

Healthcare.gov Application

Accessibility & UX Audit

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CODE *for*
AMERICA

Table of Contents

Brief Introduction to Heuristic Principles.....	3
Focus Area 1: User Control and Freedom.....	5
Focus Area 2: Inconsistent UI.....	9
Focus Area 3: Color Usage and Dependence....	13
Focus Area 4: Cognitive Load.....	19
Focus Area 5: User Empathy.....	25
Top 5 Recommendations.....	29
Q&A.....	31

10 Usability Heuristics for User Interface Design

1. Visibility of system status

The application should always keep clients informed about what is going on through appropriate feedback within a reasonable amount of time.

2. Match between system and the real world

The design should speak the users' language. Use words, phrases, and concepts familiar to the user, rather than internal jargon.

3. User control and freedom

Users often perform actions by mistake. They need a clearly marked "emergency exit" to leave the unwanted action without having to go through an extended process.

4. Consistency and standards

Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform and industry conventions.

5. Error prevention

Good error messages are important, but the best designs carefully prevent problems from occurring in the first place. Either eliminate error-prone conditions, or check for them and present users with a confirmation option before they commit to the action.

6. Recognition rather than recall

Minimize the user's memory load by making elements, actions, and options visible. The user should not have to remember information from one part of the interface to another.

7. Flexibility and efficiency of use

Shortcuts — hidden from novice users — may speed up the interaction for the expert user such that the design can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

8. Aesthetic and minimalist design

Interfaces should not contain information which is irrelevant or rarely needed. Every extra unit of information in an interface competes with the relevant units of information and diminishes their relative visibility.

9. Error recovery - Help users recognize, diagnose, and recover from errors

Error messages should be expressed in plain language (no error codes), precisely indicate the problem, and constructively suggest a solution.

10. Help and documentation

It's best if the system doesn't need any additional explanation. However, it may be necessary to provide documentation to help users understand how to complete their tasks.

Focus Areas & Recommendations

Focus Area #1

User Control and Freedom

Description: User Control and Freedom refers to the ability for the application to provide a clearly marked “emergency exit” and for the applicant to be able to navigate freely throughout the application in order to complete their task.

Benefits:

- Leave applicants feeling in control of the experience
 - Lack of control will leave applicants feeling trapped and dissatisfied
- Clear and flexible navigation allows ease of use
 - Complex navigation standards can lead to slow and inefficient application completion



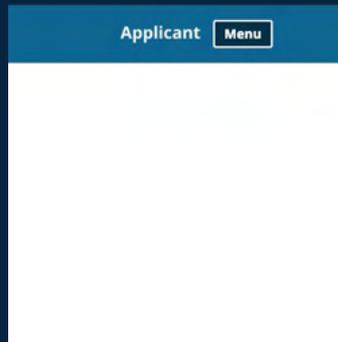
Focus Area #1: Application Status

Close and Progress Save

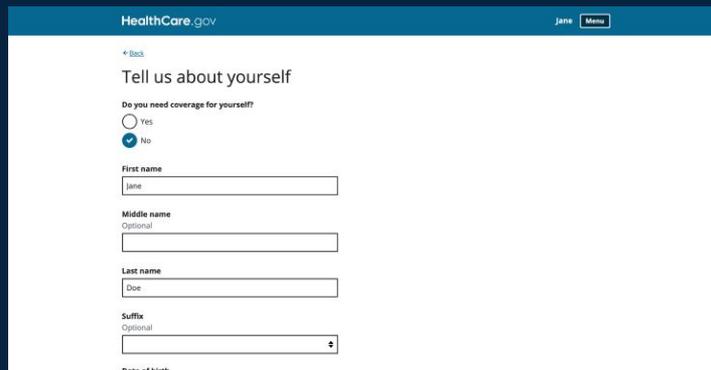
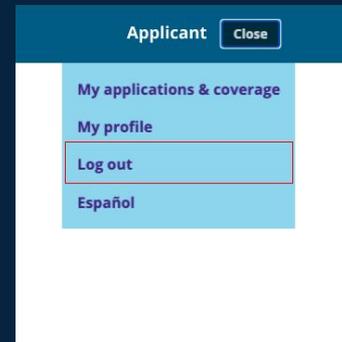
Needs improvement

