a = NULL OR INVALID OR C5b = NULL OR INVALID OR   D2 = NULL OR INVALID OR D4a = NULL OR INVALID OR   D4b = NULL OR INVALID OR D4c = NULL OR INVALID OR   D4d = NULL OR INVALID OR D20a = NULL OR INVALID OR</pre>

**Logic (continued)**

```

D20b = NULL OR INVALID
THEN PS = -1 ELSE DO
  IF SRI = 1 THEN DO

    IF T_ADL_COUNT = [0,1] THEN DO
      IF C2c = 0 THEN PS = 2
      ELSE DO
        IF C1 = 1 THEN PS = 3
        ELSE DO
          IF T_IADL_COUNT = [0, 1, 2] THEN PS = 2
          ELSE PS = 3
        END
      END
    END
  END
END

ELSE IF T_ADL_COUNT = 2 THEN DO
  IF C2c = 0 THEN PS = 3
  ELSE DO
    IF C5a = 0 AND C5B = 0 THEN PS = 3
    ELSE PS = 4
  END
END

ELSE IF T_ADL_COUNT = 3 THEN DO
  IF C1 = 0 THEN DO
    IF C5a = 0 AND C5b = 0 THEN PS = 3
    ELSE PS = 4
  END
  ELSE IF C1 = 1 THEN DO
    IF C5a = 0 AND C5b = 0 THEN DO
      IF D20a = 0 AND D20b = 0 THEN PS = 4
      ELSE PS = 5
    END
  ELSE PS = 5
  END
END

ELSE IF T_ADL_COUNT = 4 THEN DO
  IF D2 = [2, 3, 4] THEN PS = 6
  ELSE DO
    IF D20a = 0 AND D20b = 0 THEN PS = 5
    ELSE PS = 6
  END
END

END
END
END

```

# Chapter 2: Outputs for the Emergency Department Screener module

Outputs are derived from the interRAI CA Canadian version and include a series of indices that can be used to evaluate the clinical status of a client or group of clients.

Algorithms for deriving the following outputs are included:

- Self-reliance Index (SRI)
- Assessment Urgency (AU)
- Service Urgency (SU)
- interRAI Pain Scale, Version 2 (Pain)

This section also contains the algorithm to calculate age.

## Self-reliance Index (SRI)

<b>Version</b>	1.0
<b>Valid values</b>	0 — Self-reliant 1 — Impaired -1 — Missing or invalid
<b>Data elements used and corresponding valid values</b>	F3aB ADL Bathing, Admission (0, 1) F3bB ADL Personal Hygiene, Admission (0, 1) F3cB ADL Dressing Lower Body, Admission (0, 1) F3dB ADL Locomotion, Admission (0, 1) F2b Cognitive Skills for Daily Decision-Making, Admission (0, 1)
<b>Prerequisite calculations</b>	None
<b>Missing values</b>	If any of the data elements used in this algorithm have missing or invalid values, the SRI is set to -1.
<b>Logic</b>	{Computation of output} SRI score: IF F3aB = NULL OR INVALID OR F3bB = NULL OR INVALID OR F3cB = NULL OR INVALID OR F3dB = NULL OR INVALID OR F2b = NULL OR INVALID THEN SRI = -1 ELSE IF F3aB = 1 OR F3bB = 1 OR F3cB = 1 OR F3dB = 1 OR F2b = 1 THEN SRI = 1 ELSE SRI = 0 END IF

# Assessment Urgency (AU)

<b>Version</b>	2.0
<b>Valid values</b>	6-point scale with scores ranging from 1 (least urgent) to 6 (most urgent) and -1 for missing or invalid values
<b>Data elements used and corresponding valid values</b>	F3bB ADL Personal Hygiene, Admission (0, 1) F4b Dyspnea, Admission (0, 1, 2, 3) F5b Self-Reported Health, Admission (0, 1, 2, 3, 8) F6 Conditions/Diseases Unstable (0, 1) G4c Self-Reported Mood (0, 1, 2, 3, 8) G9b Informal Helper Status (0, 1, 8)
<b>Prerequisite calculations</b>	Self-reliance Index (SRI)
<b>Missing values</b>	If any of the data elements used in this algorithm have missing or invalid values, the AU is set to -1.
<b>Logic</b>	{Computation of output} AU score: IF SRI = NULL OR INVALID OR F3bB = NULL OR INVALID OR F4b = NULL OR INVALID OR F5b = NULL OR INVALID OR F6 = NULL OR INVALID OR G4c = NULL OR INVALID OR G9b = NULL OR INVALID OR SRI = -1 THEN H1a = -1 ELSE IF SRI = 1 AND G9b = [1, 8] THEN H1a = 6 ELSE IF SRI = 1 AND G9b = 0 AND G4c = [1, 2, 3] THEN H1a = 6 ELSE IF SRI = 1 AND G9b = 0 AND G4c = [0, 8] AND F3bB = 1 THEN H1a = 5 ELSE IF SRI = 1 AND G9b = 0 AND G4c = [0, 8] AND F3bB = 0 THEN H1a = 4 ELSE IF SRI = 0 AND F5b = [2, 3, 8] AND (F4b = [1, 2, 3] OR F6 = 1) THEN H1a = 3 ELSE IF SRI = 0 AND F5b = [2, 3, 8] AND (F4b = 0 AND F6 = 0) THEN H1a = 2 ELSE IF SRI = 0 AND F5b = [0, 1] AND F6 = 0 THEN H1a = 1 ELSE IF SRI = 0 AND F5b = [0, 1] AND F6 = 1 THEN H1a = 3 END IF



