VPAT Accessibility Conformance Report

(Based on ITI VPAT©)

|  |  |
| --- | --- |
| **Name of Product** | **Shadow Health** |
| **Date Last Updated** | **May 5, 2023** |
| Completed by | Nicholas Seow (Digital Accessibility Team) |
| **Applicable Standards/Guidelines** | This document rates Shadow Health according to the W3C WCAG 2.1 A and AA requirements.  |
| **Contact for More Information** | Elsevier Digital Accessibility Teamaccessibility@elsevier.com |
| **Testing Tools and Methods** | * **Hands-on keyboard operation**
* **DevTools/Code inspection**
* **Mozilla Firefox 111 and Chrome 108 on Windows 10 21H2**
* **NVDA screen reader 2023.1**
* **WAVE Browser Extension**
* **Color Contrast Analyzer**
* [W3C Web Accessibility Initiative (WAI) Pages](https://www.w3.org/WAI/)
* [Elsevier Accessibility Checklist](http://romeo.elsevier.com/accessibility_checklist/)
 |
| **Document Sections** | This document distinguishes between the “Web” and “Software (**Digital Clinical Experience**)” portions of the product – a separate conformance report for each is provided under a separate headings “Shadow Health Web Content”, then “Shadow Health Software (DCE)”. Each report includes all WCAG 2.1 A and AA checkpoints, which are further organized into 7 sections: * Visuals
* Keyboard
* Headings and Structure
* Labeling
* Multimedia
* Usability
* Mobile User Experience
 |
| **Pages Covered** | This report is based on a representative sample of Shadow Health pages and content, including:* **Web:** Login (Direct Access), New Student Enrollment, Faculty Account Request, Dashboard, Search Results (e.g. Course Index, Course Templates), Edit Profile, Assignment Page (including video tutorial), Activity Page, Post-Exam Activity, Post-Exam Results
* **Software (DCE):** DCE Orientation, interactive virtual patient 3d simulation assignments of varying complexity, slide-based presentation assignments
 |
| **Terms** | * **Supports: The functionality of the product has at least one method that meets the criteria without known defects or meets with equivalent facilitation.**
* **Partially supports: Some functionality of the product does not meet the criteria.**
* **Does not support: Majority of functionality of the product does not meet the criteria.**
* **Supports (N/A): According to W3C on conformance, "If there is no content to which a success criterion applies, the success criterion is satisfied."**
 |
| **Notes/Terminology** | * **“AT” stands for Assistive Technology such as screen readers, voice input, etc.**
* **“DCEs” comprise the “Software” as assessed in this report and refer to Digital Clinical Experiences™ – interactive virtual patient simulations that feature three-dimensional graphics and animated components, as well as slide-based presentational assignments e.g. “Concept Labs”. While web-based applications and accessed via browser, DCEs utilize technologies such as HTML5 Canvas, WebGL, and Web Assembly.**
* **Pages and content on the Shadow Health website/platform available to users (students and faculty) in general – sans DCEs that are present only on specific activity pages – comprise the “Web” portion of the product as assessed in this report.**
 |

## Conformance Summary: Web

| **WCAG 2.1 Success Criterion**  | **Level** | **Evaluation** |
| --- | --- | --- |
| 1.1.1: Non-text Content | A | Partially supports |
| 1.2.1: Audio-only and Video-only (Prerecorded) | A | Supports (N/A) |
| 1.2.2: Captions (Prerecorded) | A | Supports |
| 1.2.3: Audio Description or Full Text Alternative | A | Does not support |
| 1.2.4: Captions (Live) | AA | Supports (N/A) |
| 1.2.5: Audio Description | AA | Does not support |
| 1.3.1: Info and Relationships | A | Partially supports |
| 1.3.2: Meaningful Sequence | A | Supports |
| 1.3.3: Sensory Characteristics | A | Supports |
| 1.3.4 Orientation (2.1) | AA | Supports |
| 1.3.5 Identify Input Purpose (2.1) | AA | Does not support |
| 1.4.1: Use of Color | A | Supports |
| 1.4.2: Audio Control | A | Supports |
| 1.4.3: Contrast (Minimum) | AA | Partially supports |
| 1.4.4: Resize text | AA | Supports |
| 1.4.5: Images of Text | AA | Supports |
| 1.4.10 Reflow (2.1) | AA | Does not support |
| 1.4.11 Non-Text Contrast (2.1) | AA | Partially supports |
| 1.4.12 Text Spacing (2.1) | AA | Supports |
| 1.4.13 Content on Hover or Focus (2.1) | AA | Does not support |
| 2.1.1: Keyboard | A | Partially supports |
| 2.1.2: No Keyboard Trap | A | Supports |
| 2.1.4 Character Key Shortcuts (2.1) | A | Supports (N/A) |
| 2.2.1: Timing Adjustable | A | Supports (N/A) |
| 2.2.2: Pause, Stop, Hide | A | Supports (N/A) |
| 2.3.1: Three Flashes or Below Threshold | A | Supports (N/A) |
| 2.4.1: Bypass Blocks | A | Supports |
| 2.4.2: Page Titled | A | Supports |
| 2.4.3: Focus Order | A | Supports |
| 2.4.4: Link Purpose (In Context) | A | Supports |
| 2.4.5: Multiple Ways | AA | Supports |
| 2.4.6: Headings and Labels | AA | Supports |
| 2.4.7: Focus Visible | AA | Partially supports |
| 2.5.1 Pointer Gestures (2.1) | A | Supports (N/A) |
| 2.5.2 Pointer Cancellation (2.1) | A | Supports |
| 2.5.3 Label in Name (2.1) | A | Partially supports |
| 2.5.4 Motion Actuation (2.1) | A | Supports (N/A) |
| 3.1.1: Language of Page | A | Supports |
| 3.1.2: Language of Parts | AA | Supports (N/A) |
| 3.2.1: On Focus | A | Supports |
| 3.2.2: On Input | A | Supports |
| 3.2.3: Consistent Navigation | AA | Supports |
| 3.2.4: Consistent Identification | AA | Supports |
| 3.3.1: Error Identification | A | Supports |
| 3.3.2: Labels or Instructions | A | Partially supports |
| 3.3.3: Error Suggestion | AA | Supports |
| 3.3.4: Error Prevention (Legal, Financial, Data) | AA | Supports (N/A) |
| 4.1.1: Parsing | A | Partially supports |
| 4.1.2: Name, Role, Value | A | Partially supports |
| 4.1.3 Status Messages (2.1) | AA | Does not support |

## Conformance Summary: Software (Digital Clinical Experience)

| **WCAG 2.1 Success Criterion**  | **Level** | **Evaluation** |
| --- | --- | --- |
| 1.1.1: Non-text Content | A | Partially supports |
| 1.2.1: Audio-only and Video-only (Prerecorded) | A | Supports (N/A) |
| 1.2.2: Captions (Prerecorded) | A | Supports |
| 1.2.3: Audio Description or Full Text Alternative | A | Does not support |
| 1.2.4: Captions (Live) | AA | Supports (N/A) |
| 1.2.5: Audio Description | AA | Does not support |
| 1.3.1: Info and Relationships | A | Partially supports |
| 1.3.2: Meaningful Sequence | A | Does not support |
| 1.3.3: Sensory Characteristics | A | Partially supports |
| 1.3.4 Orientation (2.1) | AA | Supports |
| 1.3.5 Identify Input Purpose (2.1) | AA | Supports (N/A) |
| 1.4.1: Use of Color | A | Partially supports |
| 1.4.2: Audio Control | A | Supports |
| 1.4.3: Contrast (Minimum) | AA | Partially supports |
| 1.4.4: Resize text | AA | Supports |
| 1.4.5: Images of Text | AA | Supports (N/A) |
| 1.4.10 Reflow (2.1) | AA | Does not support |
| 1.4.11 Non-Text Contrast (2.1) | AA | Partially supports |
| 1.4.12 Text Spacing (2.1) | AA | Supports (N/A) |
| 1.4.13 Content on Hover or Focus (2.1) | AA | Does not support |
| 2.1.1: Keyboard | A | Does not support |
| 2.1.2: No Keyboard Trap | A | Supports (N/A) |
| 2.1.4 Character Key Shortcuts (2.1) | A | Supports (N/A) |
| 2.2.1: Timing Adjustable | A | Supports (N/A) |
| 2.2.2: Pause, Stop, Hide | A | Partially supports |
| 2.3.1: Three Flashes or Below Threshold | A | Supports (N/A) |
| 2.4.1: Bypass Blocks | A | Supports (N/A) |
| 2.4.2: Page Titled | A | Supports (N/A) |
| 2.4.3: Focus Order | A | Partially supports |
| 2.4.4: Link Purpose (In Context) | A | Supports |
| 2.4.5: Multiple Ways | AA | Supports |
| 2.4.6: Headings and Labels | AA | Supports |
| 2.4.7: Focus Visible | AA | Supports |
| 2.5.1 Pointer Gestures (2.1) | A | Supports (N/A) |
| 2.5.2 Pointer Cancellation (2.1) | A | Supports |
| 2.5.3 Label in Name (2.1) | A | Supports (N/A) |
| 2.5.4 Motion Actuation (2.1) | A | Supports (N/A) |
| 3.1.1: Language of Page | A | Supports (N/A) |
| 3.1.2: Language of Parts | AA | Supports (N/A) |
| 3.2.1: On Focus | A | Supports |
| 3.2.2: On Input | A | Supports |
| 3.2.3: Consistent Navigation | AA | Supports |
| 3.2.4: Consistent Identification | AA | Supports |
| 3.3.1: Error Identification | A | Supports |
| 3.3.2: Labels or Instructions | A | Partially supports |
| 3.3.3: Error Suggestion | AA | Supports |
| 3.3.4: Error Prevention (Legal, Financial, Data) | AA | Supports (N/A) |
| 4.1.1: Parsing | A | Supports (N/A) |
| 4.1.2: Name, Role, Value | A | Does not support |
| 4.1.3 Status Messages (2.1) | AA | Supports (N/A) |