- Closing the application is not easily discoverable (example 1)
- Interface does not resume from the applicant's last position (example 2)

Heuristics: User control and freedom, Recognition rather than recall, Error Prevention



example 1



example 2

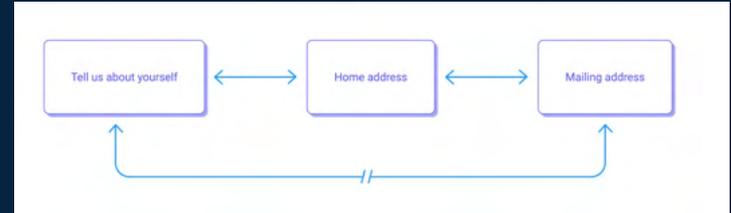
Focus Area #1: Application Status

Navigation

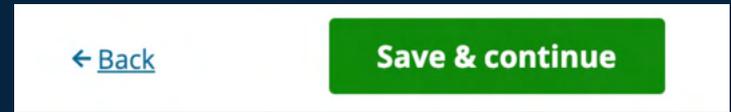
Needs improvement

- Applicants can only navigate page-by-page (*example 1*)
- Navigational controls are “*Back*” and “*Save & Continue*,” but their treatment and placement are inconsistent. (*example 2*)
- Email links that mention a specific application do not take applicant to the intended target (*example 3*)

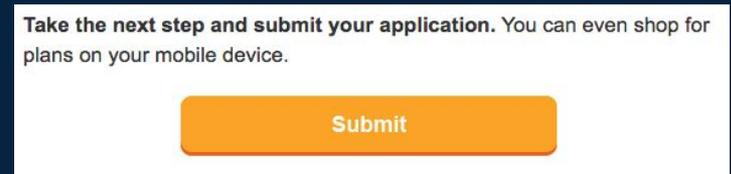
Heuristics: User control and freedom



example 1



example 2



example 3

Focus Area #1: Application Status

Distracting UI Elements

Needs improvement

- Extra “Log in” button in the “log in” screen (example 1)
- Unnecessary “password” or “username” recovery in the “create account” screen (example 2)

HealthCare.gov Español Log in

Log in

Don't have an account? [Create one.](#)

Username

Your username may be your email address. [Forgot your username?](#)

[Forgot your password?](#)

LOG IN

example 1

Forgot your password or username?'. There is a dropdown menu for 'Select your state' with 'Michigan' selected. Below that are two input fields: 'First name' (lane) and 'Last name' (Doe), both with green checkmarks. Below that is an 'Email address' field with 'tinkrbell66@hotmail.com' and a green checkmark. At the bottom, there is a 'Password' field with a red error icon."/>

HealthCare.gov Español Log in

Create an account

If you already have an account, [log in](#). [Having trouble?](#) [Don't create another account.](#) [Forgot your password or username?](#)

Select your state

Michigan

First name Last name

lane Doe ✓

Email address

Your email address will also be your username when you log in. ✓

tinkrbell66@hotmail.com

Valid: ✓ 8-20 characters ✓ Upper & lowercase letters ✓ Numbers

Password ✗

example 2



Focus Area #2

Inconsistent UI

Description: Consistency in user interface (UI) design is concerned with making sure elements in the interface is uniform. This helps create a sense of control, familiarity, and reliability.

Inconsistent UI confuses and frustrates applicants and can drive even the most promising products to failure.