## Service Urgency (SU)

<b>Version</b>	1.0
<b>Valid values</b>	4-point scale with scores ranging from 1 (least urgent) to 4 (most urgent) and -1 for missing or invalid values
<b>Data elements used and corresponding valid values</b>	F3bB ADL Personal Hygiene, Admission (0, 1) G1 Emergency Department Use: Number of Visits (0–90) G2 Time Since Last Hospital Stay (0, 1, 2, 3, 4, 5) G11a Pain Frequency (0, 1, 2, 3) G14b Treatments: IV Therapy (0, 1, 2, 3) G14d Treatments: Wound Care (0, 1, 2, 3)
<b>Prerequisite calculations</b>	Self-reliance Index (SRI)
<b>Missing values</b>	If any of the data elements used in this algorithm have missing or invalid values, the SU is set to -1.
<b>Logic</b>	<pre>{Computation of output} SU score: IF SRI = NULL OR INVALID OR F3bB = NULL OR INVALID OR G1 = NULL OR INVALID OR G2 = NULL OR INVALID OR G11a = NULL OR INVALID OR G14b = NULL OR INVALID OR G14d = NULL OR INVALID OR SRI = -1 THEN H1b = -1 ELSE IF SRI = 0 AND (G14b = [2, 3] OR G14d = [2, 3]) AND G1 &gt; 0 THEN H1b = 4 ELSE IF SRI = 0 AND (G14b = [2, 3] OR G14d = [2, 3]) AND G1 = 0 THEN H1b = 3 ELSE IF SRI = 0 AND (G14b = [0, 1] AND G14d = [0, 1]) AND G2 = [1, 2, 3, 4, 5] THEN H1b = 2 ELSE IF SRI = 0 AND (G14b = [0, 1] AND G14d = [0, 1]) AND G2 = 0 THEN H1b = 1 ELSE IF SRI = 1 AND G14b = [2, 3] THEN H1b = 3 ELSE IF SRI = 1 AND G14b = [0, 1] AND F3bB = 1 AND G11a = 3 THEN H1b = 3 ELSE IF SRI = 1 AND G14b = [0, 1] AND F3bB = 1 AND G11a = [0, 1, 2] THEN H1b = 2 ELSE IF SRI = 1 AND G14b = [0, 1] AND F3bB = 0 AND G2 = [1, 2, 3, 4, 5] THEN H1b = 2 ELSE IF SRI = 1 AND G14b = [0, 1] AND F3bB = 0 AND G2 = 0 THEN H1b = 1 END IF</pre>

## interRAI Pain Scale, Version 2 (Pain)

<b>Version</b>	2.0
<b>Valid values</b>	0 — No pain 1 — Less than daily pain 2 — Daily pain but not severe 3 — Daily severe pain 4 — Daily excruciating pain -1 — Missing or invalid
<b>Data elements used and corresponding valid values</b>	G11a Pain Frequency (0, 1, 2, 3) G11b Pain Intensity (0, 1, 2, 3, 4)
<b>Prerequisite calculations</b>	None
<b>Missing values</b>	If any of the data elements used in this algorithm have missing or invalid values, Pain is set to -1.
<b>Logic</b>	{Computation of output} Pain score: IF G11a = NULL OR INVALID OR G11B = NULL OR INVALID THEN PAIN = -1 ELSE IF G11a = 0 THEN PAIN = 0 ELSE IF G11a = [1, 2] THEN PAIN = 1 ELSE IF G11a = 3 THEN DO IF G11b = [1, 2] THEN PAIN = 2 ELSE IF G11b = 3 THEN PAIN = 3 ELSE IF G11b = 4 THEN PAIN = 4 END ELSE PAIN = -1 END IF

## Age (years)

<b>Version</b>	1.0
<b>Valid values</b>	1–115
<b>Data elements used and corresponding valid values</b>	A3 Birth Date — Valid date F1a Screening Reference Date — Valid date
<b>Prerequisite calculations</b>	None
<b>Missing values</b>	If any of the data elements used in this algorithm have missing or invalid values, then Age is set to MISSING.
<b>Logic</b>	{Computation of output} Age: IF A3 = NULL OR INVALID OR F1a = NULL OR MISSING THEN Age = MISSING ELSE Age = INT ((F1a – A3) ÷ 365.25) END IF
<b>Note</b>	The INT (INTEGER) function truncates the decimal portion of the value.

# Chapter 3: Summary of outputs

The following are examples of summary reports for the Community/Hospital Intake module and the Emergency Department Screener module.

This summary is required in real time once a client’s assessment has been completed in order to support further clinical decision-making. These tables provide an example of how this information might be provided.

## Community/Hospital Intake summary report

Output	Value	Legend
<b>Age</b>	29 years	—
<b>Self-reliance Index (SRI)</b>	1 out of 1	0 (self-reliant)–1 (impaired)
<b>Assessment Urgency Algorithm (AU)</b>	3 out of 6	1 (least urgent)–6 (most urgent)
<b>Service Urgency Algorithm (SU)</b>	3 out of 4	1 (least urgent)–4 (most urgent)
<b>Rehabilitation Algorithm (RH)</b>	4 out of 5	1 (least urgent)–5 (most urgent)
<b>interRAI Pain Scale, Version 2 (Pain)</b>	1 out of 4	0 — No pain 1 — Less than daily pain 2 — Daily pain but not severe 3 — Daily severe pain 4 — Daily excruciating pain
<b>Changes in Health, End-Stage Disease and Signs and Symptoms (CHESS)</b>	5 out of 6	1 — No health instability 2 — Minimal health instability 3 — Low health instability 4 — Moderate health instability 5 — High health instability 6 — Very high health instability
<b>Personal Support (PS)</b>	5 out of 6	1 — Very low need 2 — Low need 3 — Mild need 4 — Moderate need 5 — High need 6 — Very high need

# Emergency Department Screener summary report

Output	Value	Legend
Age	73 years	—
Self-reliance Index (SRI)	1 out of 1	0 (self-reliant)—1 (impaired)
Assessment Urgency Algorithm (AU)	6 out of 6	1 (least urgent)—6 (most urgent)
Service Urgency Algorithm (SU)	1 out of 4	1 (least urgent)—4 (most urgent)
interRAI Pain Scale, Version 2 (Pain)	2 out of 4	0 — No pain 1 — Less than daily pain 2 — Daily pain but not severe 3 — Daily severe pain 4 — Daily excruciating pain

# Appendix: Release notes

This appendix provides documentation of the changes to the output specifications.

