VPAT Accessibility Conformance Report

(Based on ITI VPAT©)

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| **Name of Product** | **Clinical Key** |
| **Date Last Updated** | **May 17, 2024** |
| Completed by | Jay Nemchik (Elsevier Digital Accessibility Team) |
| **Applicable Standards/Guidelines** | This document rates Clinical Key according to the [W3C WCAG 2.1 A and AA](https://www.w3.org/TR/WCAG21/) requirements. |
| **Contact for More Information** | Elsevier Digital Accessibility Team [accessibility@elsevier.com](mailto:accessibility@elsevier.com?subject=Accessibility%20and%20Shadow%20Health) |
| **Testing Tools and Methods** | * **Hands-on keyboard operation** * **DevTools/Code inspection** * **Mozilla Firefox 115 and Chrome 124 on Windows 11 22H2** * **NVDA screen reader 2023.3** * **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 review document includes all WCAG 2.1 A and AA checkpoints, organized into 7 logical sections:   * Visuals * Keyboard * Headings and Structure * Labeling * Multimedia * Usability * Mobile User Experience |
| **Pages Covered** | Header, Footer, Homepage, Search Results, Browse Books, Book Table of Contents, Book Chapter, Login, Register, Browse Multimedia, Procedure Videos, Clinical Calculators, Clinical Comparison, Adverse Reactions, Drug Interactions, Drug Identifier, Do Not Crush List. |
| **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.** |

## Conformance Summary

| **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 | Does not support |
| 1.2.2: Captions (Prerecorded) | A | Does not support |
| 1.2.3: Audio Description or Full Text Alternative | A | Partially supports |
| 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 | Partially 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 | 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 | Supports |
| 1.4.5: Images of Text | AA | Supports |
| 1.4.10: Reflow (2.1) | AA | Supports |
| 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 | Partially 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 (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 | Partially supports |
| 2.4.3: Focus Order | A | Partially supports |
| 2.4.4: Link Purpose (In Context) | A | Partially 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 |
| 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 |
| 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 | Partially 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 |
| 4.1.2: Name, Role, Value | A | Partially supports |
| 4.1.3: Status Messages (2.1) | AA | Supports |

