VPAT Accessibility Conformance Report

(Based on ITI VPAT©)

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| **Name of Product** | **ClinicalKey Student Assessment (CKSA)** |
| **Date Last Updated** | **July 8th, 2024** |
| Completed by | Madison Russell (Digital Accessibility Team) |
| **Applicable Standards/Guidelines** | This document rates Clinical Key Student Assessment according to the W3C WCAG 2.1 A and AA requirements. |
| **Contact for More Information** | Elsevier Digital Accessibility Team [accessibility@elsevier.com](mailto:accessibility@elsevier.com?subject=Accessibility%20and%20ScienceDirect) |
| **Testing Tools and Methods** | **Hands-on keyboard operation Firebug/Code inspection JAWS 17 on Chrome V 108 on Windows 10 NVDA screen reader v2022.1 Wave Extension aXe Extension for Chrome**  **Color Contrast Analyzer W3C WAI Pages** Elsevier Accessibility Checklist: <http://romeo.elsevier.com/accessibility_checklist/> |
| **Document Sections** | The review document below includes all WCAG 2.1 A and AA checkpoints and is organized into 6 logical sections:   * Visuals * Keyboard * Headings and Structure * Labeling * Multimedia * Usability |
| **Pages Covered** | Home, Create a Test, Share Feedback, Test, Results, Previous Tests, Performance |
| **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.** |

| **WCAG 2.1 Success Criterion** | **Level** | **Evaluation** |
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| 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 (N/A) |
| 1.2.3 Audio Description or Full Text Alternative | A | Supports (N/A) |
| 1.2.4 Captions (Live) | AA | Supports (N/A) |
| 1.2.5 Audio Description | AA | Supports (N/A) |
| 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 | Supports |
| 1.4.1 Use of Color | A | Partially supports |
| 1.4.2 Audio Control | A | Supports (N/A) |
| 1.4.3 Contrast (Minimum) | AA | Partially supports |
| 1.4.4 Resize text | AA | Does Not Support |
| 1.4.5 Images of Text | AA | Supports |
| 1.4.10 Reflow (2.1) | AA | Partially supports |
| 1.4.11 Non-Text Contrast (2.1) | AA | Partially supports |
| 1.4.12 Text Spacing (2.1) | AA | Partially supports |
| 1.4.13 Content on Hover or Focus (2.1) | AA | Supports |
| 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 |
| 2.2.2 Pause, Stop, Hide | A | Supports |
| 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 | Partially supports |
| 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 |
| 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 | Partially supports |
| 3.2.4 Consistent Identification | AA | Supports |
| 3.3.1 Error Identification | A | Supports (N/A) |
| 3.3.2 Labels or Instructions | A | 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 |
| 4.1.2 Name, Role, Value | A | Partially supports |
| 4.1.3 Status Messages (2.1) | AA | Partially supports |

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| **Visuals** | | |
| **WCAG 2.1**  **Checkpoint** | **Supporting Features** | **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 | ClinicalKey Student Assessment non-text content mostly contains text alternatives  **Exceptions:**  Test: some images’ alt text are file names |
| [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 | Instructions provided for understanding and operating content do not rely solely on sensory characteristics of components such as shape, size, visual location, orientation, or sound. |
| [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 | Most content on CKSA does not use color only to convey meaning.  **Exceptions:**  Global: blue color only is used to indicate links  Test: Color only used to indicate the correct answer (highlighted in green with no additional text indicating it is correct) |
| [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 | Most text within CKSA has a color contrast of at least 4.5:1.  **Exceptions:**  Share Feedback: Placeholder text has a contrast ratio of 2.8:1  Test: Question feedback placeholder text has a contrast ratio of 2.8:1, top navigation orange color text has a contrast ratio of 3.1:1, incorrect text in night mode has a contrast ratio of 2.6:1  Results: “You just completed a test” modal placeholder text has a contrast ratio of 2.8:1 |
| [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. | Does Not Support | Global: zooming and scaling is disabled  Home: Resizing text obscures “Create a Test” button |
| [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 | CKSA pages do not contain images of text. |
| [1.4.10 Reflow](https://www.w3.org/TR/WCAG21/#reflow) (AA) (2.1) 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. | Partially supports | Most content can be presented without loss of information when magnified.  **Exceptions:**  Test: Questions and answers overlap and are obscured when zoomed in  Results: Questions and Where to Focus are obscured when zoomed in |