## 2021–2022 release

### Chapter 1: Outputs for the Community/Hospital Intake module

Output	Previous version	Current version
<b>Changes in Health, End-Stage Disease and Signs and Symptoms (CHESS)</b>	None	Version 1.0 {Computation of output} CHESS score: IF B2c = NULL OR INVALID OR D1 = NULL OR INVALID OR D5 = NULL OR INVALID OR D8c = NULL OR INVALID OR C3 = NULL OR INVALID OR D11a = NULL OR INVALID OR D11b = NULL OR INVALID THEN CHESS = -1 ELSE DO CHESS_TEMP=0 IF D8c = [3, 4] THEN CHESS_TEMP = CHESS_TEMP + 1 IF C3 = [1, 2, 3] THEN CHESS_TEMP = CHESS_TEMP + 1 IF D11a = 1 THEN CHESS_TEMP = CHESS_TEMP + 1 IF D11b = 1 THEN CHESS_TEMP = CHESS_TEMP + 1 CHESS=0 IF D1 = 2 THEN CHESS = CHESS + 1 IF D5 = 2 THEN CHESS = CHESS + 1 IF B2c = 1 THEN CHESS = CHESS + 1 IF CHESS_TEMP = [0, 1] THEN CHESS = CHESS + CHESS_TEMP ELSE IF CHESS_TEMP >= 2 THEN CHESS = CHESS + 2 END
<b>Personal Support (PS)</b>	None	Version 1.0 {Temporary variables} T_ADL_COUNT = SUM[C2a, C2b, C2c, C2d] T_IADL_COUNT = SUM[D4a, D4b, D4c, D4d] {Computation of output} PS score: IF SRI = 0 THEN PS = 1 ELSE DO IF SRI = -1 OR C1= NULL OR INVALID OR C2a = NULL OR INVALID OR C2b = NULL OR INVALID OR C2c = NULL OR INVALID OR C2d = NULL OR INVALID OR C5a = NULL OR INVALID OR C5b = NULL OR INVALID OR D2 = NULL OR INVALID OR D4a = NULL OR INVALID OR D4b = NULL OR INVALID OR D4c = NULL OR INVALID OR D4d = NULL OR INVALID OR D20a = NULL OR INVALID OR D20b = NULL OR INVALID THEN PS = -1 ELSE DO IF SRI = 1 THEN DO

Output	Previous version	Current version
<b>Personal Support (PS)</b> (continued)	None	<pre> IF T_ADL_COUNT = [0,1] THEN DO   IF C2c = 0 THEN PS = 2   ELSE DO     IF C1 = 1 THEN PS = 3     ELSE DO       IF T_IADL_COUNT = [0, 1, 2] THEN PS = 2       ELSE PS = 3     END   END END END  ELSE IF T_ADL_COUNT = 2 THEN DO   IF C2c = 0 THEN PS = 3   ELSE DO     IF C5a = 0 AND C5B = 0 THEN PS = 3     ELSE PS = 4   END END  ELSE IF T_ADL_COUNT = 3 THEN DO   IF C1 = 0 THEN DO     IF C5a = 0 AND C5b = 0 THEN PS = 3     ELSE PS = 4   END   ELSE IF C1 = 1 THEN DO     IF C5a = 0 AND C5b = 0 THEN DO       IF D20a = 0 AND D20b = 0 THEN PS = 4       ELSE PS = 5     END     ELSE PS = 5   END END  ELSE IF T_ADL_COUNT = 4 THEN DO   IF D2 = [2, 3, 4] THEN PS = 6   ELSE DO     IF D20a = 0 AND D20b = 0 THEN PS = 5     ELSE PS = 6   END END  END END                     </pre>

## 2017–2018 release

### Chapter 1: Outputs for the Community/Hospital Intake module

Output	Previous version	Current version
<b>Rehabilitation (RH)</b>	Version 1.0 {Computation of output} IF C2d = NULL OR INVALID OR D4a = NULL OR INVALID OR D4b = NULL OR INVALID OR D4c = NULL OR INVALID OR D4d = NULL OR INVALID OR D5 = NULL OR INVALID THEN <b>E1c</b> = -1 ELSE IF D5 = [2, 8] AND D4d = 1 AND C2d = 1 THEN <b>E1c</b> = 5 ELSE IF D5 = [2, 8] AND D4d = 1 AND C2d = 0 THEN <b>E1c</b> = 4 ELSE IF D5 = [2, 8] AND D4d = 0 AND SRI = 1 THEN <b>E1c</b> = 3 ELSE IF D5 = [2, 8] AND D4d = 0 AND SRI = 0 THEN <b>E1c</b> = 2 ELSE IF D5 = [0, 1] AND D4d = 1 THEN <b>E1c</b> = 3 ELSE IF D5 = [0, 1] AND D4d = 0 AND (D4a = 1 OR D4b = 1 OR D4c = 1) THEN <b>E1c</b> = 2 ELSE IF D5 = [0, 1] AND D4d = 0 AND (D4a = 0 AND D4b = 0 AND D4c = 0) THEN <b>E1c</b> = 1 END IF	Version 2.0 {Computation of output} IF (C2d = NULL OR INVALID OR D4a = NULL OR INVALID OR D4b = NULL OR INVALID OR D4c = NULL OR INVALID OR D4d = NULL OR INVALID OR D5 = NULL OR INVALID) OR B2c = 1 THEN <b>E1c</b> = -1 ELSE IF D5 = [2, 8] AND D4d = 1 AND C2d = 1 THEN <b>E1c</b> = 5 ELSE IF D5 = [2, 8] AND D4d = 1 AND C2d = 0 THEN <b>E1c</b> = 4 ELSE IF D5 = [2, 8] AND D4d = 0 AND SRI = 1 THEN <b>E1c</b> = 3 ELSE IF D5 = [2, 8] AND D4d = 0 AND SRI = 0 THEN <b>E1c</b> = 2 ELSE IF D5 = [0, 1] AND D4d = 1 THEN <b>E1c</b> = 3 ELSE IF D5 = [0, 1] AND D4d = 0 AND (D4a = 1 OR D4b = 1 OR D4c = 1) THEN <b>E1c</b> = 2 ELSE IF D5 = [0, 1] AND D4d = 0 AND (D4a = 0 AND D4b = 0 AND D4c = 0) THEN <b>E1c</b> = 1 END IF

## 2015–2016 release

There have been no changes for the 2015–2016 release.