## Shadow Health Web ContentWCAG 2.1 A and AA Success Criteria

### Visuals – Web Content

|  |  |  |
| --- | --- | --- |
| **WCAG 2.1****Checkpoint** | **Conformance Level** | **Remarks** |
| [1.1.1: Non-Text Content](http://www.w3.org/TR/WCAG20/#text-equiv-all) (A)Provide text alternatives for non-text content (e.g. images) | Partially supports | Most images and icons have appropriate text equivalents.**Exceptions:*** Faculty Account Request, New Student Enrollment: Decorative Icon (phone) – Icon is an <img> element with no alt text attribute (alt should be present but with a null value, as image is decorative)
* Course Templates, Course Page: Thumbnail/generic icons for course/assignment listing – Icons are decorative but have extraneous alt text
* Post-Exam Results: "Objective Data Collection" Results – Observation results are indicated via checkbox icons, which lack text alternatives.
 |
| [1.3.3: Sensory Characteristics](http://www.w3.org/TR/WCAG20/#content-structure-separation-understanding) (A)Do not rely on sensory characteristics of components such as shape, size, visual location, orientation, or sound | Supports | There are no instructions or areas of content which rely solely on sensory characteristics. |
| [1.4.1: Use of Color](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-without-color) (A)Color is not used as the only visual means of conveying info | Supports | Across the site, when color is used as a means of conveying information, another visual method is also used to convey the information without color. |
| [1.4.3: Color Contrast (Minimum)](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-contrast) (AA)Text has enough contrast with the background (4.5:1 for small text and 3:1 for large text) | Partially supports | Text has sufficient contrast with its corresponding background in almost all areas.**Exceptions:*** All pages: "Skip to main content" link – Link text (white) has insufficient color contrast against its background (orange).
* Course Page: Notice Center "Type" text – White text for "Type" cell value, "Warning", is invisible against background, and only barely visible with hover background color change to grey
* Dashboard, Course Templates: Search results/course listing page navigation links – Link text (green) may have insufficient color contrast against gradient background (grey)
* Assignment Page: "Inactive" text tag in Assignment Overview Webgl Information – Text for "Inactive" (white) text has insufficient contrast against background (yellow)
* Text label for "Enter prefix..." field, which lacks a visible label save for its placeholder (light grey), has insufficient contrast against background (white)
* Post-Exam Activity: Multiple choice radio button options – Visible label text (grey) has insufficient contrast against background (white)
* Post-Exam Results: Overview/Documentation/Education & Empathy etc. tabs text – Text labels for unselected tab titles (grey/yellow/etc.) have insufficient contrast against background (white)
* Post-Exam Results: Transcript text (timestamps) – Timestamp text (grey/pink/taupe/blue/green) may have insufficient contrast against background (white)
* Post-Exam Results: "Activity Time" text, "Objective Data Collection" result scores – Text (grey) has insufficient contrast against background (white)
* Post-Exam Activity: "Saved." notification message – Notification text (green) has insufficient contrast against background (light green).
* Post-Exam Activity: "Additional Feedback" textarea input word count – Word count is presented as text (light grey) that has insufficient contrast against the backgrounds (white)
 |
| [1.4.4: Resize Text](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-scale) (AA)Text can be enlarged up to 200% without loss of functionality. | Supports | Text may be enlarged to 200% while preserving functionality of content. |
| [1.4.5: Images of Text](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-text-presentation) (AA)Text is used rather than images of text, except where the presentation of text is essential, such as logos | Supports | No images of text are used other than for logos or essential presentation.  |
| [1.4.10 Reflow](https://www.w3.org/TR/WCAG21/#reflow)(AA)Content can be presented without loss of information or functionality, and without requiring scrolling in two dimensions for:Vertical scrolling content at a width equivalent to 320 CSS pixels;Horizontal scrolling content at a height equivalent to 256 CSS pixels. | Does not support | The site does not utilize a responsive view, and when zoomed, there may be loss of functionality or content: most pages require both vertical and horizontal scrolling. |
| [1.4.11 Non-Text Contrast (AA](https://www.w3.org/TR/WCAG21/#non-text-contrast))User interact components and graphical objects have a contrast ratio of at least 3:1 against adjacent color(s). | Partially supports | Most non-text UI components and graphical objects have at least a 3:1 contrast ratio.**Exceptions:*** All pages: Buttons (teal) – Teal buttons (and links styled as buttons) have a focus indicator (thin, dotted, grey) that does not have sufficient contrast
 |
| [1.4.12 Text Spacing (AA)](https://www.w3.org/TR/WCAG21/#text-spacing)In content implemented using markup languages that support the following text style properties, no loss of content or functionality occurs by setting all the following and by changing no other style property:Line height (line spacing) to at least 1.5 times the font size;Spacing following paragraphs to at least 2 times the font size;Letter spacing (tracking) to at least 0.12 times the font size;Word spacing to at least 0.16 times the font size. | Supports | Users may adjust the text spacing of content on pages to the minimum baseline properties without causing loss of content or functionality. |
| [1.4.13 Content on Hover or Focus (AA)](https://www.w3.org/TR/WCAG21/#content-on-hover-or-focus)Where receiving and then removing pointer hover or keyboard focus triggers additional content to become visible and then hidden, the following are true:* Dismissable
* Hoverable
* Persistent
 | Does not support | Content that appears on hover or focus – while uncommonly encountered – are not dismissable, hoverable, or persistent according to the criteria.Post-Exam Results: "Subjective Data Collection" Scored Items – Tooltips that appear on cursor hover are not dismissible without moving cursor position; they disappear when cursor hovers over the additional content. The tooltips also appear on keyboard focus but are not dismissible.  |
| [2.3.1: Three Flashes or Below Threshold](http://www.w3.org/TR/WCAG20/#seizure-does-not-violate) (A)No more than three flashes in a 1-second period, or the flashes are below the defined thresholds | Supports (N/A) | No flashing content exists. |

### Keyboard – Web Content

|  |  |  |
| --- | --- | --- |
| **WCAG 2.1****Checkpoint** | **Conformance Level** | **Remarks** |
| [1.3.2: Meaningful Sequence](http://www.w3.org/TR/WCAG20/#content-structure-separation-sequence) (A)The correct reading sequence can be programmatically determined | Supports | The correct reading sequence is logical, with the DOM order according with the visual order. |
| [2.1.1: Keyboard](http://www.w3.org/TR/WCAG20/#keyboard-operation-keyboard-operable) (A)All functionality is available from a keyboard, except for tasks such as drawing | Partially supports | The standard web page content and functionality are keyboard operable across most pages.**Exceptions**:* Activity Page: When the software/simulation (DCE canvas) is loaded, keyboard functionality is rendered inoperable for the entire page
* Login, New Student Enrollment, Edit Profile: Password visibility toggle – The visibility of entered values cannot be toggled via keyboard
 |
| [2.1.2: No Keyboard Trap](http://www.w3.org/TR/WCAG20/#keyboard-operation-trapping) (A)The user can use the keyboard to move through page elements and is not trapped on a particular element | Supports | No pages have a keyboard trap.Note: as per exception under SC 2.1.1, typical keyboard functionality is disabled upon load of DCE canvas |
| [2.1.4 Character Key Shortcuts (A)](https://www.w3.org/TR/WCAG21/#character-key-shortcuts)If a keyboard shortcut is implemented in content using only letter (including upper- and lower-case letters), punctuation, number, or symbol characters, then at least one of the following is true:* Turn off
* Remap
* Active only on focus
 | Supports (N/A) | The site does not use any character key shortcuts. The embedded video player on certain (tutorial) Activity pages activates its single-key shortcuts only while in focus.  |
| [2.4.3: Focus Order](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-focus-order) (A)Users can tab through the elements of a page in a logical order | Supports | Tab order is logical and preserves the meaning and operability of pages across the site.Note: There exist a few points where focus management is not utilized for greater convenience to AT users, for example in indicating error messages upon form submission (focus is not shifted to the message), or in activating a tab within the Post-Exam Results tabs/navigation menu (focus remains within tab list and is not shifted to tab content). |
| [2.4.7: Focus Visible](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-focus-visible) (AA)The page element with the current keyboard focus has a visible focus indicator | Partially supports | Many elements across the site have a visible indication of focus.**Exceptions:*** Login: "Sign In" button – Button is keyboard-operable, but lacks a visible focus indicator
* Post-Exam Results: "Objective Data Collection" Result accordion – Accordion controls/targets do not have a visible focus
* Post-Exam Activity: "Student Survey" grouped radio buttons – Radio button groups lack visible focus/selection indicator, until a selection is inadvertently made
 |
| [3.2.1: On Focus](http://www.w3.org/TR/WCAG20/#consistent-behavior-receive-focus) (A)When a UI component receives focus, this does not trigger unexpected actions. | Supports | Focusable elements do not cause unexpected actions/changes of context when receiving focus. |