| [1.4.11 Non-Text Contrast](https://www.w3.org/TR/WCAG21/#non-text-contrast) (AA)  (2.1) User interact components and graphical objects have a contrast ratio of at least 3:1 against adjacent color(s). | Partially supports | Overall CKSA provides good contrast between graphical objects and backgrounds.  **Exceptions:**  Home: “incorrect” color has a contrast ratio of 2.8:1, “correct” color has a contrast ratio of 1.9:1, “unanswered” color has a contrast ratio of 1.6:1, after hovering “Create a Test” link text turns orange and has a contrast ratio of 1.6:1  Share Feedback: Text area border has a contrast ratio of 1.4:1  Test: Question feedback input border has a contrast ratio of 1.4:1, green color used to indicate the correct answer has a contrast ratio of 1:1 in night mode  Results: “You just completed a test” modal input border has a contrast ratio of 1.4:1 |
| [1.4.12 Text Spacing](https://www.w3.org/TR/WCAG21/#text-spacing) (AA)  (2.1)  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. | Partially supports | Most text-based CSS settings within CKSA can be changed to certain minimum values without loss of content or functionality.  **Exceptions:**  Home: “Create a Test” is partially obscured when changed to minimum values  Test: In question feedback “submit feedback” button is completely obscured when changed to minimum values |
| [1.4.13 Content on Hover or Focus](https://www.w3.org/TR/WCAG21/#content-on-hover-or-focus) (AA)  (2.1)  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 | Supports | CKSA contains little content that appears on hover or focus. |
| [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) | CKSA does not contain flashing content. |
| **Keyboard** | | |
| **WCAG 2.1**  **Checkpoint** | **Supporting Features** | **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 can be programmatically determined on CKSA pages. |
| [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 | Overall ClinicalKey Student Assessment provides keyboard access to most of the interactive content.  **Supporting Remarks:**  Navigation is fully keyboard operable.  **Exceptions:**  Home: CK Student Resources not reachable via keyboard, “Lowest scoring topics information” flyout is not reachable via keyboard, lowest scoring topics subject score tooltip is not keyboard accessible  Create a Test: select all checkboxes are not accessible (using the enter key or space bar to select the checkbox opens and closes the accordion)  Test: Left side question navigation is not keyboard accessible  Results: “Learning Point” open/close is not reachable 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 | There are no keyboard traps within CKSA. |
| [2.1.4 Character Key Shortcuts](https://www.w3.org/TR/WCAG21/#character-key-shortcuts) (A)  (2.1)  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) | CKSA does not have any keyboard shortcuts using single keys. |
| [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 | Overall CKSA users can tab through the interface in a logical order, where elements receive focus from top to bottom, left to right.  **Exceptions:**  Test: “Key concepts” and keywords receive focus but are not interactive, references receive focus but are not interactive  Results: First result in “where to focus” receives focus but is not interactive |
| [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 | All CKSA page elements have a visible focus indicator. |
| [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 | UI components on CKSA do not trigger unexpected actions when receiving focus. |
| **Headers and Structure** | | |
| **WCAG 2.1**  **Checkpoint** | **Supporting Features** | **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 | On ClinicalKey Student Assessment pages, information, structure, and relationships can be mostly programmatically determined.  **Exceptions:**  Home: “Lowest scoring topics” is visually a heading but not semantically, lowest scoring topics subjects are visually presented as a list but not semantically  Share Feedback: “Share your feedback” is visually a heading but not semantically, number buttons appear visually as a group but not semantically  Test: Top navigation appears visually to be in a list but is not semantically, top navigation is not contained within a navigation landmark  Results: Questions are grouped like a list structure but are not in a semantic list structure  Performance: Strengths and weaknesses appear to be in an ordered list structure but this is not displayed semantically |
| [2.4.1: Bypass Blocks](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-skip) (A)  Users can bypass repeated blocks of content. | Supports | “Skip to main content” button appears on all pages |
| [2.4.6: Headings and Labels](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-descriptive) (AA)  Headings and labels are clear and consistent. | Supports | Pages on CKSA have clear and consistent headings and labels |
| [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 | All pages on CKSA have the language of the page specified, using lang=”EN”. |
| [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) | Page content on CKSA is in the same language, English. |
| [4.1.1: Parsing](http://www.w3.org/TR/WCAG20/#ensure-compat-parses) (A)  Use valid, error-free HTML | Supports | Page elements have complete start and end tags, elements are nested according to their specifications, elements do not contain duplicate attributes, and IDs are unique. |