## 2014–2015 release

Reference document names were updated to reflect the most recent versions.

# 2013–2014 release

## Chapter 1: Outputs for the Community/Hospital Intake module

Output	Previous version	Current version
<b>Assessment Urgency (AU)</b>	Version 1.0 {Computation of output} AU score: IF SRI = NULL OR INVALID OR C2b = NULL OR INVALID OR C3 = NULL OR INVALID OR C4 = NULL OR INVALID OR C5a = NULL OR INVALID OR D3 = NULL OR INVALID OR D20b = NULL OR INVALID THEN E1a = -1 ELSE IF SRI = 1 AND D20b = 1 THEN E1a = 6 ELSE IF SRI = 1 AND D20b = 0 AND D3 = 1 THEN E1a = 6 ELSE IF SRI = 1 AND D20b = 0 AND D3 = [0, 8] AND C2b = 1 THEN E1a = 5 ELSE IF SRI = 1 AND D20b = 0 AND D3 = [0, 8] AND C2b = 0 THEN E1a = 4 ELSE IF SRI = 0 AND C4 = [2, 3, 8] AND (C3 = [1, 2, 3] OR C5a = 1) THEN E1a = 3 ELSE IF SRI = 0 AND C4 = [2, 3, 8] AND (C3 = 0 AND C5a = 0) THEN E1a = 2 ELSE IF SRI = 0 AND C4 = [0, 1] AND C5a = 0 THEN E1a = 1 ELSE IF SRI = 0 AND C4 = [0, 1] AND C5a = 1 THEN E1a = 3 END IF	Version 2.0 {Computation of output} AU score: IF SRI = NULL OR INVALID OR C2b = NULL OR INVALID OR C3 = NULL OR INVALID OR C4 = NULL OR INVALID OR C5a = NULL OR INVALID OR D3 = NULL OR INVALID THEN E1a = -1 OR D20b = NULL OR INVALID THEN E1a = -1 ELSE IF SRI = 1 AND D20b = 1 THEN E1a = 6 ELSE IF SRI = 1 AND D20b = 0 AND D3 = 1 THEN E1a = 6 ELSE IF SRI = 1 AND D20b = 0 AND D3 = [0, 8] AND C2b = 1 THEN E1a = 5 ELSE IF SRI = 1 AND D20b = 0 AND D3 = [0, 8] AND C2b = 0 THEN E1a = 3 ELSE IF SRI = 0 AND C4 = [2, 3, 8] AND (C3 = [1, 2, 3] OR C5a = 1) THEN E1a = 4 ELSE IF SRI = 0 AND C4 = [2, 3, 8] AND (C3 = 0 AND C5a = 0) THEN E1a = 2 ELSE IF SRI = 0 AND C4 = [0, 1] AND C5a = 0 THEN E1a = 1 ELSE IF SRI = 0 AND C4 = [0, 1] AND C5a = 1 THEN E1a = 3 END IF



## Chapter 2: Outputs for the Emergency Department Screener module

Output	Previous version	Current version
<b>Assessment Urgency (AU)</b>	Version 1.0 {Computation of output} AU score: IF SRI = NULL OR INVALID OR F3bB = NULL OR INVALID OR F4b = NULL OR INVALID OR F5b = NULL OR INVALID OR F6 = NULL OR INVALID OR G4c = NULL OR INVALID OR G9b = NULL OR INVALID THEN H1a = -1 ELSE IF SRI = 1 AND G9b = [1, 8] THEN H1a = 6 ELSE IF SRI = 1 AND G9b = 0 AND G4c = [1, 2, 3] THEN H1a = 6 ELSE IF SRI = 1 AND G9b = 0 AND G4c = [0, 8] AND F3bB = 1 THEN H1a = 5 ELSE IF SRI = 1 AND G9b = 0 AND G4c = [0, 8] AND F3bB = 0 THEN H1a = 4 ELSE IF SRI = 0 AND F5b = [2, 3, 8] AND (F4b = [1, 2, 3] OR F6 = 1) THEN H1a = 3 ELSE IF SRI = 0 AND F5b = [2, 3, 8] AND (F4b = 0 AND F6 = 0) THEN H1a = 2 ELSE IF SRI = 0 AND F5b = [0, 1] AND F6 = 0 THEN H1a = 1 ELSE IF SRI = 0 AND F5b = [0, 1] AND F6 = 1 THEN H1a = 3 END IF	Version 2.0 {Computation of output} AU score: IF SRI = NULL OR INVALID OR F3bB = NULL OR INVALID OR F4b = NULL OR INVALID OR F5b = NULL OR INVALID OR F6 = NULL OR INVALID OR G4c = NULL OR INVALID OR G9b = NULL OR INVALID THEN H1a = -1 ELSE IF SRI = 1 AND G9b = [1, 8] THEN H1a = 6 ELSE IF SRI = 1 AND G9b = 0 AND G4c = [1, 2, 3] THEN H1a = 6 ELSE IF SRI = 1 AND G9b = 0 AND G4c = [0, 8] AND F3bB = 1 THEN H1a = 5 ELSE IF SRI = 1 AND G9b = 0 AND G4c = [0, 8] AND F3bB = 0 THEN H1a = 3 ELSE IF SRI = 0 AND F5b = [2, 3, 8] AND (F4b = [1, 2, 3] OR F6 = 1) THEN H1a = 4 ELSE IF SRI = 0 AND F5b = [2, 3, 8] AND (F4b = 0 AND F6 = 0) THEN H1a = 2 ELSE IF SRI = 0 AND F5b = [0, 1] AND F6 = 0 THEN H1a = 1 ELSE IF SRI = 0 AND F5b = [0, 1] AND F6 = 1 THEN H1a = 3 END IF