Benefits:

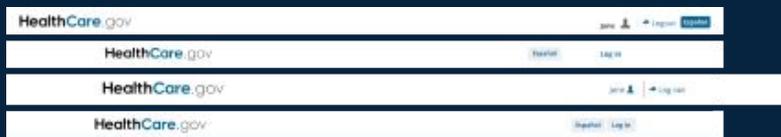
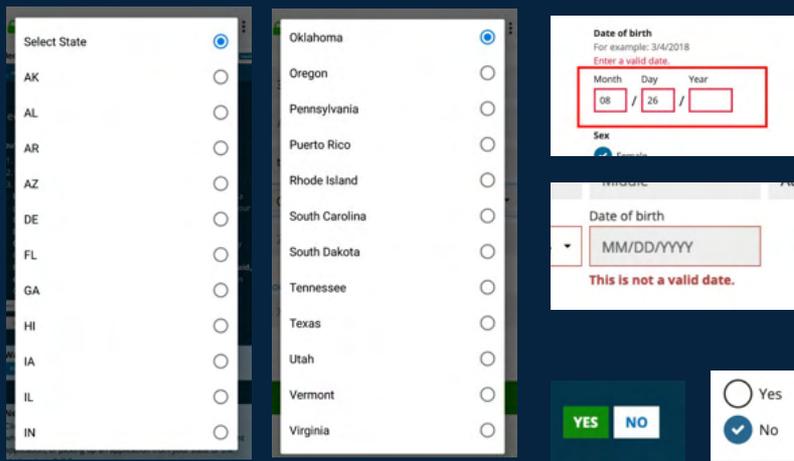
- Applicants will learn faster how to use the website
 - An inconsistent interface is similar to trying to talk with the applicant while switching languages
- Consistency eliminates confusion
 - When applicants feels confused, the next stage is frustration
- Consistency saves money and time
 - Consistent design is built with a consistent UI

Focus Area #2: Inconsistent UI

Menus, Forms, Headers and Buttons

Needs improvement

- Dropdown menus, forms and headers need to be consistent and uniform throughout the site
- Button size and button formats should be standardized across all pages
- Repeat patterns and elements any time you can



Focus Area #2: Inconsistent UI

Error Messages

Needs improvement

- Error indicators should be consistent in appearance and location
- Error messages should inform applicants why their input was rejected

Username 

Your username may be your email address. Forgot your [username?](#)

Re-enter password 

Forgot your [password?](#)

Use:  8-20 characters  Upper & lowercase letters  Number(s)

Password 

.....

Passwords must be 8-20 characters, contain a mix of uppercase and lowercase letters, and contain at least one number.

Phone number Date of birth

XXX-XXX-XXXX Home MM/DD/YYYY

Telephone number isn't valid. This is not a valid date.

Street address

Street address isn't valid.

City Montana

Your city can only include letters.

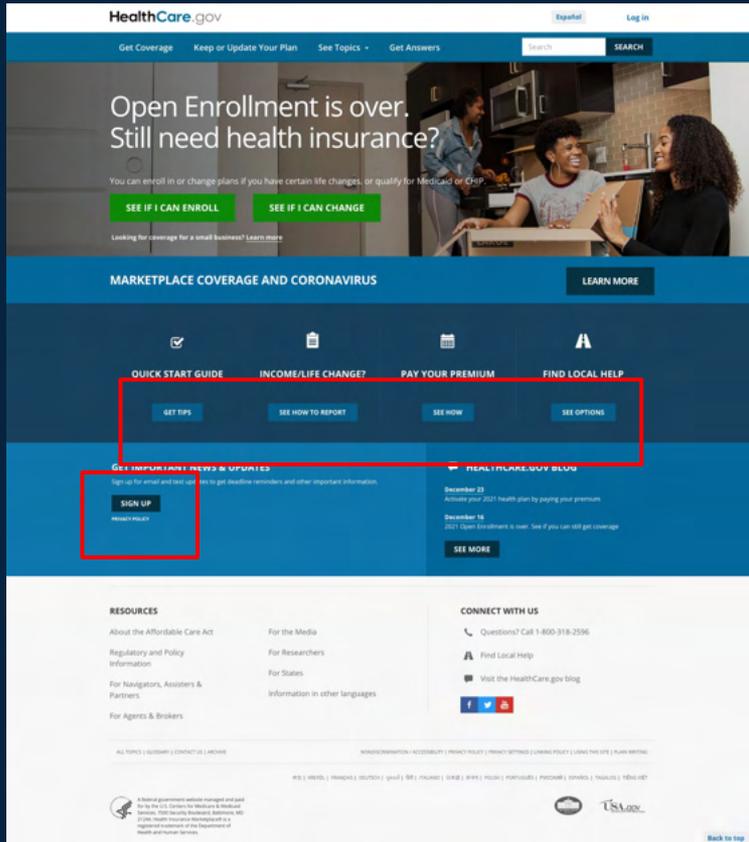
Heuristics: Error prevention, Help users recognize, diagnose, and recover from errors