### Headings and Structure – Web Content

|  |  |  |
| --- | --- | --- |
| **WCAG 2.1****Checkpoint** | **Conformance Level** | **Remarks** |
| [1.3.1: Information and Relationships](http://www.w3.org/TR/WCAG20/#content-structure-separation-programmatic) (A)Info, structure, and relationships can be programmatically determined | Partially supports | Headings are programmatically determinable in many areas to help distinguish content – for example, Assignment Pages (and many others) have a clear and logical hierarchical heading structure. Programmatically determinable lists are typically used to group related items – for example, global navigation links are organized within a list structure. Table markup is utilized appropriately in some instances. Landmarks are demarcated appropriately in most areas – for example, almost every page has a defined main landmark.**Exceptions:*** All Pages: Header landmark – The global site header is not defined as <header> - instead, <header> encloses the <h1> element within the main landmark
* Login, New Student Enrollment, Faculty Account Request: First heading level – Page lacks a first heading level <h1>
* Login: Links and text below login form fields – h3, h4 elements are not actually headings
* New Student Enrollment: "Course PIN" field – Visible text label is a heading, instead of being associated with the input
* New Student Enrollment: Email and Password fields – Second set of email address and password fields (for users with existing accounts) have visible field labels with erroneous/duplicate id associations
* Course Templates: "Search for a course template…" field – Visible text label is a heading, instead of being associated with the input
* Dashboard: "Search for a user name…" field, "Search Orphaned Students" checkbox – Related controls (search field and supplementary checkbox) are not grouped
* Search Results (e.g. Course Index, Course Templates): Search results/course listing table – Search results are presented as tabular data, however table lacks headers and header/data cell associations
* Course Page: Course overview information table – Tables used for layout of course information, although content implies a data table - lacking headers and header/data cell associations
* Course Page: "Add Admin Notes" modal – Text area field lacks an associated label
* Assignment Page: "Possible Tags"/"Active Tags" list in Assignment Overview – Individual tags are visually distinguished in sequence, but lack semantic list markup
* Post-Exam Activity: Multiple choice radio button options – Radio button options for multiple choice test item are not grouped i.e. contained within a fieldset.
* Post-Exam Activity: Text input field – Visible text label is a heading, accompanied by placeholder instruction text, instead of being associated with the input.
* Post-Exam Results: Content within Overview/Documentation etc. tabs – Heading level out of order, skipped heading level
* Post-Exam Results: Transcript, "Interventions", "Environmental Safety Check" – Information is presented within table, arguably as tabular data, however table lacks headers and potentially header/data cell associations
* Post-Exam Results: "Subjective Data Collection" Scored Items – Category/Scored Items information is presented/implied as a table but lacks data table markup. Scored Items within Categories may be presented as a list but lack the appropriate list markup.
* Preferences: Preference selection forms – Radio button options are not grouped i.e. contained within a fieldset; visible labels are not correctly associated with forms
* Post-Exam Activity: "Student Survey" grouped radio buttons – Radio button groups to various questions utilize data table markup, potentially resulting in excessive verbosity for AT that reads both table and form information
 |
| [2.4.1: Bypass Blocks](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-skip) (A)Users can bypass repeated blocks of content. | Supports | Headings and landmarks exist, which allow users using Assistive Technology to jump to the different areas of content quickly. A "Skip to main content" link is provided on every page. |
| [2.4.6: Headings and Labels](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-descriptive) (AA) Headings and labels are clear and consistent. | Supports | Headings and labels used are clear and descriptive.  |
| [3.1.1: Language of Page](http://www.w3.org/TR/WCAG20/#meaning-doc-lang-id) (A)The language of the page is specified | Supports | Across all pages, the language is appropriately defined as lang="en-US".  |
| [3.1.2: Language of Parts](http://www.w3.org/TR/WCAG20/#meaning-other-lang-id) (AA)Specify the language of text passages that are in a different language than the default language of the page. | Supports (N/A) | There are no sections of text that do not match the default language of the page. |
| [4.1.1: Parsing](http://www.w3.org/TR/WCAG20/#ensure-compat-parses) (A)Use valid, error-free HTML | Partially supports | Almost all pages use and error-free HTML; HTML and CSS typically pass concerning these 4 specific criteria: (i) elements have complete start and end tags,(ii) elements are nested according to their specifications(iii) elements do not contain duplicate attributes(iv) any IDs are unique, except where the specifications allow these features.**Exceptions:*** New Student Enrollment: Registration forms – Two <form> elements (new registration vs. existing user) share an id value
 |

### Labeling – Web Content

|  |  |  |
| --- | --- | --- |
| **WCAG 2.1****Checkpoint** | **Conformance Level** | **Remarks** |
| [1.3.5 Identify Input Purpose (AA)](https://www.w3.org/TR/WCAG21/#identify-input-purpose)The purpose of each input field collecting information about the user can be programmatically determined when:The input field serves a purpose identified in the Input Purposes for User Interface Components section; and the content is implemented using technologies with support for identifying the expected meaning for form input data. | Does not support | The only pages with personal input fields are the Login, registration flow, Edit Profile pages. These fields lack autocomplete attributes.* Login: Email and Password fields – Login fields lack autocomplete attributes. i.e. autocomplete="email" & autocomplete="current-password"
* Faculty Account Request, New Student Enrollment, Profile: Personal information fields – Several personal information fields lack autocomplete attributes. e.g. autocomplete="name", autocomplete="email", autocomplete="tel"
 |
| [2.4.2: Page Titled](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-title) (A)The page has a title describing its topic or purpose | Supports | Each page has a descriptive page title that identifies its content or purpose. |
| [2.4.4: Link Purpose (In Context)](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-refs) (A)The purpose of each link can be determined from the link text or surrounding context. | Supports | Each link has an identifiable purpose from the link text or surrounding context.  |
| [2.5.3 Label in Name](https://www.w3.org/TR/WCAG21/#label-in-name) (A)For user interface components with labels that include text or images of text, the name contains the text that is presented visually. | Partially supports | Almost all user interface components that have visible text contain that text consistently within the accessible name.**Exceptions:*** All Pages: "Browse" navigation button – Button has null aria-label="" attribute
 |
| [3.2.4: Consistent Identification](http://www.w3.org/TR/WCAG20/#consistent-behavior-consistent-functionality) (AA)UI components used across the web site are identified consistently on every page. | Supports | Most components are consistent across the site, and identified consistently where they perform the same function across pages. |
| [3.3.1: Error Identification](http://www.w3.org/TR/WCAG20/#minimize-error-identified) (A)Input errors are clearly marked and described to the user. | Supports | Errors are identified and presented to users with relevant summaries.Note: On Login, Faculty Account Request, New Student Enrollment forms, and Edit Profile forms, error summaries identifying fields with invalid input are presented in text above form fields upon page load after form submission. The error messages are visually distinguishedvia different text and/or background size and colors (typically red). Error states are not programmatically communicated to AT, nor is focus management used for convenient error indication.  |
| [3.3.2: Labels and Instructions](http://www.w3.org/TR/WCAG20/#minimize-error-cues) (A)Items requiring user input are clearly labeled or have clear instructions. | Partially supports | Labels or instructions are provided for most form elements, most of which are programmatically associated with their inputs. Note: see SC 1.3.1 for exceptions where visible labels may not be programmatically associated with inputs.**Exceptions:** * Edit Profile: Current Password field – The field requirement is not identified via its programmatically assigned label – "required" is only stated within the section heading
 |
| [3.3.3: Error Suggestion](http://www.w3.org/TR/WCAG20/#minimize-error-suggestions) (AA)When the user makes an input error, give suggestions for valid input. | Supports | Error validation occurs, typically upon form submission, and relevant suggestions are provided in text, including the identification of incomplete fields and password requirement suggestions e.g. “Password must contain an uppercase letter, a lowercase letter, a number, and a symbol”. |
| [4.1.2: Name, Role, Value](http://www.w3.org/TR/WCAG20/#ensure-compat-rsv) (A)For all UI components, the name, value, and role can be programmatically determined. | Partially supports | Some UI components communicate their state programmatically. **Exceptions:*** Search Results (e.g. Course Index, Course Templates): Navigation landmarks – Main <nav> element lacks a unique label (aria-label attribute); search results page listings introduce additional <nav> elements, making the distinction necessary
* Course Page: "Notice Center" accordion – Accordion control implemented as <a> without role, rather than <button> with state communicated via aria-expanded attributes.
* Assignment Page: Accordions in Assignment Overview – Accordion control implemented as <a> without role, rather than <button> with state communicated via aria-expanded attributes.
* Post-Exam Results: Transcript toggles – Toggles for transcript line type have aria-pressed="true" attributes that are not set to "true" upon activation
* Post-Exam Results: Results tabs/navigation menu – The list of links to select/activate tabbed content utilize aria-expanded attributes to communicate state, but it does not operate equivalently to a tablist with manual activation using e.g. aria-selected attributes on <button>. (The selection of tabs is less functional for use with keyboard/AT, with focus being retained in the link list after activation.)
* Post-Exam Results: "Objective Data Collection" Result accordion – Accordion control implemented as <a> without role, rather than <button> with state communicated via aria-expanded attributes
* Post-Exam Results: "Lab Pass" link (when unavailable) – The "disabled" attribute is not valid on <a> elements, so the disabled state of the link when target document is unavailable/unapplicable (which is presented visually) is not communicated to AT - should use aria-disabled attribute, or turn element into <button>
* Post-Exam Activity: "Save" button for text input field (e.g. "Reflection") – "Save", a link styled as a button that triggers saving the state of text input, lacks a button role
 |
| [4.1.3 Status Messages](https://www.w3.org/TR/WCAG21/#status-messages) (AA)In content implemented using markup languages, status messages can be programmatically determined through role or properties such that they can be presented to the user by assistive technologies without receiving focus. | Does not support | Status messages, although uncommonly encountered, are not announced by assistive technology.* Post-Exam Activity: "Saved." notification message – The status message, which is momentarily visible, does not use role="status" and is not communicated to AT
* Post-Exam Activity: "Additional Feedback" textarea input error indication – Client-side validation for minimum word count is communicated visually via icon and change of text color, and via text (count), however the error state is not programmatically communicated to AT e.g. via role="status"
 |