## WCAG 2.1 A and AA Success Criteria

### Visuals

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| **WCAG 2.1**  **Checkpoint** | **Conformance Level** | **Remarks** |
| [1.1.1: Non-Text Content](https://www.w3.org/TR/WCAG21/#non-text-content) (A) Provide text alternatives for non-text content (e.g. images) | Partially supports | Most images and icons have appropriate text equivalents.  Note: Browse Book covers are considered decorative, so they should have alt="" (otherwise AT users will get a double reading for the link).  **Exceptions:**  Footer: The social media icons do not have descriptive alternative text.  Search Results: Bulk action icons and PDF download do not have alternative text.  Book Chapter: The image figures should use more descriptive alt text than just alt="".  Clinical Comparison: The 'X' close button needs alternative text. The Expand/Collapse icons do not have any alternative text.  Drug Identifier: The drug images do not have any alt text. |
| [1.3.3: Sensory Characteristics](https://www.w3.org/TR/WCAG21/#sensory-characteristics) (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](https://www.w3.org/TR/WCAG21/#use-of-color) (A) Color is not used as the only visual means of conveying info | Partially supports | Color is not used as the only means of conveying information in most areas.  **Exceptions:**  Clinical Comparison: The colored term names in the table need some indication of what the color coding means through a symbol or table header. |
| [1.4.3: Color Contrast (Minimum)](https://www.w3.org/TR/WCAG21/#contrast-minimum) (AA) Text has enough contrast with the background (4.5:1 for small text and 3:1 for large text) | Partially supports | Text has enough contrast with its corresponding background in almost all areas.  **Exceptions:**  Browse Books: In Firefox, the filter list by title placeholder text does not have enough contrast 3.2:1.  Book Table of Contents: In Firefox, the Search this Book placeholder text does not have enough contrast at 3.2:1.  Book Chapter: The Box number / Key Points light text on blue background does not have enough contrast at 4.01:1.  Browse Multimedia: The blue (or orange on hover) links in the full-size image areas do not have enough contrast at 4.25:1.  Clinical Comparison: The "Complete form to run…" gray text on white background does not have enough contrast at 1.82:1. The orange Adverse Reactions term color on a light orange background in the table does not have enough contrast at 3.64:1. The light gray 'No' text on white background does not have enough contrast at 1.82:1.  Adverse Reactions: The "Complete form to run…" gray text on white background does not have enough contrast at 1.82:1  Drug Interactions: The "Complete form to run…" gray text on white background does not have enough contrast at 1.82:1. The orange "Major" text on white background does not have enough contrast at 2.57:1. |
| [1.4.4: Resize Text](https://www.w3.org/TR/WCAG21/#resize-text) (AA)  Text can be enlarged up to 200% without loss of functionality. | Supports | Text can be enlarged to 200% and content remains functional. |
| [1.4.5: Images of Text](https://www.w3.org/TR/WCAG21/#images-of-text) (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. Some content images from books and journals do contain images of text but these are pictures that contain significant other visual content. ([Reference W3C Understanding SC 1.4.5](https://www.w3.org/TR/UNDERSTANDING-WCAG20/visual-audio-contrast-text-presentation.html)) |
| [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. | Supports | Clinical Key uses a responsive view that properly scrolls in only one direction once width reaches low CSS pixels. |
| [1.4.11: Non-Text Contrast](https://www.w3.org/TR/WCAG21/#non-text-contrast) (AA)  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:**  Footer: The social media icons do not have enough contrast at 2.96:1.  Register: The checkbox borders do not have enough contrast with the gray background at 1.74:1.  Search Results: The checkbox borders do not have enough contrast at 1:9:1 on white background.  Browse Books: The checkbox borders for the filters do not have enough contrast at 1.74:1.  Browse Multimedia: The checkbox borders for the filters do not have enough contrast at 1.74:1. |
| [1.4.12: Text Spacing](https://www.w3.org/TR/WCAG21/#text-spacing) (AA)  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 | The site allows users to adjust the text spacing without causing loss of content or functionality. |
| [1.4.13: Content on Hover or Focus](https://www.w3.org/TR/WCAG21/#content-on-hover-or-focus) (AA)  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 | Partially supports | Most content that appears on hover or focus is not dismissable or hoverable.  **Exceptions:**  Book Chapter: The icon tooltips for Saving, Downloading PDFs, emailing, open reading mode, etc. are not dismissable or hoverable.  Browse Multimedia: The image tooltips are not dismissable or hoverable. Each image option tooltips (Save, Email, Close, etc.) are not dismissable or hoverable.  Procedure Videos: The icon tooltip for Reading mode is not dismissable or hoverable. |
| [2.3.1: Three Flashes or Below Threshold](https://www.w3.org/TR/WCAG21/#three-flashes-or-below-threshold) (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