Focus Area #2: Inconsistent UI

Font Size

Needs improvement

- Font size for body text should be 16px as a best practice
- Font standards apply to text in buttons as well
- Text that is too small with different background colors makes it harder for applicant to complete the task



Resource: [AccessibleWeb on Minimum Font Sizes](#)

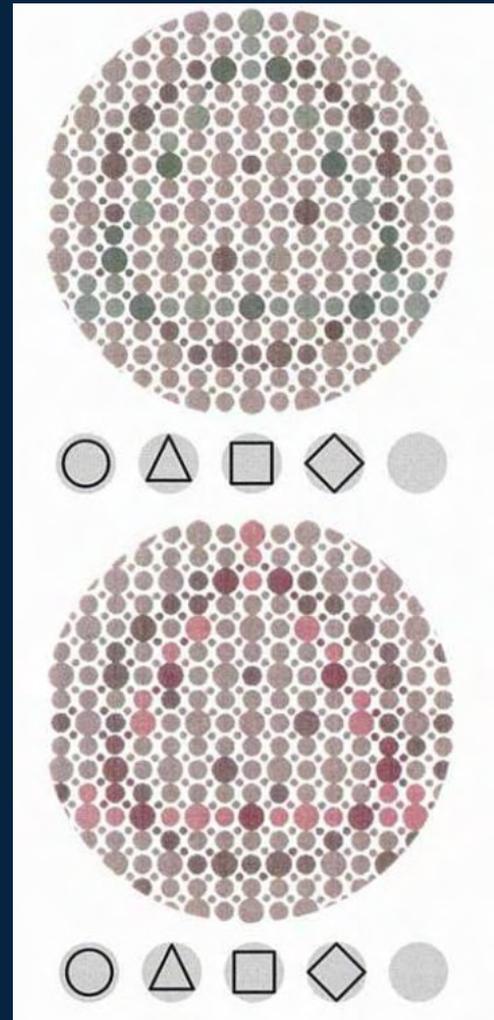
Focus Area #3

Color Usage and Dependence

Description: The **use of color** is meant to enhance other design techniques, never distract. Color helps lend consistency, variety, and importance to an intended message and usage of an interface. Color should never be used on its own to convey important information.

Benefits:

- Reinforces the intuitive use of an interface
- Alleviates confusion and frustration
- Reduces barriers and obstacles



Focus Area #3 - Color Usage and Dependence

Color Contrast

- Some people cannot read text if there is too little contrast between text and background.
- [W3C Web Content Accessibility Guidelines 2.0](#) require color combinations meet clearly defined contrast ratios
- Level AA compliance: Text/images of text must have a contrast ratio of at least 4.5:1

Resource: [University of Washington on Effective Use of Color](#)

Heuristics: Consistency and standards / Aesthetic and minimalist design

Eligibility results

Results based on your application (ID 3829729691) submitted for enrollment. [Learn more about your eligibility results](#)

Apply

Get Results

Get Coverage

Sample
Text

Sample
Text

Sample
Text

Sample
Text

Get coverage for:

Select Year

Select State

Submit

Focus Area #3 - Color Usage and Dependence

Avoiding Color Dependence

- Some people are unable to perceive color differences, or may not perceive color the same way others do
- It is important to avoid using color alone to communicate information

Resource: [University of Washington on Effective Use of Color](#)

Heuristics: Consistency and standards / Error prevention / Error recovery

To buy a Marketplace plan

Your eligibility is temporary: By April 6, you must submit documents to confirm some information. See your eligibility notice for details and deadlines.