Output	Previous version	Current version
<p><b>Service Urgency (SU)</b></p>	<p>Version 1.0                      {Computation of output}                      SU score:                      IF SRI = NULL OR INVALID OR F3bB = NULL OR INVALID OR G1 = NULL OR INVALID OR G2 = NULL OR INVALID OR G11a = NULL OR INVALID OR G14b = NULL OR INVALID OR G14d = NULL OR INVALID THEN                      H1b = -1                      ELSE IF SRI = 0 AND (G14b = [2, 3] OR G14d = [2, 3]) AND G1 &gt;0 THEN H1b = 4                      ELSE IF SRI = 0 AND (G14b = [2, 3] OR G14d = [2, 3]) AND G1 = 0 THEN H1b = 3                      ELSE IF SRI = 0 AND (G14b = [0, 1] OR G14d = [0, 1]) AND G2 = [1, 2, 3, 4, 5] THEN H1b = 2                      ELSE IF SRI = 0 AND (G14b = [0, 1] OR G14d = [0, 1]) AND G2 = 0 THEN H1b = 1                      ELSE IF SRI = 1 AND G14b = [2, 3] THEN H1b = 3                      ELSE IF SRI = 1 AND G14b = [0, 1] AND F3bB = 1 AND G11a = 3 THEN H1b = 3                      ELSE IF SRI = 1 AND G14b = [0, 1] AND F3bB = 1 AND G11a = [0, 1, 2] THEN H1b = 2                      ELSE IF SRI = 1 AND G14b = [0, 1] AND F3bB = 0 AND G2 = [1, 2, 3, 4, 5] THEN H1b = 2                      ELSE IF SRI = 1 AND G14b = [0, 1] AND F3bB = 0 AND G2 = 0 THEN H1b = 1                      END IF</p>	<p>Version 1.0                      {Computation of output}                      SU score:                      IF SRI = NULL OR INVALID OR F3bB = NULL OR INVALID OR G1 = NULL OR INVALID OR G2 = NULL OR INVALID OR G11a = NULL OR INVALID OR G14b = NULL OR INVALID OR G14d = NULL OR INVALID THEN                      H1b = -1                      ELSE IF SRI = 0 AND (G14b = [2, 3] OR G14d = [2, 3]) AND G1 &gt;0 THEN H1b = 4                      ELSE IF SRI = 0 AND (G14b = [2, 3] OR G14d = [2, 3]) AND G1 = 0 THEN H1b = 3                      ELSE IF SRI = 0 AND (G14b = [0, 1] AND G14d = [0, 1]) AND G2 = [1, 2, 3, 4, 5] THEN H1b = 2                      ELSE IF SRI = 0 AND (G14b = [0, 1] AND G14d = [0, 1]) AND G2 = 0 THEN H1b = 1                      ELSE IF SRI = 1 AND G14b = [2, 3] THEN H1b = 3                      ELSE IF SRI = 1 AND G14b = [0, 1] AND F3bB = 1 AND G11a = 3 THEN H1b = 3                      ELSE IF SRI = 1 AND G14b = [0, 1] AND F3bB = 1 AND G11a = [0, 1, 2] THEN H1b = 2                      ELSE IF SRI = 1 AND G14b = [0, 1] AND F3bB = 0 AND G2 = [1, 2, 3, 4, 5] THEN H1b = 2                      ELSE IF SRI = 1 AND G14b = [0, 1] AND F3bB = 0 AND G2 = 0 THEN H1b = 1                      END IF</p>

## 2012–2013 release

## Chapter 1: Outputs for the Community/Hospital Intake module

Output	Previous version	Current version
<b>Self-reliance Index (SRI)</b>	Version 1.0 {Computation of output} SRI score: IF C2a = NULL OR INVALID OR C2b = NULL OR INVALID OR C2c = NULL OR INVALID OR C2d = NULL OR INVALID OR C1 = NULL OR INVALID THEN SRI = -1 ELSE IF C2a = 1 OR C2b = 1 OR C2c = 1 OR C2d = 1 OR C1 = 1 THEN SRI = 1 ELSE SRI = 0 END IF	Version 1.0 {Computation of output} SRI score: IF C2a = NULL OR INVALID OR C2b = NULL OR INVALID OR C2c = NULL OR INVALID OR C2d = NULL OR INVALID OR C1 = NULL OR INVALID THEN SRI = -1 ELSE IF C2a = 1 OR C2b = 1 OR C2c = 1 OR C2d = 1 OR C1 = 1 THEN SRI = 1 ELSE SRI = 0 END IF
<b>Assessment Urgency (AU)</b>	Version 1.0 {Computation of output} AU score: IF SRI = NULL OR INVALID OR C2b = NULL OR INVALID OR C3 = NULL OR INVALID OR C4 = NULL OR INVALID OR C5a = NULL OR INVALID OR D3 = NULL OR INVALID OR D20b = NULL OR INVALID THEN E1a = -1 ELSE IF SRI = 1 AND D20b = 1 THEN E1a = 6 ELSE IF SRI = 1 AND D20b = 0 AND D3 = 1 THEN E1a = 6 ELSE IF SRI = 1 AND D20b = 0 AND D3 = [0, 8] AND C2b = 1 THEN E1a = 5 ELSE IF SRI = 1 AND D20b = 0 AND D3 = [0, 8] AND C2b = 0 THEN E1a = 3 ELSE IF SRI = 0 AND C4 = [2, 3, 8] AND (C3 = [1, 2, 3] OR C5a = 1) THEN E1a = 4 ELSE IF SRI = 0 AND	Version 1.0 {Computation of output} AU score: IF SRI = NULL OR INVALID OR C2b = NULL OR INVALID OR C3 = NULL OR INVALID OR C4 = NULL OR INVALID OR C5a = NULL OR INVALID OR D3 = NULL OR INVALID OR D20b = NULL OR INVALID THEN E1a = -1 ELSE IF SRI = 1 AND D20b = 1 THEN E1a = 6 ELSE IF SRI = 1 AND D20b = 0 AND D3 = 1 THEN E1a = 6 ELSE IF SRI = 1 AND D20b = 0 AND D3 = [0, 8] AND C2b = 1 THEN E1a = 5 ELSE IF SRI = 1 AND D20b = 0 AND D3 = [0, 8] AND C2b = 0 THEN E1a = 3 ELSE IF SRI = 0 AND C4 = [2, 3, 8] AND (C3 = [1, 2, 3] OR C5a = 1) THEN E1a = 4 ELSE IF SRI = 0 AND C4 = [2, 3, 8] AND (C3 = 0 AND C5a = 0)