### Multimedia – Web Content

|  |  |  |
| --- | --- | --- |
| **WCAG 2.1****Checkpoint** | **Conformance Level** | **Remarks** |
| [1.2.1: Audio-only or Video-only (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-av-only-alt) (A)Provide alternatives for pre-recorded audio-only or video-only content. | Supports (N/A) | There is no prerecorded audio-only or video-only content. |
| [1.2.2: Captions (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-captions) (A)Provide captions for pre-recorded audio | Supports | Closed captions are provided for video content via the embedded video player on tutorial Assignment pages. Speakers are uniquely identified using “Speaker 1”, Speaker 2”. |
| [1.2.3: Audio Description or Media Alternative (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-audio-desc) (A)Provide alternatives for pre-recorded synchronized audio/video | Does not support | Neither audio description tracks nor media alternatives are provided for the video content on tutorial Assignment pages. |
| [1.2.4: Captions (Live)](http://www.w3.org/TR/WCAG20/#media-equiv-real-time-captions) (AA)Provide captions for live audio in synchronized audio/video. | Supports (N/A) | There is no live audio in synchronized audio/video. |
| [1.2.5: Audio Description (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-audio-desc-only) (AA)Provide an audio description of pre-recorded video. | Does not support | Audio description tracks are not provided for the video content on tutorial Assignment pages; narration in the audio tracks do not properly constitute audio descriptions. |
| [1.4.2: Audio Control](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-dis-audio) (A)Audio can be paused and stopped, or the audio volume can be changed. | Supports | Pages do not have audio that plays automatically. The embedded video player has pause/stop and volume controls. |
| [2.2.2: Pause, Stop, Hide](http://www.w3.org/TR/WCAG20/#time-limits-pause) (A)Users can stop, pause, or hide moving, blinking, scrolling, or auto-updating information. | Supports (N/A) | There is no moving, scrolling, or auto-updating information. |

### Usability – Web Content

|  |  |  |
| --- | --- | --- |
| **WCAG 2.1****Checkpoint** | **Conformance Level** | **Remarks** |
| [2.2.1: Timing Adjustable](http://www.w3.org/TR/WCAG20/#time-limits-required-behaviors) (A)Users are warned of time limits shorter than 20 hours and time limits can be turned off or extended | Supports (N/A) | There is no session timeout, or the time limit is longer than 20 hours.Note: See [corresponding Software (DCE) section for this checkpoint](#_Usability_-_Shadow) for relevant guidance on time limits whenever DCE canvas is loaded.  |
| [2.4.5: Multiple Ways](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-mult-loc) (AA)More than one way is available to navigate to other web pages. | Supports | All pages, except pages that are a step in or result of a process (e.g. part of an assignment or activity), may be located in multiple ways—for example, via Browse indexes in the global navigation menu or search functionality available via the Dashboard.  |
| [3.2.2: On Input](http://www.w3.org/TR/WCAG20/#consistent-behavior-unpredictable-change) (A) Changing the setting of a checkbox, radio button, or other UI component does not trigger unexpected changes in context. | Supports | User input, such as changing the values of form elements, does not initiate unexpected actions or changes in context. |
| [3.2.3: Consistent Navigation](http://www.w3.org/TR/WCAG20/#consistent-behavior-consistent-locations) (AA)Navigation menus are in the same location and order on every web page. | Supports | Navigation menus are consistent across pages. For example, Main navigation links in the header and supplementary links in the footer are consistent across pages, occurring in the same relative order. |
| [3.3.4: Error Prevention (Legal, Financial, Data)](http://www.w3.org/TR/WCAG20/#minimize-error-reversible) (AA)For web pages with legal or financial commitments, input can be reviewed and corrected before final submission, and submissions can be reverted. | Supports (N/A) | There are no submissions which require legal or financial commitments.  |

### Mobile User Experience – Web Content

|  |  |  |
| --- | --- | --- |
| **WCAG 2.1****Checkpoint** | **Conformance Level** | **Remarks** |
| [1.3.4 Orientation](https://www.w3.org/TR/WCAG21/#orientation)(AA) Content does not restrict its view and operation to a single display orientation, such as portrait or landscape, unless a specific display orientation is essential. | Supports | Pages do not restrict view and operation of content to a single orientation. |
| [2.5.1 Pointer Gestures](https://www.w3.org/TR/WCAG21/#pointer-gestures) (A) All functionality that uses multipoint or path-based gestures for operation can be operated with a single pointer without a path-based gesture, unless a multipoint or path-based gesture is essential. | Supports (N/A) | Pages do not utilize or require multipoint or path-based gestures for any functionality. |
| [2.5.2 Pointer Cancellation (A)](https://www.w3.org/TR/WCAG21/#pointer-cancellation)For functionality that can be operated using a single pointer, at least one of the following is true:* No Down-Event
* Abort or Undo
* Up Reversal
* Essential
 | Supports | All interactive content functions through the Up-Event, allowing users to potentially move their pointer off the component to cancel. |
| [2.5.4 Motion Actuation (A)](https://www.w3.org/TR/WCAG21/#motion-actuation)Functionality that can be operated by device motion or user motion can also be operated by user interface components and responding to the motion can be disabled to prevent accidental actuation, except when:* Supported Interface
* Essential
 | Supports (N/A) | There is no content that utilizes device or user motion. |

## Shadow Health Software (Digital Clinical Experience): WCAG 2.1 A and AA Success Criteria

### Visuals – Shadow Health Software (DCE)

|  |  |  |
| --- | --- | --- |
| **WCAG 2.1****Checkpoint** | **Conformance Level** | **Remarks** |
| [1.1.1: Non-Text Content](http://www.w3.org/TR/WCAG20/#text-equiv-all) (A)Provide text alternatives for non-text content (e.g. images) | Partially supports | Most significant non-text content in DCEs is in the form of three-dimensional animated graphics, occasionally accompanied by sound. Descriptive identification of visually or auditorily depicted scenarios/experiences – most of such content comprises a test or assessment exercise – are often provided in text. Descriptive identification for static graphic “imaging” under “Patient Details” such as cardiograms and x-rays are also provided in text, though not overtly associated with/captioning the images. A form of synchronized captioning for the spoken dialog of virtual patients during assessment/interview activities is provided within the dynamically updating “Transcript” area in DCEs. In slide-based DCEs such as “Concept Labs”, animated and static graphics are typically presented alongside text alternatives or descriptive identification.Note: The text equivalents and alternatives are presented on screen but not programmatically determinable due to the technologies employed. Images, icons, or shapes on UI components may not have text equivalents available immediately on screen (except, rather often, upon mouseover hover).**Exceptions:** * “Room Assessment” – This is a visual identification exercise that involves a requirement for vision as a sensory modality in the simulated scenario. While selection of active areas within the scene occasion descriptions in text, the basic changes in scene/perspective via “Change viewing position of room” lack any descriptive identification
* Diagrams in slide-based DCEs – More complex, full-slide diagrams – e.g. “RAAS System Illustrated” depicting the relationships between components within a kidney hormonal system – may comprise static and animated graphics, and geometrical symbols such as arrows indicating direction. Such diagrammatic information may lack sufficient text equivalents/alternatives.
 |
| [1.3.3: Sensory Characteristics](http://www.w3.org/TR/WCAG20/#content-structure-separation-understanding) (A)Do not rely on sensory characteristics of components such as shape, size, visual location, orientation, or sound | Partially supports | There are few instructions or areas of content which rely solely on sensory characteristics.**Exceptions:*** UI components (e.g. arrow buttons) – Tutorial instructions for e.g. arrow buttons to change viewing position may only refer to them by shape and position.
 |
| [1.4.1: Use of Color](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-without-color) (A)Color is not used as the only visual means of conveying info | Partially supports | In most instances, when color is used as a means of conveying information, another visual method is also used to convey the information without color.**Exceptions:*** Data box red text (e.g. “Allergies: ...”) – Red text is distinguished (most text is black) as more important/urgent information, yet only by color.
* Highlighted (incomplete) items during “Final Check” – Items (required inputs that are identified as incomplete) are highlighted in yellow, but may not be sufficiently identified as such in text or via other means, especially in the “Objective Data” pane
* “Table of Content” links in slide-based DCEs – Active (white) and inactive (light grey) links are distinguished only by color
* Answers in quiz activities in slide-based DCEs – Correct/incorrect answers to multiple-choice questions are indicated both by color (red/green background) and explanatory text upon selection, but if multiple attempts are permitted for a single question, previously-selected answers retain the background color change without any other indication of status
* Data box (Electronic Health Record) tabs – Selected tab (grey background) is distinguished from the rest (blue background) only by color; visible text with the same text as the selected tab, e.g. “Labs”, does appear below the tablist area to function as a heading, but does not sufficiently communicate the tab’s selected state without color
 |
| [1.4.3: Color Contrast (Minimum)](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-contrast) (AA)Text has enough contrast with the background (4.5:1 for small text and 3:1 for large text) | Partially supports | Text has sufficient contrast with its corresponding background in most areas.**Exceptions:*** Close buttons (text) – Close buttons (text) for various panes in their hovered state (orange) have insufficient contrast against background (white).
* Show/hide sections in “Interview Guide” – Text of heading/toggle in expanded state, i.e. “Hide…” (orange) does not have sufficient contrast against background (grey)
* Data box “Flowsheets” input areas – Placeholder text/instructions within input-enabled cells (grey) may have insufficient contrast against cell backgrounds (grey)
* Data box red text (e.g. “Allergies: ...”) – Text in data box sections may occasionally be red, which has insufficient contrast against background (white).
* “Final Check” list – “Final Check” expandable list section headings (white) has insufficient contrast against their backgrounds (grey)
* Data box red text (e.g. “Allergies: ...”) – Red text is distinguished (most text is black) as more important/urgent information, yet only by color.
* Answers in quiz activities in slide-based DCEs – Correct answers may be indicated with color – white text over green background – that does not have sufficient contrast
 |
| [1.4.4: Resize Text](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-scale) (AA)Text can be enlarged up to 200% without loss of functionality. | Supports | Content remains functional within DCE canvas with browser zoom at 200% on the Activity page. Operating System zoom settings do not affect full-screen mode. |
| [1.4.5: Images of Text](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-text-presentation) (AA)Text is used rather than images of text, except where the presentation of text is essential, such as logos | Supports (N/A) | The technologies utilized by the simulations do support such a distinction between text and images of text (content is not implemented via markup languages).  |
| [1.4.10 Reflow](https://www.w3.org/TR/WCAG21/#reflow)(AA)Content can be presented without loss of information or functionality, and without requiring scrolling in two dimensions for:Vertical scrolling content at a width equivalent to 320 CSS pixels;Horizontal scrolling content at a height equivalent to 256 CSS pixels. | Does not support | The DCE canvas employs a fixed aspect ratio on the page and does not utilize a responsive view. When the Activity page embedding the DCE canvas is zoomed, accessing functionality or content requires both vertical and horizontal scrolling.Note: The best way to prevent horizontal and vertical scrolling is to activate the “Enable Fullscreen“ checkbox within the Settings menu (gear icon). |
| [1.4.11 Non-Text Contrast (AA](https://www.w3.org/TR/WCAG21/#non-text-contrast))User interact components and graphical objects have a contrast ratio of at least 3:1 against adjacent color(s). | Partially supports | Most non-text UI components and graphical objects have at least a 3:1 contrast ratio.**Exceptions:*** Controls in settings menu – Buttons/controls in settings menu (blue) have insufficient contrast against background (near-black).
* Close “x” buttons – Close buttons, appearing as “x”, for various panes in unhovered state (grey) have insufficient contrast against background (white).
* “Interview Guide” components (Show/hide sections) – Text of heading/toggle in expanded state with minus sign signifying contraction, i.e. “- Hide…” (orange) may not have sufficient contrast against background (grey).
* UI components in 3d simulation area, auscultation mini-map – Various UI components, particularly non-text buttons such as arrows overlaid on 3d simulation area, may exhibit insufficient contrast under certain circumstances.
 |
| [1.4.12 Text Spacing (AA)](https://www.w3.org/TR/WCAG21/#text-spacing)In content implemented using markup languages that support the following text style properties, no loss of content or functionality occurs by setting all the following and by changing no other style property:Line height (line spacing) to at least 1.5 times the font size;Spacing following paragraphs to at least 2 times the font size;Letter spacing (tracking) to at least 0.12 times the font size;Word spacing to at least 0.16 times the font size. | Supports (N/A) | Content is not implemented using markup languages, and text style properties may not be changed. Users are not provided with any alternative option to modify the spacing between characters, lines, and paragraphs. |
| [1.4.13 Content on Hover or Focus (AA)](https://www.w3.org/TR/WCAG21/#content-on-hover-or-focus)Where receiving and then removing pointer hover or keyboard focus triggers additional content to become visible and then hidden, the following are true:* Dismissable
* Hoverable
* Persistent
 | Does not support | Content that appears on hover or focus are not dismissible, hoverable, or persistent according to the criteria.* UI components (e.g. arrow buttons, info and help buttons) – Tooltips that appear on cursor hover are not dismissible without moving cursor position. The tooltips also disappear when cursor hovers over the additional content.
 |
| [2.3.1: Three Flashes or Below Threshold](http://www.w3.org/TR/WCAG20/#seizure-does-not-violate) (A)No more than three flashes in a 1-second period, or the flashes are below the defined thresholds | Supports (N/A) | No flashing content exists. |