Jane Close

My applications & coverage

My profile

ME

MY SPOUSE

MY DEPENDENT

YES NO

SINGLE MARRIED

Focus Area #3 - Color Usage and Dependence

Color Insensitivity

- Color insensitivity can make it difficult, or impossible, for some to distinguish hues
- Common vision problems like astigmatism and short/nearsightedness can affect how well people perceive color and contrast
- Almost 15 million people (1 in 12 men, and 1 in 200 women) have some kind of color insensitivity,

Resource: [National Eye Institute on Color Blindness](#)

Heuristics: Consistency and standards / Aesthetic and minimalist design

Before you get started

Fill in the information below about your household. Not applying for coverage in Georgia? [Change](#)

Deuteranopia

Are you single or married? ⓘ

SINGLE

MARRIED

Before you get started

Fill in the information below about your household. Not applying for coverage in Georgia? [Change](#)

Tritanopia

Are you single or married? ⓘ

SINGLE

MARRIED

What is your marital status? ⓘ

Single

Married

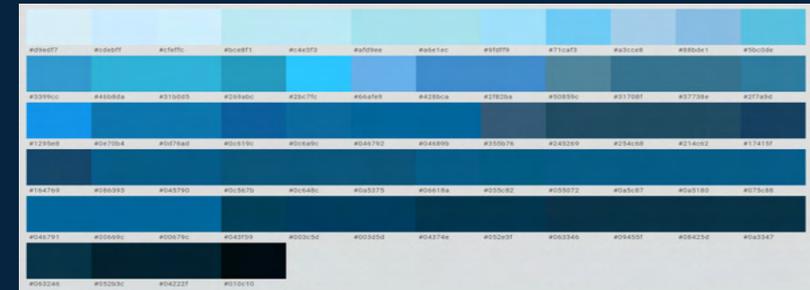
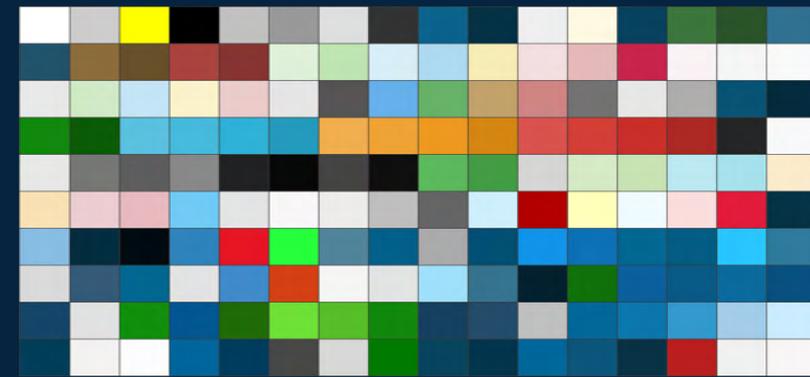
How many tax dependents, like your children, will you claim on your 2020

Include all of your dependents on your 2021 tax return, even those not applying for coverage. Don't include yourself or your spouse.

Focus Area #3 - Color Usage and Dependence

Color Analysis and Breakdown

- **Reduce colors**
 - 160+ colors, 64 of those are "blue", and more than 295 instances of contrast failure
 - Review how, where, and why they are used
- **Decrease risk, liability, and sight bias**
 - Avoiding pure black text on white can help people with [Irlen Syndrome](#), dyslexia, light sensitivity, and autism
 - Best contrast combination: Max color contrast of white/light text on a black/dark background
 - 1,000+ pages of potential risk (508a/ADA)



Focus Area #4

Cognitive Load

Description: The **cognitive load** is the amount of mental resources required to operate the user interface.

Benefits:

- Reduce applicant overwhelm
- Lower chances of mistakes and misunderstandings
- Faster application completion



Design Idea #1



6% complete

[← Back](#)

Tell us about yourself

Do you need coverage for yourself?