Output	Previous version	Current version
<b>Assessment Urgency (AU) (continued)</b>	C4 = [2, 3, 8] AND (C3 = 0 AND C5a = 0) THEN E1a = 2 ELSE IF SRI = 0 AND C4 = [0, 1] AND C5a = 0 THEN E1a = 1 ELSE IF SRI = 0 AND C4 = [0, 1] AND C5a = 1 THEN E1a = 3 END IF	THEN E1a = 2 ELSE IF SRI = 0 AND C4 = [0, 1] AND C5a = 0 THEN E1a = 1 ELSE IF SRI = 0 AND C4 = [0, 1] AND C5a = 1 THEN E1a = 3 END IF
<b>Service Urgency (SU)</b>	Version 1.0 {Computation of output} SU score: IF SRI = NULL OR INVALID OR C2b = NULL OR INVALID OR D9a = NULL OR INVALID OR D15b = NULL OR INVALID OR D15d = NULL OR INVALID OR D16 = NULL OR INVALID OR D17 = NULL OR INVALID THEN E1b = -1 ELSE IF SRI = 0 AND (D15b = [2, 3] OR D15d = [2, 3]) AND D17 >0 THEN E1b = 4 ELSE IF SRI = 0 AND (D15b = [2, 3] OR D15d = [2, 3]) AND D17 = 0 THEN E1b = 3 ELSE IF SRI = 0 AND (D15b = [0, 1] AND D15d = [0, 1]) AND D16 = [1, 2, 3, 4, 5] THEN E1b = 2 ELSE IF SRI = 0 AND (D15b = [0, 1] AND D15d = [0, 1]) AND D16 = 0 THEN E1b = 1 ELSE IF SRI = 1 AND D15b = [2, 3] THEN E1b = 3 ELSE IF SRI = 1 AND D15b = [0, 1] AND C2b = 1 AND D9a = 3 THEN E1b = 3 ELSE IF SRI = 1 AND D15b = [0, 1] AND C2b = 1 AND D9a = [0, 1, 2] THEN E1b = 2 ELSE IF SRI = 1 AND D15b = [0, 1] AND C2b = 0 AND D16 = [1, 2, 3, 4, 5] THEN E1b = 2 ELSE IF SRI = 1 AND D15b = [0, 1] AND C2b = 0 AND D16 = 0 THEN E1b = 1 END IF	Version 1.0 {Computation of output} SU score: IF SRI = NULL OR INVALID OR C2b = NULL OR INVALID OR D9a = NULL OR INVALID OR D15b = NULL OR INVALID OR D15d = NULL OR INVALID OR D16 = NULL OR INVALID OR D17 = NULL OR INVALID THEN E1b = -1 ELSE IF SRI = 0 AND (D15b = [2, 3] OR D15d = [2, 3]) AND D17 >0 THEN E1b = 4 ELSE IF SRI = 0 AND (D15b = [2, 3] OR D15d = [2, 3]) AND D17 = 0 THEN E1b = 3 ELSE IF SRI = 0 AND (D15b = [0, 1] AND D15d = [0, 1]) AND D16 = [1, 2, 3, 4, 5] THEN E1b = 2 ELSE IF SRI = 0 AND (D15b = [0, 1] AND D15d = [0, 1]) AND D16 = 0 THEN E1b = 1 ELSE IF SRI = 1 AND D15b = [2, 3] THEN E1b = 3 ELSE IF SRI = 1 AND D15b = [0, 1] AND C2b = 1 AND D9a = 3 THEN E1b = 3 ELSE IF SRI = 1 AND D15b = [0, 1] AND C2b = 1 AND D9a = [0, 1, 2] THEN E1b = 2 ELSE IF SRI = 1 AND D15b = [0, 1] AND C2b = 0 AND D16 = [1, 2, 3, 4, 5] THEN E1b = 2 ELSE IF SRI = 1 AND D15b = [0, 1] AND C2b = 0 AND D16 = 0 THEN E1b = 1 END IF