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| **WCAG 2.1**  **Checkpoint** | **Conformance Level** | **Remarks** |
| [1.3.2: Meaningful Sequence](https://www.w3.org/TR/WCAG21/#meaningfuusequence) (A)  The correct reading sequence can be programmatically determined | Partially supports | The correct reading sequence is usually logical with the DOM order matching the visual order in most cases.  **Exceptions:**  The "Reading Mode" used on several pages, such as Book Chapter and Procedure Videos does not hide the Header or Footer content from the screen reader.  Browse Multimedia: Users should not reach any content not visible on the page when viewing images in the full-screen slideshow.  Drug Identifier: There are two dropdowns for "Shape"; one is visually hidden but can still be reached by screen reader. |
| [2.1.1: Keyboard](https://www.w3.org/TR/WCAG21/#keyboard) (A)  All functionality is available from a keyboard, except for tasks such as drawing | Partially supports | Most content is keyboard operable.  Note: The video player used requires knowledge of specific keystrokes to use all its functionality. Recommend switching to a more accessible video player.  **Exceptions**:  Homepage: Using the "Skip to Search" link gives the search field a tabindex="-1", which causes the field to become inoperable if a user tabs away from it.  Search Results: Whole Book titles cannot be reached by keyboard.  Browse Books: The filter checkboxes cannot be reached by keyboard.  Browse Multimedia: The filter checkboxes cannot be reached by keyboard.  Clinical Comparison: The terms within the Drug List/Topic List cannot be reached/removed with the keyboard. The Topic dropdowns can be opened with the keyboard, but users cannot select a topic. Users cannot expand/collapse the classification categories with the keyboard. The 'X' close button is not keyboard operable. The Topic category popups only appear on hover for users and cannot be activated by keyboard.  Adverse Reactions: The terms within the Drug List cannot be reached/removed with the keyboard.  Drug Interactions: The terms within the Drug List cannot be reached/removed with the keyboard. Users cannot expand/collapse the report accordions with the keyboard. The help icons have hover information that cannot be reached by keyboard.  Drug Identifier: Users cannot enlarge the drug images, as they only appear on mouse hover.  Do Not Crush List: There are icons next to all drug names that have information that only appears on mouse hover. |
| [2.1.2: No Keyboard Trap](https://www.w3.org/TR/WCAG21/#no-keyboard-trap) (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. |
| [2.1.4: Character Key Shortcuts](https://www.w3.org/TR/WCAG21/#character-key-shortcuts) (A)  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. |
| [2.4.3: Focus Order](https://www.w3.org/TR/WCAG21/#focus-order) (A)  Users can tab through the elements of a page in a logical order | Partially supports | Tab order is logical on the site for the most part.  **Exceptions:**  After closing dialog boxes, the user's focus should be returned to the activating element for that dialog.  The "Reading Mode" used on several pages, such as Book Chapter and Procedure Videos does not remove the Header or Footer content from the tab order.  Search Results: Disabled elements (Add to Presentation) should not be reachable by keyboard.  Register: If there is an error, focus should be placed in the error summary box after submission.  Header: The Cancel button should come before the Done button in the change language dialog. Focus should be placed into the navigation spine after activating the hamburger button. On page load, the navigation spine is not properly removed from the tab order. After activating the Skip to Search link, tabindex="-1" is added to the search input, causing it to be unreachable by tabbing. Clearing the search text using the provided button should not reset focus to the top of the page.  Browse Multimedia: The user's focus should return to the activated image after closing the expanded image content.  Clinical Comparison: User's focus should be moved into the Classification list after activation.  Drug Identifier: There are two dropdowns for "Shape"; one is visually hidden but can still be reached by keyboard.  Do Not Crush List: Activating one of the navigation anchor links should move keyboard/screen reader focus to the appropriate heading. |
| [2.4.7: Focus Visible](https://www.w3.org/TR/WCAG21/#focus-visible) (AA)  The page element with the current keyboard focus has a visible focus indicator | Partially supports | Many elements use a very good visible focus.  **Exceptions:**  Homepage: The Inform your clinical decisions and Deepen your knowledge links have a very faint visible focus that is not noticeable enough.  Search Results: The bulk actions do not have a visible focus.  Do Not Crush List: The list of letter links to provide same-page anchors do not have any visible focus. |
| [3.2.1: On Focus](https://www.w3.org/TR/WCAG21/#on-focus) (A)  When a UI component receives focus, this does not trigger unexpected actions. | Supports | Focusable elements do not cause unexpected actions when receiving focus. |