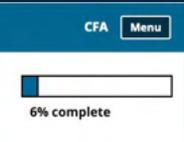
Yes

No

Design Idea #2



Design Idea #3



Focus Area #4: Cognitive Load

Progress Bar

- Tells the applicant how far they are, and how much more they have to go
- Splits the application into “stages”

Heuristics: Visibility of Application Status, Match Between System & Real World

Current (with optional)

First name

Middle name
Optional

Last name

Suffix
Optional

Date of birth
For example: 3/4/2018
Month / Day / Year
 / /

Sex
 Female
 Male

Proposed (with required)

First name
Required

Middle name

Last name
Required

Suffix

Date of birth
Required
For example: 3/4/2018
Month / Day / Year
 / /

Sex
Required
 Female
 Male

Focus Area #4: Cognitive Load

“Required” Fields

- Marking “required” explicitly makes it less likely the user will make an erroneous form submission
- Screen readers will read “required”

Resource: [Accessibility Guidance on Required Fields](#)

Heuristics: Error Prevention, Recognition Rather Than Recall

Eligibility results

Results based on your application (ID 382972961) submitted on 01/06/2021. Follow these steps below to complete your enrollment. [Learn more about your eligibility results](#)

Eligibility overview **eligibility**

Marketplace plan

For a premium tax credit of up to \$536 each month for your tax household.

For lower copayments, coinsurance, and deductibles (cost-sharing reductions) on Silver plans.

Your eligibility is temporary: By April 6, you must submit documents to confirm some information. See your eligibility notice for details and deadlines.

Full Medicaid determination

Check that people under your charge for Medicaid. They can still continue with a Medicaid application. For more information to the Illinois Medicaid. Do any of these people want to send their information to the Illinois Medicaid so they can check on Medicaid and the Children's health insurance program (CHIP) eligibility, if applicable?

Jane Doe
 John Doe
 Jim Doe
 Mike Doe
 None of these people

SEND TO MEDICAID

What should I do if I think my eligibility results are wrong?

If you don't agree with what you qualify for, you may be able to file an appeal.

You can appeal eligibility to buy Marketplace plans and also for enrollment periods, if you're applying for help paying for coverage, you may also have the right to appeal eligibility for tax credits, cost sharing reductions, Medicaid eligibility, and CHIP eligibility. If you qualify for tax credits or cost-sharing reductions, you can appeal the amount your eligibility for.

Review your eligibility notice to find appeal instructions for each person in your household, including the number of days you have to file an appeal. Here's important information to consider when filing an appeal.

- You can have someone file or participate in your appeal. That person can be a friend, relative, neighbor, or other person. Or, you can file and participate in your appeal on your own.
- If you file an appeal, you may be able to keep your eligibility for coverage while your appeal is pending.
- The outcome of an appeal doesn't change the eligibility of other members of your household.
- Depending on your state and your eligibility results, you may be able to file an appeal through the Marketplace or you may have to file an appeal with your state Medicaid or CHIP agency.
- Learn about which states have special rules for appeals: [Special rules for appeals](#). You can also mail an appeal request form or your own letter filing an appeal to Health Insurance Marketplace, 463 Indiana State, Lansing, MI 48906-0001.

Would you like to register to vote? optional

[Click here to register to vote](#)



Focus Area #4: Cognitive Load

Understanding Eligibility

- A high volume of complex information at once
- Information about eligibility and enrollment are interleaved
- Would benefit to guide the applicant via smaller chunks of information and asking them questions



You're eligible to enroll in Marketplace coverage **enrollment**

You have a Special Enrollment Period because...

Choose a plan by March 1, 2021 to get coverage.

Select your health plan and complete the steps below by March 1, 2021.

After you select a plan, you'll need to submit documents. Continue for more information.

For coverage to start:	Confirm your plan by:
February 1, 2021	January 31, 2021
March 1, 2021	February 28, 2021
April 1, 2021	March 1, 2021

- 1 **Decide how much tax credit to use to lower your premium** **Starts**
- 2 **Report tobacco use**
- 3 **See if plans cover your doctors, hospitals & prescription drugs**

Enter your doctors and hospitals to see if they're in the plan's network, and drugs to see which plans cover them.