### Keyboard – Shadow Health Software (DCE)

|  |  |  |
| --- | --- | --- |
| **WCAG 2.1****Checkpoint** | **Conformance Level** | **Remarks** |
| [1.3.2: Meaningful Sequence](http://www.w3.org/TR/WCAG20/#content-structure-separation-sequence) (A)The correct reading sequence can be programmatically determined | Does not support | The visual order of content as presented appears logical, but a correct reading sequence is not able to be programmatically determined due to the technologies employed (content is not implemented via markup languages). Assistive technology such as screen readers are not able to make sense of any DCE/simulation content. |
| [2.1.1: Keyboard](http://www.w3.org/TR/WCAG20/#keyboard-operation-keyboard-operable) (A)All functionality is available from a keyboard, except for tasks such as drawing | Does not support | DCEs do not support keyboard operability in general.Note: Keyboard functionality is rendered inoperable for entire page upon automatic loading of DCE canvas. Tabbing is limited to the “conversation box”, and only after text input cursor is activated via mouse click. |
| [2.1.2: No Keyboard Trap](http://www.w3.org/TR/WCAG20/#keyboard-operation-trapping) (A)The user can use the keyboard to move through page elements and is not trapped on a particular element | Supports (N/A) | Due to the lack of keyboard functionality in DCEs, keyboard traps are not encountered.Note: As noted under SC 2.1.1, typical keyboard functionality is disabled upon load of DCE canvas. In the event that focus is activated on a “conversation box” text input (upon mouseclick), keyboard users will not be able to tab away from the DCE canvas. |
| [2.1.4 Character Key Shortcuts (A)](https://www.w3.org/TR/WCAG21/#character-key-shortcuts)If a keyboard shortcut is implemented in content using only letter (including upper- and lower-case letters), punctuation, number, or symbol characters, then at least one of the following is true:* Turn off
* Remap
* Active only on focus
 | Supports (N/A) | DCEs do not use any character key shortcuts.  |
| [2.4.3: Focus Order](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-focus-order) (A)Users can tab through the elements of a page in a logical order | Partially supports | Focus order considerations are mostly not applicable due to a general lack of keyboard functionality and unavailability of interactive elements for keyboard operation in DCEs. **Exceptions:*** The only keyboard-operable elements (input fields of the “conversation box”) exhibit a sequential focus order, if severely limited in scope – yet only in one direction upon tabbing. (Note: text input cursor within an input must first be activated via mouse click.)
 |
| [2.4.7: Focus Visible](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-focus-visible) (AA)The page element with the current keyboard focus has a visible focus indicator | Supports | The only keyboard-operable elements in DCEs (input fields of the “conversation box”) have visual indicators of focus (including blinking text input cursors). Note: text input cursor must first be activated via mouse click. |
| [3.2.1: On Focus](http://www.w3.org/TR/WCAG20/#consistent-behavior-receive-focus) (A)When a UI component receives focus, this does not trigger unexpected actions. | Supports | While there are very few focusable elements due to the general lack of keyboard operability, these elements do not cause unexpected actions/changes of context when receiving focus. |

### Headings and Structure – Shadow Health Software (DCE)

|  |  |  |
| --- | --- | --- |
| **WCAG 2.1****Checkpoint** | **Conformance Level** | **Remarks** |
| [1.3.1: Information and Relationships](http://www.w3.org/TR/WCAG20/#content-structure-separation-programmatic) (A)Info, structure, and relationships can be programmatically determined | Partially supports | The technologies employed do not allow for programmatically determinable information and relationships.However, text content is organized visually in a logical manner in general – for example, by using consistent styling for headings within sections, and standard text formatting conventions for lists (bullets to denote unordered list items). Text descriptions are used to clarify information and relationships in some instances. For example, the tracking of checkpoints within the “Interview Guide” is indicated by both a checkmark icon next to a completed goal, and a text description of the tally of completed goals for the entire exercise (e.g. “2 of 34”), and per section (e.g. “1 of 4”).Exceptions:* Header cells in “data box” sections tables – First rows are not identified clearly as header rows, with no text description nor much other visual distinction from the rest of the table apart from subtle text formatting (bold) and the positioning of scrollbars/buttons
 |
| [2.4.1: Bypass Blocks](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-skip) (A)Users can bypass repeated blocks of content. | Supports (N/A) | DCEs are not a set of web pages, so a mechanism to bypass repeated blocks of content is not applicable. |
| [2.4.6: Headings and Labels](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-descriptive) (AA) Headings and labels are clear and consistent. | Supports | Headings and labels used are clear and descriptive.For example, the sub-menus of individual options within the “Exam Menu” reflect the appropriate headings when selected; headings in the “data box” (Electronic Health Record) area, e.g. for information within “Patient Details”, are clear and concise. Slide-based DCEs such as “Concept Labs” have a clear and relevant heading for each slide. |
| [3.1.1: Language of Page](http://www.w3.org/TR/WCAG20/#meaning-doc-lang-id) (A)The language of the page is specified | Supports (N/A) | The technologies employed do not allow for language to be specified or programmatically determined. |
| [3.1.2: Language of Parts](http://www.w3.org/TR/WCAG20/#meaning-other-lang-id) (AA)Specify the language of text passages that are in a different language than the default language of the page. | Supports (N/A) | The technologies employed do not allow for language to be specified or programmatically determined; there are additionally no sections of text that do not match the default language. |
| [4.1.1: Parsing](http://www.w3.org/TR/WCAG20/#ensure-compat-parses) (A)Use valid, error-free HTML | Supports (N/A) | DCE content is not implemented via an applicable markup language. |