### Headings and Structure

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| **WCAG 2.1**  **Checkpoint** | **Conformance Level** | **Remarks** |
| [1.3.1: Information and Relationships](https://www.w3.org/TR/WCAG21/#info-and-relationships) (A)  Info, structure, and relationships can be programmatically determined | Partially supports | Good use of heading in some places to help distinguish content. Lists are typically used to group related links or text. Landmarks are sometimes used in good places.  Consider replacing the buttons that look like checkboxes with traditional HTML checkboxes.  **Exceptions:**  Header: The header navigation should be an unordered list.  Search Results: The share and save tools h3s should come after the result title h2s.  Clinical Calculators: After searching, the category name heading should be an h2 instead of an h3. The subsequent subcategory names should be h3s instead of h4s. Tables being used for layout should be given role="presentation".  Clinical Comparison: Frames must use a non-empty title attribute. The extra tables used as "sticky tables" should be invisible to screen readers (aria-hidden="true"). "Drug List" and "Topic List" should be h2s. The table headers should have scope attributes. The blank table header should be given text stating "Topics" or similar.  Adverse Reactions: Frames must use a non-empty title attribute. The top row of the tables should be table headers with proper scope attributes.  Drug Interactions: Frames must use a non-empty title attribute. Due to "Findings" being an h3, the next subsequent headings ("Drug to Drug Interactions", "Drug to Grapefruit Juice Interactions", etc.) should be h4s.  Drug Identifier: Frames must use a non-empty title attribute. |
| [2.4.1: Bypass Blocks](https://www.w3.org/TR/WCAG21/#bypass-blocks) (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. "Skip" links exist to skip repetitive content.  Note: It may be beneficial to only use one or two skip links. |
| [2.4.6: Headings and Labels](https://www.w3.org/TR/WCAG21/#headings-and-labels) (AA)  Headings and labels are clear and consistent. | Supports | Headings and labels used are clear and descriptive.  For example, H2 headings are present on search results with the chapter name such as “Signs of Bacterial Endocarditis”. |
| [3.1.1: Language of Page](https://www.w3.org/TR/WCAG21/#language-of-page) (A)  The language of the page is specified | Supports | The language is defined as lang="en-US". When changing the site's language to e.g. German, the main page lang value also changes correctly. |
| [3.1.2: Language of Parts](https://www.w3.org/TR/WCAG21/#language-of-parts) (AA)  Specify the language of text passages that are in a different language than the default language of the page. | Supports | The change language links provide text labels that properly identify the language using the lang attribute. |
| [4.1.1: Parsing](https://www.w3.org/TR/WCAG21/#parsing) (A)  Use valid, error-free HTML | Supports | HTML and CSS passes 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.  Note: There are other general HTML validation errors outside the scope of this criterion. |