Use your tax credit to lower your monthly premium **eligibility**

This figure for a premium tax credit of \$536 a month. You can decide how much of this amount you want to use to lower your monthly premium.

You can lower your monthly premium to \$336 per month.

The amount is based on:

- Expected family income
- Where you live
- The household size

If any of these things change over the year, the tax credit amount you qualify for can change. For example, if your income goes up during the year, your tax credit will be lower. If you take more tax credit than you're eligible for, you may have to pay money each month on top of your regular basic cost of the plan.

If your income or household changes, it's very important to update your Marketplace information as soon as possible to avoid paying money back on your Marketplace plan.

If you qualify for the use of all your tax credits, you'll also see the amount on your Notice of Eligibility.

Use \$536 monthly tax credit (do you want to use to lower your premium?)

All of the tax credit each month. Special notice: If you don't want to be having to pay money back on your Notice of Eligibility, if anything changes.

None of the tax credit each month.

Your monthly premium will be reduced by \$100.

We'll apply all of your tax credit to your monthly premium. You'll receive none of your tax credit when you file the Notice of Eligibility.

Important: If things change—like you get a raise, gain or lose a dependent, or work more or less hours, update your Marketplace application right away.

None of the tax credit each month. Special notice: If you don't want to be having to pay money back on your Notice of Eligibility, if anything changes.

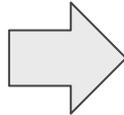
Save & Continue

Heuristics: Aesthetic and Minimalist Design, Match Between System and the Real World

Focus Area #4: Cognitive Load

First, guide the applicant through their eligibility.

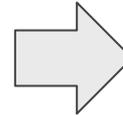
You and your family are eligible to buy a healthcare plan on the marketplace.



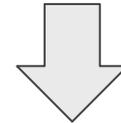
You are also eligible for a premium tax credit. A premium tax credit is...

OR

You are not eligible for a premium tax credit, because _____.

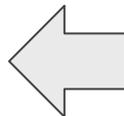


We determined that you are not eligible for Medicaid. **Would you like to send your application to Medicaid anyway to verify?**



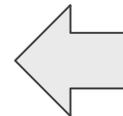
Your eligibility is temporary.

Proceed to enrollment...



Do you want to challenge your eligibility results?

If so, we'll give you more information about how to challenge the decision.



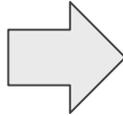
Here is a PDF with more details about your eligibility for further reference.

Focus Area #4: Cognitive Load

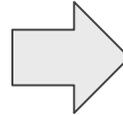
Then, present enrollment.

Now you will enroll.

You must select a plan by this date for your eligibility results to apply for this date of coverage.

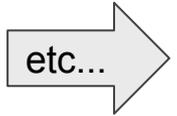


Here is an overview of the next steps for you to enroll in a healthcare plan.



How much of the PTC would you like to apply to your plan cost?

Here is more information about the tax implications about this decision.



Focus Area #5

User Empathy

Description: **User empathy** is the understanding of how a person's experience with a product, service, or process can affect the level of confidence and trust the applicant has towards the larger establishment.

Benefits:

- Elevated faith in authenticity
 - Question tone may entrench applicant's beliefs of institutionalized discrimination
- Increased credibility of intent
 - Complicated or invasive processes may reduce applicant's trust in the process
- Enhanced sense of dependability
 - Increased anxiety in an environment limits the applicant's ability to think and reason



Focus Area #5: User Empathy

Invalidating Language

needs improvement

- Confusing error messages
 - Messages—sometimes no messages—do not help the applicant resolve an error
- Distressing messages and questions
 - Questions that are phrased in a way that implies wrongness or lesser personhood
- Use of language assumes understanding
 - Expectation that the applicant will immediately know complicated or specialized language

Heuristics: Error Prevention, Match between system and the real world

First name

Téa

First name isn't valid.

Last name

Öber

Last name isn't valid.

Is Test only incarcerated pending disposition of charges?