### Labeling – Shadow Health Software (DCE)

|  |  |  |
| --- | --- | --- |
| **WCAG 2.1****Checkpoint** | **Conformance Level** | **Remarks** |
| [1.3.5 Identify Input Purpose (AA)](https://www.w3.org/TR/WCAG21/#identify-input-purpose)The purpose of each input field collecting information about the user can be programmatically determined when:The input field serves a purpose identified in the Input Purposes for User Interface Components section; and the content is implemented using technologies with support for identifying the expected meaning for form input data. | Supports (N/A) | No applicable form elements that collect information about the user are used in DCEs. |
| [2.4.2: Page Titled](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-title) (A)The page has a title describing its topic or purpose | Supports (N/A) | The interactive simulation content and technologies employed do not support a page/document title analogous to that of web pages. |
| [2.4.4: Link Purpose (In Context)](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-refs) (A)The purpose of each link can be determined from the link text or surrounding context. | Supports | DCEs are discrete applications/simulations rather than a set of pages or documents, so references/actions analogous to hyperlinks are uncommon. However, each element akin to a link has an identifiable purpose from the link text or surrounding context.For example, each button/link within a “data box” (Electronic Health Record) sub-section, such as “Labs” or “Flowsheets”, contains the title of the pane it leads to, e.g. “Complete Metabolic Panel (CMP)”. In slide-based DCEs such as “Concept Labs”, links within the “Table of Contents” contain the titles of the previously-reviewed slides they lead to. |
| [2.5.3 Label in Name](https://www.w3.org/TR/WCAG21/#label-in-name) (A)For user interface components with labels that include text or images of text, the name contains the text that is presented visually. | Supports (N/A) | The technologies employed do not allow for programmatically determinable accessible names for UI components. Consequentially, and in conjunction with the lack of keyboard operability, these components are typically not usable with assistive technology. |
| [3.2.4: Consistent Identification](http://www.w3.org/TR/WCAG20/#consistent-behavior-consistent-functionality) (AA)UI components used across the web site are identified consistently on every page. | Supports | While DCEs are not a set of web pages or analogous to on, UI components are consistent within a DCE and across DCE – and identified consistently (visually/in text) where they perform the same function.For example, menu items/buttons within the “Exam Menu” and “data box” (Electronic Health Record) areas are consistently labelled. |
| [3.3.1: Error Identification](http://www.w3.org/TR/WCAG20/#minimize-error-identified) (A)Input errors are clearly marked and described to the user. | Supports | While most DCE content is a component of a complex assessment or test exercise not germane to immediate validation/feedback, where relevant, errors are identified upon form submission (most significantly at the point of final submission that may conclude the assignment) and presented to users in text.For example, incomplete forms at the point of final submission will occasion an error message/state – the incomplete items are reproduced and further indicated via yellow highlighting on a “Final Check” review pane. Such errors are indicated without revealing the correct answers to specific questions, since the submission constitutes a test attempt, nor information about which questions should be responded to. Dialogic interactions with virtual patients (via text input into the “conversation box”) may also occasion a “No matching questions found” notice upon invalid entry. In slide-based DCEs, the incorrect selection of an answer for multiple-choice questions may reveal an error message including an (educational) explanation.Note: Error states are not programmatically communicated to AT, nor is focus management used for convenient error indication, due to the technologies employed.  |
| [3.3.2: Labels and Instructions](http://www.w3.org/TR/WCAG20/#minimize-error-cues) (A)Items requiring user input are clearly labeled or have clear instructions. | Partially supports | Labels or instructions are provided for most form elements, logically located in close proximity. The technologies employed do not allow for labels to be programmatically associated with their inputs. **Exceptions:** * “Conversation box” text input – Dialogic communication with a virtual patient via the “conversation box” may have a word minimum for valid input submission that is not sufficiently labeled or indicated, except for the inactive state of the Submit button and a tooltip error message upon Return key submission
 |
| [3.3.3: Error Suggestion](http://www.w3.org/TR/WCAG20/#minimize-error-suggestions) (AA)When the user makes an input error, give suggestions for valid input. | Supports | While most DCE content is a component of a complex assessment or test exercise not germane to immediate validation/feedback, where relevant, error validation in some areas occurs dynamically during user input or upon input submission.For example, during dialogic communication with a virtual patient, suggestions are presented for input errors. Misspelled words are validated dynamically and underlined, and several suggestions for correctly spelled words are presented via selectable menu. Upon submission, slightly invalid (thematically similar) input may occasion a selectable menu presenting valid options/sentences. In slide-based DCEs, the incorrect selection of an answer for multiple-choice questions may reveal an error message including an (educational) explanation that hints at the correct answer. |
| [4.1.2: Name, Role, Value](http://www.w3.org/TR/WCAG20/#ensure-compat-rsv) (A)For all UI components, the name, value, and role can be programmatically determined. | Does not support | The technologies employed do not allow for the name, role, and value of UI components to be specified or communicated in programmatically determinable ways. Consequentially, and in conjunction with the lack of keyboard operability, these components are typically not usable by assistive technology. |
| [4.1.3 Status Messages](https://www.w3.org/TR/WCAG21/#status-messages) (AA)In content implemented using markup languages, status messages can be programmatically determined through role or properties such that they can be presented to the user by assistive technologies without receiving focus. | Supports (N/A) | Status/dynamic messages are presented on screen occasionally – for example upon completion of a checkpoint in the “Interview Guide” – however DCE content is not implemented via an applicable markup language that enables them to be programmatically determined (i.e. communicated to assistive technology). The state of application within the DCE canvas itself, for example in loading states such as “Please wait”, “Connecting to servers”, etc. is similarly presented visually but not communicated to AT. |

### Multimedia – Shadow Health Software (DCE)

|  |  |  |
| --- | --- | --- |
| **WCAG 2.1****Checkpoint** | **Conformance Level** | **Remarks** |
| [1.2.1: Audio-only or Video-only (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-av-only-alt) (A)Provide alternatives for pre-recorded audio-only or video-only content. | Supports (N/A) | There is no prerecorded audio-only or video-only content. |
| [1.2.2: Captions (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-captions) (A)Provide captions for pre-recorded audio | Supports | Interactive 3d simulations typically include prerecorded audio content. A form of synchronized captioning for the spoken dialog of virtual patients during assessment/interview activities is provided within the dynamically updating “Transcript” area in DCEs. During the initial orientation phase of DCEs, audio narration may itself be considered an alternative for the text presented on screen (representing preceptors’ instructions), although there is no synchronized indicator.Note: Any captioning is not available to assistive technology.  |
| [1.2.3: Audio Description or Media Alternative (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-audio-desc) (A)Provide alternatives for pre-recorded synchronized audio/video | Does not support | Animated 3d simulation content – for example during the representation of actions or perspectival movement/scene changes – is not sufficiently accompanied by audio description or descriptive transcripts. Narration in available audio does not properly constitute audio description. Non-specific scene descriptions may occasionally be presented in the form of text dialogs or within the dynamically updating “Transcript” area, but they are not available to assistive technology. |
| [1.2.4: Captions (Live)](http://www.w3.org/TR/WCAG20/#media-equiv-real-time-captions) (AA)Provide captions for live audio in synchronized audio/video. | Supports (N/A) | There is no live audio in synchronized audio/video. |
| [1.2.5: Audio Description (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-audio-desc-only) (AA)Provide an audio description of pre-recorded video. | Does not support | Animated 3d simulation content – for example during the representation of actions or perspectival/scene changes – is not accompanied by audio description; narration in available audio does not properly constitute audio description. |
| [1.4.2: Audio Control](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-dis-audio) (A)Audio can be paused and stopped, or the audio volume can be changed. | Supports | DCEs may have audio that plays automatically, for example narration during the initial orientation phase. Functionality is sometimes provided to pause/stop the audio via a button, and volume control is always available from the settings menu. |
| [2.2.2: Pause, Stop, Hide](http://www.w3.org/TR/WCAG20/#time-limits-pause) (A)Users can stop, pause, or hide moving, blinking, scrolling, or auto-updating information. | Partially supports | While functionality to pause, stop, or hide is not typically present in DCEs, almost all animated content and information in DCEs may be considered essential.For example, user interaction is not permitted during loading animations, so they provide a useful indication of progress. Animations of characters and environments in the 3d simulations are typically direct and brief (e.g. scene/perspective changes lasting less than five seconds, representations of actions initiated by users), or subtle and sustained (the nominal movements of resting/breathing). In either case they provide information essential to the simulations’ educational content relating to the physical environments and circumstances they are meant to represent.**Exceptions:*** "Start!" button to initiate DCE – The button has a persistent automatic bouncing zoom in/out animation until activation
* Animated graphics in in slide-based DCEs – Animated graphics e.g. of the motion of organs may be continuous, with no available mechanism to pause/stop/hide
* Arrow indicators, buttons during DCE orientation – Pointer arrows (moving) and buttons (blinking) indicating next steps may be persistently animated during guided processes
 |

### Usability – Shadow Health Software (DCE)

|  |  |  |
| --- | --- | --- |
| **WCAG 2.1****Checkpoint** | **Conformance Level** | **Remarks** |
| [2.2.1: Timing Adjustable](http://www.w3.org/TR/WCAG20/#time-limits-required-behaviors) (A)Users are warned of time limits shorter than 20 hours and time limits can be turned off or extended | Supports | Users are shown a notification message that the session is “Paused” after several minutes if DCE is in the background, or a notification message to “Take a break” if inactivity in any state persists for one hour. In either case the session state/progress is automatically saved, there is no time limit to respond, and the user is presented with the option to Resume by activating a button. There is no definitive session timeout, or it is longer than 20 hours.  |
| [2.4.5: Multiple Ways](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-mult-loc) (AA)More than one way is available to navigate to other web pages. | Supports | DCE content is neither a set of web pages nor analogous to one – the constituent interactivity and simulation content within a DCE typically align to its educational process/objective. In slide-based DCEs such as “Concept Labs”, the “Table of Contents” provides an overview, with links back to previously reviewed slides. |
| [3.2.2: On Input](http://www.w3.org/TR/WCAG20/#consistent-behavior-unpredictable-change) (A) Changing the setting of a checkbox, radio button, or other UI component does not trigger unexpected changes in context. | Supports | User input does not initiate unexpected actions or changes in context.For example, the “conversation box” does not unexpectedly submit upon user input, only upon the Return key or activation of the Submit button.Note: Automatic submission of speech-to-text is a toggleable option, defaulting to disabled. |
| [3.2.3: Consistent Navigation](http://www.w3.org/TR/WCAG20/#consistent-behavior-consistent-locations) (AA)Navigation menus are in the same location and order on every web page. | Supports | Navigation menus are consistent within a DCE, and generally across DCEs.For example, during patient assessment activities: the “data box” containing the Electronic Health Record is always located on the right (with buttons for its subsections predictably located toward the top-right); the “Exam Menu” with its menu is always located towards the top-left; the “Interview Guide” expandable menu is always located directly above the text input “conversation box”. |
| [3.3.4: Error Prevention (Legal, Financial, Data)](http://www.w3.org/TR/WCAG20/#minimize-error-reversible) (AA)For web pages with legal or financial commitments, input can be reviewed and corrected before final submission, and submissions can be reverted. | Supports (N/A) | There are no submissions which require legal or financial commitments.  |