Output	Previous version	Current version
<b>Rehabilitation (RH)</b>	Version 1.0 {Computation of output} RH score: IF C2d = NULL OR INVALID OR D4a = NULL OR INVALID OR D4b = NULL OR INVALID OR D4c = NULL OR INVALID OR D4d = NULL OR INVALID OR D5 = NULL OR INVALID THEN E1c = -1 ELSE IF D5 = [2, 8] AND D4d = 1 AND C2d = 1 THEN E1c = 5 ELSE IF D5 = [2, 8] AND D4d = 1 AND C2d = 0 THEN E1c = 4 ELSE IF D5 = [2, 8] AND D4d = 0 AND SRI = 1 THEN E1c = 3 ELSE IF D5 = [2, 8] AND D4d = 0 AND SRI = 0 THEN E1c = 2 ELSE IF D5 = [0, 1] AND D4d = 1 THEN E1c = 3 ELSE IF D5 = [0, 1] AND D4d = 0 AND (D4a = 1 OR D4b = 1 OR D4c = 1) THEN E1c = 2 ELSE IF D5 = [0, 1] AND D4d = 0 AND (D4a = 0 AND D4b = 0 AND D4c = 0) THEN E1c = 1 END IF	Version 1.0 {Computation of output} RH score: IF C2d = NULL OR INVALID OR D4a = NULL OR INVALID OR D4b = NULL OR INVALID OR D4c = NULL OR INVALID OR D4d = NULL OR INVALID OR D5 = NULL OR INVALID THEN E1c = -1 ELSE IF D5 = [2, 8] AND D4d = 1 AND C2d = 1 THEN E1c = 5 ELSE IF D5 = [2, 8] AND D4d = 1 AND C2d = 0 THEN E1c = 4 ELSE IF D5 = [2, 8] AND D4d = 0 AND SRI = 1 THEN E1c = 3 ELSE IF D5 = [2, 8] AND D4d = 0 AND SRI = 0 THEN E1c = 2 ELSE IF D5 = [0, 1] AND D4d = 1 THEN E1c = 3 ELSE IF D5 = [0, 1] AND D4d = 0 AND (D4a = 1 OR D4b = 1 OR D4c = 1) THEN E1c = 2 ELSE IF D5 = [0, 1] AND D4d = 0 AND (D4a = 0 AND D4b = 0 AND D4c = 0) THEN E1c = 1 END IF
<b>interRAI Pain Scale, Version 2 (Pain)</b>	Version 2.0 {Computation of output} Pain score: IF D9a = [0, 1, 2, 3] AND D9b = [0, 1, 2, 3, 4] THEN DO IF D9a = 0 THEN PAIN = 0 ELSE IF D9a = [1, 2] THEN PAIN = 1 ELSE IF D9a = 3 THEN DO IF D9b = [1, 2] THEN PAIN = 2 IF D9b = 3 THEN PAIN = 3 IF D9b = 4 THEN PAIN = 4 END END ELSE PAIN = -1 END IF	Version 2.0 {Computation of output} Pain score: IF D9a = NULL OR INVALID OR D9b = NULL OR INVALID THEN PAIN = -1 ELSE IF D9a = 0 THEN PAIN = 0 ELSE IF D9a = [1, 2] THEN PAIN = 1 ELSE IF D9a = 3 THEN DO IF D9b = [1, 2] THEN PAIN = 2 IF D9b = 3 THEN PAIN = 3 IF D9b = 4 THEN PAIN = 4 END ELSE PAIN = -1 END IF

Output	Previous version	Current version
<b>Age (Years)</b>	Version 1.0 {Computation of output} Age: IF A3 = NULL OR INVALID OR B1 = NULL OR INVALID THEN Age = MISSING ELSE Age = INT ((B1 – A3) ÷ 365.25) END IF	Version 1.0 {Computation of output} Age: IF A3 = NULL OR INVALID OR B1 = NULL OR INVALID THEN Age = MISSING ELSE Age = INT ((B1 – A3) ÷ 365.25) END IF

## Chapter 2: Outputs for the Emergency Department Screener module

Output	Previous version	Current version
<b>Self-reliance Index (SRI)</b>	Version 1.0 {Computation of output} SRI score: IF F3aB = NULL OR INVALID OR F3bB = NULL OR INVALID OR F3cB = NULL OR INVALID OR F3dB = NULL OR INVALID OR F2b = NULL OR INVALID THEN SRI = -1 ELSE IF F3aB = 1 OR F3bB = 1 OR F3cB = 1 OR F3dB = 1 OR F2b = 1 THEN SRI = 1 ELSE SRI = 0 END IF	Version 1.0 {Computation of output} SRI score: IF F3aB = NULL OR INVALID OR F3bB = NULL OR INVALID OR F3cB = NULL OR INVALID OR F3dB = NULL OR INVALID OR F2b = NULL OR INVALID THEN SRI = -1 ELSE IF F3aB = 1 OR F3bB = 1 OR F3cB = 1 OR F3dB = 1 OR F2b = 1 THEN SRI = 1 ELSE SRI = 0 END IF
<b>Assessment Urgency (AU)</b>	Version 1.0 {Computation of output} AU score: IF SRI = NULL OR INVALID OR F3bB = NULL OR INVALID OR F4b = NULL OR INVALID OR F5b = NULL OR INVALID OR F6 = NULL OR INVALID OR G4c = NULL OR INVALID OR G9b = NULL OR INVALID THEN H1a = -1 ELSE IF SRI = 1 AND G9b = [1, 8] THEN H1a = 6 ELSE IF SRI = 1 AND G9b = 0 AND G4c = [1, 2, 3] THEN H1a = 6 ELSE IF SRI = 1 AND G9b = 0 AND G4c = [0, 8] AND F3bB = 1 THEN H1a = 5 ELSE IF SRI = 1 AND G9b = 0 AND G4c = [0, 8] AND F3bB = 0 THEN H1a = 3	Version 1.0 {Computation of output} AU score: IF SRI = NULL OR INVALID OR F3bB = NULL OR INVALID OR F4b = NULL OR INVALID OR F5b = NULL OR INVALID OR F6 = NULL OR INVALID OR G4c = NULL OR INVALID OR G9b = NULL OR INVALID THEN H1a = -1 ELSE IF SRI = 1 AND G9b = [1, 8] THEN H1a = 6 ELSE IF SRI = 1 AND G9b = 0 AND G4c = [1, 2, 3] THEN H1a = 6 ELSE IF SRI = 1 AND G9b = 0 AND G4c = [0, 8] AND F3bB = 1 THEN H1a = 5 ELSE IF SRI = 1 AND G9b = 0 AND