[Learn more about pending disposition.](#)

Yes

No

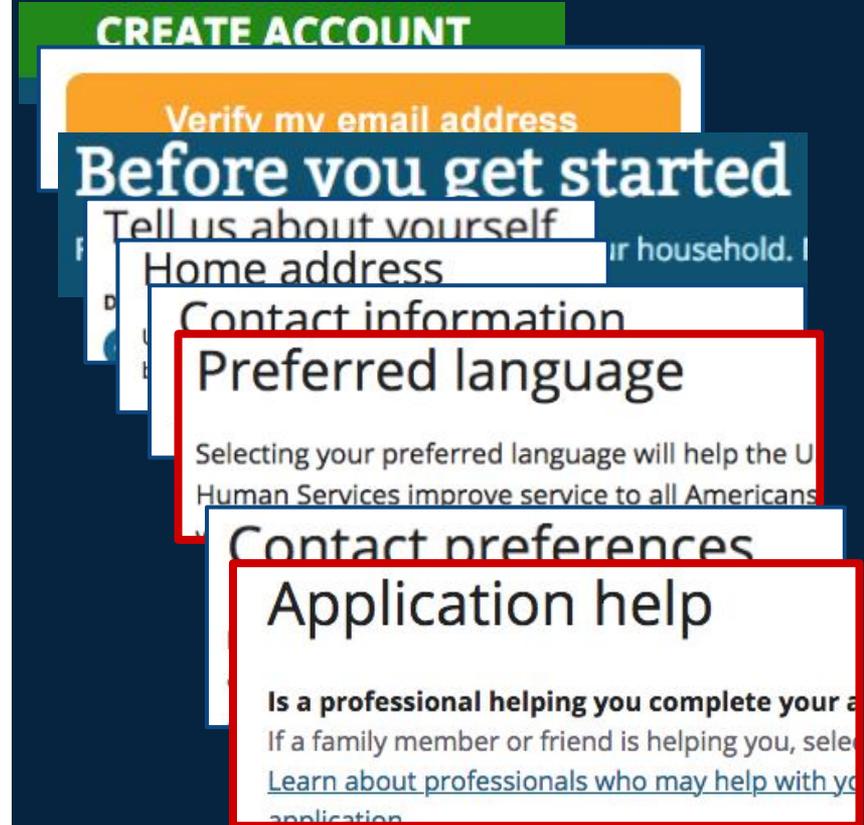
Focus Area: User Empathy

Hidden Resources

needs improvement

- Help offered several screens into coverage application
 - Help should be one of the first things an applicant can ask for
- Preferred language not immediately available
 - Language selection should be clearly visible and available as soon as possible
- Assuming that gender precludes healthcare needs
 - System automatically removes a person from certain healthcare options based sex

Heuristics: Control and Freedom, Help and Documentation



Focus Area #5: User Empathy

Stigmatizing Implications

needs improvement

- Grouping heritage with “negative” conditions
 - Grouping can infer a relationship between options
- Gathering data that will not affect eligibility
 - Minorities experience biases that affect them, even when promised safety
- Impersonal verbiage
 - Many questions ask an applicant about their life circumstances in a way that denies humanity

Heuristics: Consistency and Standards, Match between system and real world

Household information

Do any of these situations apply to any household members?

Select all that apply. This information may help with savings on coverage.

- Is pregnant
- Is American Indian or Alaska Native
- Is currently incarcerated (detained or jailed)
- None of these apply to the people in the household

Providing this information won't impact eligibility, plan options, or costs.

Top 5 Recommendations

- 1. User Control & Freedom:**
Allow Applicants to freely navigate throughout the application
- 2. Inconsistent UI:**
All UI elements need to be consistent throughout
- 3. Color Usage and Dependence:**
Reduce colors, review how, where, and why they are used
- 4. Cognitive Load:**
Guide Applicants through eligibility/enrollment
- 5. User Empathy:**
Remove stigmatizing implications about Applicants

THANK YOU!

We will follow up with details

Q&A

Hattie Chau, Evan Suarez, Tatia Wallin, Chris Stevenson, Smai Fullerton