### Mobile User Experience – Shadow Health Software (DCE)

|  |  |  |
| --- | --- | --- |
| **WCAG 2.1****Checkpoint** | **Conformance Level** | **Remarks** |
| [1.3.4 Orientation](https://www.w3.org/TR/WCAG21/#orientation)(AA) Content does not restrict its view and operation to a single display orientation, such as portrait or landscape, unless a specific display orientation is essential. | Supports | The Activity pages containing the DCE canvas do not restrict view and operation of content to a single display orientation, even while DCEs are running. DCEs assume landscape orientation for their simulation content (generally meant to imitate human field of view/scale), but do not restrict display orientation even while in full-screen mode, although there may be unfamiliar positioning/alignment of components or content.Note: Shadow Health considers mobile devices (phones and tablets) unsupported platforms for DCEs: see [DCE Minimum System Specifications](https://service.elsevier.com/app/answers/detail/a_id/34674/supporthub/shadow-health/). |
| [2.5.1 Pointer Gestures](https://www.w3.org/TR/WCAG21/#pointer-gestures) (A) All functionality that uses multipoint or path-based gestures for operation can be operated with a single pointer without a path-based gesture, unless a multipoint or path-based gesture is essential. | Supports (N/A) | Pages do not utilize or require multipoint or path-based gestures for any functionality. |
| [2.5.2 Pointer Cancellation (A)](https://www.w3.org/TR/WCAG21/#pointer-cancellation)For functionality that can be operated using a single pointer, at least one of the following is true:* No Down-Event
* Abort or Undo
* Up Reversal
* Essential
 | Supports | All interactive content functions through the Up-Event, allowing users to potentially move their pointer off the component to cancel.Note: the built-in Screen Reader in slide-based DCEs is activated upon the Down-Event (right mouseclick). |
| [2.5.4 Motion Actuation (A)](https://www.w3.org/TR/WCAG21/#motion-actuation)Functionality that can be operated by device motion or user motion can also be operated by user interface components and responding to the motion can be disabled to prevent accidental actuation, except when:* Supported Interface
* Essential
 | Supports (N/A) | There is no content that utilizes device or user motion. |

## Revised Section 508 Report

### Chapter 3: [Functional Performance Criteria](https://www.access-board.gov/ict/#chapter-3-functional-performance-criteria) (FPC)

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Conformance Level** | **Remarks** |
| 302.1 Without Vision | Does not support | Web: User interface and content are largely compatible with screen readers, with meaningful semantic structure and consistency across many areas. Videos are closed captioned but lack audio descriptions.Software (DCE): User interface and content are not compatible with screen readers. The DCE canvas does not support keyboard operability and components and contents are not programmatically determinable. During the initial orientation phase of 3d simulations, text presented visually is typically accompanied by automatic narration; conversely, during assessment exercises (that may require a specific sensory modality), non-specific text descriptions are not available to AT. In general, simulations neither provide audio descriptions nor descriptive transcripts in text that are available to AT. Slide-based DCEs have built-in Screen Reader functionality, toggled from the Settings menu, that can narrate text content presented visually on each slide – although activation is dependent on mouse cursor, control over reading is limited, and navigation is not supported. |
| 302.2 With Limited Vision | Partially supports | Web: Style sheets separate presentation from content. Personal style sheets and Operating System contrast can be applied. Browser zoom (content and functionality preserved at 200%) and Screen magnification applications are supported. Pages do not have a responsive design and may require horizontal scrolling at higher browser zoom levels. Software (DCE): Presentation is not separated from content, and personal styles and preferences may not be applied. No built-in zoom or text-size enlargement functionality, but the canvas is expandable to full-screen. Screen magnification applications are supported. Animated 3d simulation content may represent visual information (often part of assessment exercises) that have non-specific scene descriptions presented as text on screen. User interface and content are not compatible with screen readers. |
| 302.3 Without Perception of Color | Partially supports | Web: Perception of color is not required to use almost all content – where color is involved, another visual method is utilized to clearly convey the same information. There are a few exceptions of text/components with insufficient color contrast.Software (DCE): Perception of color is not required to use most content, although there are exceptions where color is used as the sole means of conveying information and certain text/components with insufficient color contrast. 3d simulation content (in the form of assessment exercises) may require color perception to distinguish and interpret represented phenomena – such scenes may be accompanied by non-specific text descriptions presented on screen. |
| 302.4 Without Hearing | Partially supports | Web: Closed captions are provided for video content via the embedded video player on tutorial Assignment pages.Software (DCE): Content may include assessment exercises such as simulated auscultation procedures that require the sense of hearing to distinguish and interpret auditory phenomena. For example, the respiratory exam simulates breath sounds as heard through a stethoscope. Such audio may be accompanied by non-specific text descriptions presented on screen. |
| 302.5 With Limited Hearing  | Supports | Web: Independent volume control is provided in the embedded video player on tutorial Assignment pages. Closed captions are also provided for this video content.Software (DCE): Independent volume control functionality is provided via the Settings menu. Content may include assessment exercises such as simulated auscultation procedures that require the sense of hearing to distinguish and interpret auditory phenomena. For example, the respiratory exam simulates breath sounds as heard through a stethoscope. Such audio may be accompanied by non-specific text descriptions presented on screen. |
| 302.6 Without Speech | Supports | Web: There is no content that requires speech input.Software (DCE): Speech-to-text functionality may be utilized for input, but is not required. |
| 302.7 With Limited Manipulation  | Partially supports | Web: Visible labels are provided for most form elements for ease of selection. Content and interface are largely amenable to simple, standard keyboard operation. Most elements have logical and consistent accessible names, and may be operated via speech input.Software (DCE): Visible labels are provided for many form elements for ease of selection. Lack of support for keyboard operability in general means that the use of a pointing device (i.e. mouse) is required. Some simulation activities such as “Respiratory Percussion” require users to click small targets on a miniature body map as part of an examination procedure. |
| 302.8 With Limited Reach and Strength | Supports | Does not apply. |
| 302.9 With Limited Language, Cognitive, and Learning Abilities | Does not support | Web: Brief description of Activities are provided within each Assignment. No specific modes of content, presentation, or interactivity are provided for individuals with limited cognitive, language and learning abilities.Software (DCE): Most content is a component of an assessment, presentation, or other educational exercise for specialist vocations. Much simulated spoken dialogue is the narration of displayed text, or presented via dynamic transcripts. No specific modes of content, presentation, or interactivity are provided for individuals with limited cognitive, language and learning abilities. |

### Chapter 5: [Software](https://www.access-board.gov/ict/#chapter-5-software)

Applicable to Digital Clinical Experiences (DCEs).

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Conformance Level** | **Remarks** |
| **501.1 Scope – Incorporation of WCAG 2.0 AA** | See [WCAG 2.x section](#_Software_(DCE):_WCAG) | See information in WCAG 2.x section |
| [502 Interoperability with Assistive Technology](https://www.access-board.gov/ict/#502-interoperability-assistive-technology) | Heading cell – no response required | Heading cell – no response required |
| 502.2.1 User Control of Accessibility Features | N/A | DCEs are not platform software. |
| 502.2.2 No Disruption of Accessibility Features | Supports | DCEs do not disrupt platform accessibility features, e.g. keyboard commands for Operating System accessibility options such as the Windows Magnifier. |
| 502.3 Accessibility Services | Heading cell – no response required | Heading cell – no response required |
| 502.3.1 Object Information | Does not support | Information and relationships – and the name, role, value of components – are typically not programmatically determinable (available to assistive technology). |
| 502.3.2 Modification of Object Information | Does not support | The name, role, and state of UI components are typically unable to be specified or communicated in programmatically determinable ways. Most components are not keyboard operable. |
| 502.3.3 Row, Column, and Headers | Does not support | The semantic structures of tables are not programmatically determinable. |
| 502.3.4 Values | Does not support | The values of components (e.g. radio buttons, checkboxes) are not programmatically determinable. |
| 502.3.5 Modification of Values | Does not support | The values of components (e.g. radio buttons, checkboxes) are not programmatically determinable are not programmatically determinable; the use of much AT to manipulate values is typically not possible due to lack of keyboard operability in general. |
| 502.3.6 Label Relationships | Does not support | Label relationships are not present or programmatically determinable. |
| 502.3.7 Hierarchical Relationships | Does not support | Hierarchical relationships as implied visually are not programmatically determinable. |
| 502.3.8 Text | Does not support | Visible text content is typically not programmatically determinable and unable to be read by screen readers. |
| 502.3.9 Modification of Text | Supports | Text inputs within the “conversation box” and certain areas within the “data box” (Electronic Health Record) may be edited while operating AT such as a screen reader. Note: input labels are not programmatically determinable, and inputs require initial text input cursor activation via mouse click. |
| 502.3.10 List of Actions | Does not support | Roles, names, and values/states of components are not programmatically determinable.  |
| 502.3.11 Actions on Objects | Does not support | Roles, names, and values/states of components are not programmatically determinable; the use of much AT to execute actions is not possible due to lack of keyboard operability in general. |
| 502.3.12 Focus Cursor | Partially supports | DCEs lack keyboard operability in general, however, text insertion point is indicated within the “conversation box” and certain area within the “data box” (Electronic Health Record) – only after text input cursor is activated via mouse click. Tab focus is largely inoperable/not tracked – tabbing with a visible focus is possible only within the mode options of the “conversation box”. |
| 502.3.13 Modification of Focus Cursor | Does not support | Programmatic access to focus, text insertion point, or selection attributes is not possible. |
| 502.3.14 Event Notification | Does not support | Dynamically updating content is not programmatically communicated, and so not announced by AT. |
| 502.4 Platform Accessibility Features | N/A | DCEs are not platform software. |
| [503 Applications](https://www.access-board.gov/ict/#503-applications) | Heading cell – no response required | Heading cell – no response required |
| 503.2 User Preferences | N/A | DCEs are web applications and designed to be isolated from the underlying platform software. |
| 503.3 Alternative User Interfaces | Partially supports | The built-in Screen Reader in slide-based DCEs utilizes web and platform technologies, but operation method differs and is greatly limited in capability from Operating System or standard accessibility services. |
| 503.4 User Controls for Captions and Audio Description | Heading cell – no response required | Heading cell – no response required |
| 503.4.1 Caption Controls | Does not support | A form of captioning for the spoken dialog of virtual patients during assessment/interview activities is provided within the dynamically updating “Transcript” area in DCEs, rather than as standard closed captions from a program selection – it may not be deactivated. Conversely, DCE volume control is conveniently provided via the Settings menu. |
| 503.4.2 Audio Description Controls | N/A | Audio description tracks are not provided. |