| **Labeling** | | |
| **WCAG 2.1**  **Checkpoint** | **Supporting Features** | **Remarks** |
| 1.3.5 Identify Input Purpose (AA)  (2.1)  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 | CKSA provides some input fields pertaining to the end user. |
| [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 | Partially supports | Most CKSA pages have a title that describes the topic or purpose of the page.  **Exceptions:**  Previous Tests: Title is “Student Assignments” but main heading and page purpose are “Previous Tests” |
| [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 | CKSA links have descriptive and unique names. |
| [2.5.3 Label in Name](https://www.w3.org/TR/WCAG21/#label-in-name) (A)  (2.1)  For user interface components with labels that include text or images of text, the name contains the text that is presented visually. | Supports | UI components with labels that include text have an accessible name that includes that text. |
| [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 | UI components are identified consistently and on every page. |
| [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 | ClinicalKey Student Assessment identifies input errors in a variety of ways including text which appears below form inputs, popups, and alerts. |
| [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 | Most form inputs provide an accessible name using the <label> tag or aria-label.  Exceptions:  Test: Answer radio buttons are missing labels/accessible name |
| [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 | Suggestions for valid input are clear and easy to understand. |
| [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 | The name, role, and value can be programmatically determined for most CKSA components.  **Exceptions:**  Test: Left and right skip buttons at top of page do not have an accessible name |
| [4.1.3 Status Messages](https://www.w3.org/TR/WCAG21/#status-messages) (AA)  (2.1)  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. | Partially supports | CKSA uses some status messages to alert the user that a change was successful or an error was made.  **Exceptions:**  Create a Test: Status message error (changing subjects) is not accessible to assistive technology |
| **Multimedia** | | |
| **WCAG 2.1**  **Checkpoint** | **Supporting Features** | **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 pre-recorded audio-only or video-only content on the site. |
| [1.2.2: Captions (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-captions) (A)  Provide captions for pre-recorded audio | Supports (N/A) | There is no pre-recorded audio on the site. |
| [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 | Supports (N/A) | There is no pre-recorded synchronized audio/video on the site. |
| [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. | Supports (N/A) | There is no pre-recorded video on the site. |
| [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 (N/A) | There is no audio on the site. |
| [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) | CKSA does not contain moving, blinking, scrolling, or auto-updating information. |
| **Usability** | | |
| **WCAG 2.1**  **Checkpoint** | **Supporting Features** | **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 | ClinicalKey Student Assessment does not have a session timeout less 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 | CKSA contains more than one way to navigate to other web pages. |
| [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 | CKSA pages do not trigger unexpected changes in context when changing the setting of a checkbox, radio button, or other UI component. |
| [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. | Partially supports | Most CKSA’s navigation menus are in the same location and order on every page.  **Exceptions:**  Results: Order of test result navigation (“where to focus” and “questions”) changes order from one test to the next |
| [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) | No data submissions on the site require legal or financial commitments. No data submissions allow for a users’ profile to be deleted. |
| **Mobile User Experience** | | |
| **WCAG 2.1**  **Checkpoint** | **Supporting Features** | **Remarks** |
| [1.3.4 Orientation](https://www.w3.org/TR/WCAG21/#orientation)  (AA)  (2.1)  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 | Content on CKSA does not restrict to a single display orientation. |
| [2.5.1 Pointer Gestures](https://www.w3.org/TR/WCAG21/#pointer-gestures) (A)  (2.1)  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) | CKSA does not contain multipoint or path-based gestures. |
| 2.5.2 Pointer Cancellation (A)  (2.1)  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 | CKSA content supports pointer cancellation. |
| [2.5.4 Motion Actuation](https://www.w3.org/TR/WCAG21/#motion-actuation)  (A)  (2.1)  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) | CKSA does not contain motion actuation. |