### Labeling

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| **WCAG 2.1**  **Checkpoint** | **Conformance Level** | **Remarks** |
| [1.3.5: Identify Input Purpose](https://www.w3.org/TR/WCAG21/#identify-input-purpose) (AA)  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 Register, Settings, and Login pages, which do not use any autocomplete attributes. |
| [2.4.2: Page Titled](https://www.w3.org/TR/WCAG21/#page-titled) (A)  The page has a title describing its topic or purpose | Partially supports | The title changes dynamically and is typically descriptive.  **Exceptions:**  Clinical Comparison: The title on this page is only "Tools- ClinicalKey".  Adverse Reactions: The title on this page is only "Tools- ClinicalKey".  Drug Interactions: The title on this page is only "Tools- ClinicalKey".  Drug Identifier: The title on this page is only "Tools- ClinicalKey".  Do Not Crush List: The title on this page is only "Tools- ClinicalKey". |
| [2.4.4: Link Purpose (In Context)](https://www.w3.org/TR/WCAG21/#link-purpose-in-context) (A)  The purpose of each link can be determined from the link text or surrounding context. | Partially supports | Nearly all links used have an identifiable purpose from the link text or surrounding context.  **Exceptions:** Header: The Clinical Pharmacology link should indicate that it opens in a new tab/window in the link text.  Footer: The social media icon links do not have descriptive link text (i.e., Facebook, LinkedIn, etc.)  Homepage: The Inform your clinical decisions and Deepen your knowledge links should remove their aria-labelledby attributes. |
| [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 | User interface components that have visible text contain that text consistently within the accessible name.  Note: Several UI components do not have the visible text as the first part of the accessible name. |
| [3.2.4: Consistent Identification](https://www.w3.org/TR/WCAG21/#consistent-identification) (AA)  UI components used across the web site are identified consistently on every page. | Supports | Most UI components are consistent across the site.  For example, Save, Email, and Print are all buttons which are labelled the same across search results, preview panes, and full text article pages. |
| [3.3.1: Error Identification](https://www.w3.org/TR/WCAG21/#error-identification) (A)  Input errors are clearly marked and described to the user. | Partially supports | Error identification happens and is presented well visually. A summary is provided for users describing the errors on the page.  **Exceptions:**  Register: Required checkboxes should also receive aria-invalid="true" if not checked during submission.  Search Results: The submission errors through fields such as the Email dialog need to announce the errors to screen readers. The input field with the error should include an error message within the label (or through aria-invalid="true").  Browse Multimedia: The submission errors through fields such as the Email dialog need to announce the errors to screen readers. The input field with the error should include an error message within the label (or through aria-invalid="true"). |
| [3.3.2: Labels or Instructions](https://www.w3.org/TR/WCAG21/#labels-or-instructions) (A)  Items requiring user input are clearly labeled or have clear instructions. | Partially supports | Most input areas have clear labels which are programmatically assigned.  **Exceptions:**  Clinical Calculators: The text inputs and select inputs for various calculators do not have any labels.  Clinical Comparison: The Search for drug input needs a proper label, as a placeholder is not sufficient. The Topic dropdowns should be given a group label (Add Topics to Report) using fieldset/legend or similar.  Adverse Reactions: The Search for Drug input needs a proper label, as a placeholder is not sufficient.  Drug Interactions: The Search for Drug input needs a proper label, as a placeholder is not sufficient. The "Select All" label and checkbox should not be within the <legend> tag.  Drug Identifier: The colors dropdown needs instructions to state something like "Select Colors to add to list". The Shape dropdown needs a consistent label (Consider placing a visual label for these dropdowns, but especially for the shape dropdown). |
| [3.3.3: Error Suggestion](https://www.w3.org/TR/WCAG21/#error-suggestion) (AA)  When the user makes an input error, give suggestions for valid input. | Supports | When users change passwords, and do not meet password requirements, feedback is provided such as: "New password must be at least 5 characters." |
| [4.1.2: Name, Role, Value](https://www.w3.org/TR/WCAG21/#name-role-value) (A)  For all UI components, the name, value, and role can be programmatically determined. | Partially supports | Some UI components communicate their state programmatically.  **Exceptions:**  Header: The language dialog should have aria-modal="true".  Search Results: The bulk action buttons do not have proper labels.  Browse Books: The checkboxes should use proper ARIA attributes (aria-checked, etc.) if they are not recast into traditional input elements.  Browse Multimedia: The checkboxes should use proper ARIA attributes (aria-checked, etc.) if they are not recast into traditional input elements. The image buttons do not need the visually hidden text, as the image alt is sufficient. Email dialog needs aria-modal="true".  Clinical Comparison: The Topic dropdown buttons should be given aria-expanded="true/false". Recommend that the Classification list be given the ARIA Tree attributes and keyboard interaction model. The autosuggestion drug list should be announced to screen readers. When screen reader focus moves between the autosuggest elements, the screen reader does not announce the list items properly. Recommend using best tooltip practices to announce the tooltips that appear on the icons (appear on keyboard focus and connect using aria-describedby). The Remove buttons in the Drug/Topic Lists need proper button text.  Adverse Reactions: The autosuggestion drug list should be announced to screen readers. When screen reader focus moves between the autosuggest elements, the screen reader does not announce the list items properly. The Remove buttons in the Drug List need proper button text.  Drug Interactions: The autosuggestion drug list should be announced to screen readers. When screen reader focus moves between the autosuggest elements, the screen reader does not announce the list items properly. The Findings accordions need to be given aria-expanded="true/false". Recommend using best tooltip practices to announce the tooltips that appear on the help icons (appear on keyboard focus and connect using aria-describedby). The Remove buttons in the Drug List need proper button text.  Drug Identifier: The autosuggestion drug list should be announced to screen readers. When screen reader focus moves between the autosuggest elements, the screen reader does not announce the list items properly. Consider following the design pattern set here (<https://www.w3.org/TR/wai-aria-practices/examples/listbox/listbox-collapsible.html>) which is an accessible custom dropdown. The Remove button for a color should specify which color it's removing (e.g. "Remove green from selected colors").  Do Not Crush List: Recommend using best tooltip practices to announce the tooltips that appear on the icons (appear on keyboard focus and connect using aria-describedby). |
| [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 | Many message updates are given to the user through a change in context (modal dialog box). Status messages, such as the one given for users trying to add non-images to slideshows and another given to users for trying to save items when not logged in, are given to screen readers as an alert. |