### Chapter 6: [Support Documentation and Services](https://www.access-board.gov/ict/#chapter-6-support-documentation-and-services)

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Conformance Level** | **Remarks** |
| 601.1 Scope | Heading cell – no response required | Heading cell – no response required |
| [602 Support Documentation](https://www.access-board.gov/ict/#602-support-documentation) | Heading cell – no response required | Heading cell – no response required |
| 602.2 Accessibility and Compatibility Features | Supports | Details on accessibility and compatibility features are found on articles within the [Shadow Health Support Center](https://service.elsevier.com/app/home/supporthub/shadow-health/) such as [Accessibility Standards](https://service.elsevier.com/app/answers/detail/a_id/34675/supporthub/shadow-health/), [Frequently Asked Questions by Customer IT and Legal Departments](https://service.elsevier.com/app/answers/detail/a_id/34713/supporthub/shadow-health/), and [Using Speech to Text](https://service.elsevier.com/app/answers/detail/a_id/34682/supporthub/shadow-health/). This document (VPAT) provides additional details on the accessibility and compatibility features of Shadow Health. |
| 602.3 Electronic Support Documentation | See [WCAG 2.x section](#_602.3_Electronic_Support) | See information in WCAG 2.x section |
| 602.4 Alternate Formats for Non-Electronic Support Documentation | Supports | Support documentation as provided via the Shadow Health Support Center is primarily in an electronic format, in the form of searchable HTML pages (articles). (Support is additionally provided via email, chat, and phone options.) Please contact accessibility@elsevier.com to request alternate formats for support documentation, or for any questions on accessibility or assistive technology compatibility features in Shadow Health. |
| [603 Support Services](https://www.access-board.gov/ict/#603-support-services) | Heading cell – no response required | Heading cell – no response required |
| 603.2 Information on Accessibility and Compatibility Features | Supports | This document (VPAT) provides details on the accessibility and compatibility features of Shadow Health. Details on accessibility and compatibility features are also found on articles within the [Shadow Health Support Center](https://service.elsevier.com/app/home/supporthub/shadow-health/) such as [Accessibility Standards](https://service.elsevier.com/app/answers/detail/a_id/34675/supporthub/shadow-health/), [Frequently Asked Questions by Customer IT and Legal Departments](https://service.elsevier.com/app/answers/detail/a_id/34713/supporthub/shadow-health/), and [Using Speech to Text](https://service.elsevier.com/app/answers/detail/a_id/34682/supporthub/shadow-health/). Support channels (via email, chat, or phone) can also provide additional information on accessibility and compatibility features. Please contact accessibility@elsevier.com for further questions on accessibility or assistive technology compatibility features in Shadow Health. |
| 603.3 Accommodation of Communication Needs | Supports | Users may contact the Shadow Health support team via:* [Email (web form)](https://service.elsevier.com/app/contact/supporthub/shadow-health/)
* [Chat (web interface)](https://service.elsevier.com/app/chat/chat_launch/supporthub/shadow-health/)
* [Phone](https://service.elsevier.com/app/phone/supporthub/shadow-health/): +1 800 222 9570 (toll free for US & Canada)

Support documentation is available via the [Shadow Health Support Center](https://service.elsevier.com/app/home/supporthub/shadow-health/). Please contact accessibility@elsevier.com for further questions on accessibility or assistive technology compatibility features in Shadow Health. |

#### 602.3 Electronic Support Documentation

Conformance Summary: [Shadow Health Support Center](https://service.elsevier.com/app/home/supporthub/shadow-health/)

| **WCAG 2.1 Success Criterion**  | **Level** | **Evaluation** | **Remarks** |
| --- | --- | --- | --- |
| 1.1.1: Non-text Content | A | Partially supports | Several images may have generic alt text |
| 1.2.1: Audio-only and Video-only (Prerecorded) | A | Supports (N/A) | No audio-only/video-only content |
| 1.2.2: Captions (Prerecorded) | A | Partially supports | Several video tutorials lack captioning |
| 1.2.3: Audio Description or Full Text Alternative | A | Does not support | Text alternatives for video tutorials may not be sufficiently descriptive |
| 1.2.4: Captions (Live) | AA | Supports (N/A) | No live video |
| 1.2.5: Audio Description | AA | Does not support | Video tutorials do not have audio descriptions |
| 1.3.1: Info and Relationships | A | Partially supports | Some pages lack <h1>. Tables may lack headers. Contact form selection fields may lack association with their labels. |
| 1.3.2: Meaningful Sequence | A | Partially supports | Reading sequence is mostly logical for AT. “Most viewed answers” section in Email contact form occurs unexpectedly between form fields and Submit button. |
| 1.3.3: Sensory Characteristics | A | Supports | No content relies on sensory characteristics |
| 1.3.4 Orientation (2.1) | AA | Supports | Not restricted to a single orientation |
| 1.3.5 Identify Input Purpose (2.1) | AA | Supports | Contact form provides autocomplete attributes for relevant personal information fields |
| 1.4.1: Use of Color | A | Supports | Color is not used as the only visual means of conveying information. |
| 1.4.2: Audio Control | A | Supports (N/A) | No auto-playing audio |
| 1.4.3: Contrast (Minimum) | AA | Partially supports | Almost all text meets contrast requirements. Search field visible label (placeholder) and orange numbered list may lack sufficient contrast. |
| 1.4.4: Resize text | AA | Supports | Usable at 200% zoom |
| 1.4.5: Images of Text | AA | Supports | No images of text |
| 1.4.10 Reflow (2.1) | AA | Supports | Responsive design presents content in a single column at 400% zoom |
| 1.4.11 Non-Text Contrast (2.1) | AA | Partially supports | Almost all components meet contrast requirements. One instance of external link icon with insufficient contrast. |
| 1.4.12 Text Spacing (2.1) | AA | Supports | No issues when minimum text spacing styles are applied |
| 1.4.13 Content on Hover or Focus (2.1) | AA | Supports (N/A) | No content appears on cover/focus |
| 2.1.1: Keyboard | A | Supports | All interactive elements are keyboard operable |
| 2.1.2: No Keyboard Trap | A | Supports | No keyboard trap |
| 2.1.4 Character Key Shortcuts (2.1) | A | Supports (N/A) | No character key shortcuts |
| 2.2.1: Timing Adjustable | A | Supports (N/A) | No session timeout |
| 2.2.2: Pause, Stop, Hide | A | Supports (N/A) | No auto-playing media |
| 2.3.1: Three Flashes or Below Threshold | A | Supports (N/A) | No flashing content |
| 2.4.1: Bypass Blocks | A | Supports | Skip links to search and main; pages have landmarks |
| 2.4.2: Page Titled | A | Supports | Pages have descriptive titles |
| 2.4.3: Focus Order | A | Partially supports | Logical focus order across most content. Toggling expansion in “Most viewed answers” in the Email contact form moves focus back to the start of the form. |
| 2.4.4: Link Purpose (In Context) | A | Partially supports | The purpose of most links can be determined. Link text within support articles may occasionally be generic/vague.  |
| 2.4.5: Multiple Ways | AA | Supports | Content may be located via browse, search, category indexes, ‘Related Articles’ |
| 2.4.6: Headings and Labels | AA | Supports | Headings and labels are descriptive and consistent |
| 2.4.7: Focus Visible | AA | Partially supports | Most links and components have good visible focus indicators. Contact form “Your role” radio buttons do not receive an initial visible focus. |
| 2.5.1 Pointer Gestures (2.1) | A | Supports (N/A) | No complex pointer gestures required |
| 2.5.2 Pointer Cancellation (2.1) | A | Supports | Interactivity allows for cancellation |
| 2.5.3 Label in Name (2.1) | A | Supports | The accessible names of components  |
| 2.5.4 Motion Actuation (2.1) | A | Supports (N/A) | No functionality responds to device motion |
| 3.1.1: Language of Page | A | Supports | Page language defined as en-GB |
| 3.1.2: Language of Parts | AA | Supports (N/A) | All page content matches default |
| 3.2.1: On Focus | A | Supports | No instances of unexpected actions on focus |
| 3.2.2: On Input | A | Partially supports | Most components do not unexpectedly change context. Selecting next “Role” radio button in Search immediately changes search filter.  |
| 3.2.3: Consistent Navigation | AA | Supports | Navigation, search, ‘Related Articles’/’Recently Viewed’ sections are consistent across pages |
| 3.2.4: Consistent Identification | AA | Supports | Components with same functionality are identified consistently |
| 3.3.1: Error Identification | A | Supports | Contact form error message summary is clearly indicated and announced by AT; errors are associated with inputs |
| 3.3.2: Labels or Instructions | A | Supports | Labels and instructions are provided for forms, most of which are programmatically associated. |
| 3.3.3: Error Suggestion | AA | Supports | Incomplete/invalid fields are identified in contact form, along with suggestions for valid input |
| 3.3.4: Error Prevention (Legal, Financial, Data) | AA | Supports (N/A) | No submission requires legal or financial commitments |
| 4.1.1: Parsing | A | Supports | No duplicate IDs or other parsing errors |
| 4.1.2: Name, Role, Value | A | Supports | Components communicate state programmatically. |
| 4.1.3 Status Messages (2.1) | AA | Supports | Contact form error message summary is announced by AT |