Output	Previous version	Current version
<b>Assessment Urgency (AU)</b> (continued)	<p>ELSE IF SRI = 0 AND F5b = [2, 3, 8] AND (F4b = [1, 2, 3] OR F6 = 1) THEN H1a = 4 ELSE IF SRI = 0 AND F5b = [2, 3, 8] AND (F4b = 0 AND F6 = 0) THEN H1a = 2 ELSE IF SRI = 0 AND F5b = [0, 1] AND F6 = 0 THEN H1a = 1 ELSE IF SRI = 0 AND F5b = [0, 1] AND F6 = 1 THEN H1a = 3 END IF</p>	<p>G4c = [0, 8] AND F3bB = 0 THEN H1a = 3 ELSE IF SRI = 0 AND F5b = [2, 3, 8] AND (F4b = [1, 2, 3] OR F6 = 1) THEN H1a = 4 ELSE IF SRI = 0 AND F5b = [2, 3, 8] AND (F4b = 0 AND F6 = 0) THEN H1a = 2 ELSE IF SRI = 0 AND F5b = [0, 1] AND F6 = 0 THEN H1a = 1 ELSE IF SRI = 0 AND F5b = [0, 1] AND F6 = 1 THEN H1a = 3 END IF</p>
<b>Service Urgency (SU)</b>	<p>Version 1.0 {Computation of output} SU score: IF SRI = NULL OR INVALID OR F3bB = NULL OR INVALID OR G1 = NULL OR INVALID OR G2 = NULL OR INVALID OR G11a = NULL OR INVALID OR G14b = NULL OR INVALID OR G14d = NULL OR INVALID THEN H1b = -1 ELSE IF SRI = 0 AND (G14b = [2, 3] OR G14d = [2, 3]) AND G1 &gt;0 THEN H1b = 4 ELSE IF SRI = 0 AND (G14b = [2, 3] OR G14d = [2, 3]) AND G1 = 0 THEN H1b = 3 ELSE IF SRI = 0 AND (G14b = [0, 1] OR G14d = [0, 1]) AND G2 = [1, 2, 3, 4, 5] THEN H1b = 2 ELSE IF SRI = 0 AND (G14b = [0, 1] OR G14d = [0, 1]) AND G2 = 0 THEN H1b = 1 ELSE IF SRI = 1 AND G14b = [2, 3] THEN H1b = 3 ELSE IF SRI = 1 AND G14b = [0, 1] AND F3bB = 1 AND G11a = 3 THEN H1b = 3 ELSE IF SRI = 1 AND G14b = [0, 1] AND F3bB = 1 AND G11a = [0, 1, 2] THEN H1b = 2 ELSE IF SRI = 1 AND G14b = [0, 1] AND F3bB = 0 AND</p>	<p>Version 1.0 {Computation of output} SU score: IF SRI = NULL OR INVALID OR F3bB = NULL OR INVALID OR G1 = NULL OR INVALID OR G2 = NULL OR INVALID OR G11a = NULL OR INVALID OR G14b = NULL OR INVALID OR G14d = NULL OR INVALID THEN H1b = -1 ELSE IF SRI = 0 AND (G14b = [2, 3] OR G14d = [2, 3]) AND G1 &gt;0 THEN H1b = 4 ELSE IF SRI = 0 AND (G14b = [2, 3] OR G14d = [2, 3]) AND G1 = 0 THEN H1b = 3 ELSE IF SRI = 0 AND (G14b = [0, 1] OR G14d = [0, 1]) AND G2 = [1, 2, 3, 4, 5] THEN H1b = 2 ELSE IF SRI = 0 AND (G14b = [0, 1] OR G14d = [0, 1]) AND G2 = 0 THEN H1b = 1 ELSE IF SRI = 1 AND G14b = [2, 3] THEN H1b = 3 ELSE IF SRI = 1 AND G14b = [0, 1] AND F3bB = 1 AND G11a = 3 THEN H1b = 3</p>

Output	Previous version	Current version
<b>Service Urgency (SU) (continued)</b>	G2 = [1, 2, 3, 4, 5] THEN H1b = 2 ELSE IF SRI = 1 AND G14b = [0, 1] AND F3bB = 0 AND G2 = 0 THEN H1b = 1 END IF	ELSE IF SRI = 1 AND G14b = [0, 1] AND F3bB = 1 AND G11a = [0, 1, 2] THEN H1b = 2 ELSE IF SRI = 1 AND G14b = [0, 1] AND F3bB = 0 AND G2 = [1, 2, 3, 4, 5] THEN H1b = 2 ELSE IF SRI = 1 AND G14b = [0, 1] AND F3bB = 0 AND G2 = 0 THEN H1b = 1 END IF
<b>interRAI Pain Scale, Version 2 (Pain)</b>	Version 2.0 {Computation of output} Pain score: IF D9a = [0, 1, 2, 3] AND D9b = [0, 1, 2, 3, 4] THEN DO IF D9a = 0 THEN PAIN = 0 ELSE IF D9a = [1, 2] THEN PAIN = 1 ELSE IF D9a = 3 THEN DO IF D9b = [1, 2] THEN PAIN = 2 IF D9b = 3 THEN PAIN = 3 IF D9b = 4 THEN PAIN = 4 END END ELSE PAIN = -1 END IF	Version 2.0 {Computation of output} Pain score: IF G11a = NULL OR INVALID OR G11B = NULL OR INVALID THEN PAIN = -1 ELSE IF G11a = 0 THEN PAIN = 0 ELSE IF G11a = [1, 2] THEN PAIN = 1 ELSE IF G11a = 3 THEN DO IF G11b = [1, 2] THEN PAIN = 2 ELSE IF G11b = 3 THEN PAIN = 3 ELSE IF G11b = 4 THEN PAIN = 4 END ELSE PAIN = -1 END IF
<b>Age (Years)</b>	Version 1.0 {Computation of output} Age: IF A3 = NULL OR INVALID OR F1a = NULL OR MISSING THEN Age = MISSING ELSE Age = INT ((F1a - A3) ÷ 365.25) END IF	Version 1.0 {Computation of output} Age: IF A3 = NULL OR INVALID OR F1a = NULL OR MISSING THEN Age = MISSING ELSE Age = INT ((F1a - A3) ÷ 365.25) END IF



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