### Multimedia

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| **WCAG 2.1**  **Checkpoint** | **Conformance Level** | **Remarks** |
| [1.2.1: Audio-only or Video-only (Prerecorded)](https://www.w3.org/TR/WCAG21/#audio-only-and-video-only-prerecorded) (A)  Provide alternatives for pre-recorded audio-only or video-only content. | Does not support | Videos encountered in the search or browse which contain no audio are not accompanied by proper alternatives. They do not have a 'View in Source' either, which would often provide text alternatives for the video's content. |
| [1.2.2: Captions (Prerecorded)](https://www.w3.org/TR/WCAG21/#captions-prerecorded) (A)  Provide captions for pre-recorded audio | Does not support | The videos on the Browse Multimedia and Procedure Videos pages are not captioned. |
| [1.2.3: Audio Description or Media Alternative (Prerecorded)](https://www.w3.org/TR/WCAG21/#audio-description-or-media-alternative-prerecorded) (A)  Provide alternatives for pre-recorded synchronized audio/video | Partially supports | There are synchronized videos on the Procedures Videos pages (e.g. Abdominal Paracentesis procedure), and they are supplemented with long text descriptions of the steps outlined in the videos. |
| [1.2.4: Captions (Live)](https://www.w3.org/TR/WCAG21/#captions-live) (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)](https://www.w3.org/TR/WCAG21/#audio-description-prerecorded) (AA)  Provide an audio description of pre-recorded video. | Does not support | There are videos used on the Procedures Videos pages, and although they have narration, it is typically not enough to cover the need of an audio description. |
| [1.4.2: Audio Control](https://www.w3.org/TR/WCAG21/#audio-control) (A)  Audio can be paused and stopped, or the audio volume can be changed. | Supports (N/A) | There is no audio that plays automatically on the site. |
| [2.2.2: Pause, Stop, Hide](https://www.w3.org/TR/WCAG21/#pause-stop-hide) (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

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| **WCAG 2.1**  **Checkpoint** | **Conformance Level** | **Remarks** |
| [2.2.1: Timing Adjustable](https://www.w3.org/TR/WCAG21/#pause-stop-hide) (A)  Users are warned of time limits shorter than 20 hours and time limits can be turned off or extended | Supports (N/A) | There does not seem to be a session timeout. |
| [2.4.5: Multiple Ways](https://www.w3.org/TR/WCAG21/#multiple-ways) (AA)  More than one way is available to navigate to other web pages. | Supports | Users can reach all pages in the system using the global navigation with at least two ways. For example, profile-specific options can be found both within the profile dropdown and the navigation spine. |
| [3.2.2: On Input](https://www.w3.org/TR/WCAG21/#on-input) (A)  Changing the setting of a checkbox, radio button, or other UI component does not trigger unexpected changes in context. | Supports | User inputs do not cause unexpected actions. |
| [3.2.3: Consistent Navigation](https://www.w3.org/TR/WCAG21/#consistent-navigation) (AA)  Navigation menus are in the same location and order on every web page. | Supports | Navigation menus are consistently in the same place and in same order.  For example, on all pages, the Header always has Search, Browse, and Tools in the same place and order. |
| [3.3.4: Error Prevention (Legal, Financial, Data)](https://www.w3.org/TR/WCAG21/#error-prevention-legaufinanciaudata) (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

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| **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 | Clinical Key does not restrict its view 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 | Clinical Key does not use any multipoint or path-based gestures. |
| [2.5.2: Pointer Cancellation](https://www.w3.org/TR/WCAG21/#pointer-cancellation) (A)  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](https://www.w3.org/TR/WCAG21/#motion-actuation) (A)  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 on Clinical Key that utilizes device or user motion. |