

healthycent\$

An Interactive Informant of Medical Procedures for All

(Student Team)

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Participants

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Proposed Tool Name

healthycent\$

Design Narrative

Rationale

In our work in outpatient clinics as medical students, we encounter patients asking how much they will need to pay for a procedure or medication on a daily basis. Despite improvements in our diagnostic skills and knowledge of therapeutic options, questions regarding healthcare costs often delve into unfamiliar territory that we are unable to fully address during limited clinic time, and we often default to suggesting that the patient contacts their insurance company. This is a significant point of concern since the prices of medical therapies and procedures are often key factors in a patient's decision-making process.

With that in mind, our goal is to create a tool that will provide price transparency for healthcare procedures, with the intent to aid the shared decision-making process between primary care physicians and patients.

Healthycent\$ (stylized as 'healthycent\$') is our solution - a platform designed to present complex healthcare cost data in a simplified, easily accessible manner to help patients not only make informed decisions on where to obtain care, but also better understand the care they are receiving. Our tool's main user base will be patients, and given that this quality vs cost vs location decision-making process often occurs during the outpatient clinic visit, we envision our tool being integrated into clinics and introduced to patients by a provider when first explaining a procedure. This is similar to how a provider may suggest a site such as GoodRx in clinic and demonstrate its use, empowering the patient to utilize the site themselves independently in the future.

Our Interface

To maximize accessibility for clients of all ages and all manner of technological backgrounds, healthycent\$ is designed as a website that will be accessible on both computers and mobile devices. It will therefore be easily available in any context, be it in on a computer in the comfort of a patient's own home, on a smartphone for a patient on the go, or in the clinician's office being viewed jointly by both provider and patient, with the option to print relevant information. Our website will sport a mobile-friendly format with responsive web design, allowing for all the convenience of access from a smartphone without the hassle of needing to download an app. 81% of Americans own a smartphone, and almost 20% of Americans use their smartphones exclusively for internet access, suggesting that a smartphone-friendly format will allow more users to access our site.

Our tool is also targeted towards users of all health literacy levels, with the assumption that most of our users will have limited understanding of medical knowledge and healthcare terminology. Our website will incorporate a simple, clean design that is easy to navigate, using a map-based interface to help clients visualize and compare relevant costs based on geographical location. This map-based interface design draws inspiration from other commonly used applications such as Google Maps, providing a familiar means of navigation that users are already accustomed to.

Several additional layers of functionality are added on top of this basic framework, with options to filter information based on key parameters: distance, price range, and insurance options. Users will be able to view additional information on each healthcare location in their search results, such as overall hospital rating and overall safety grade, to provide more context about that particular healthcare site. This information will be drawn from CMS Hospital Compare Data and Leapfrog's Patient Safety Grade data. To allow patients to learn more about the procedure being searched for, the website also includes printable popups that provide patient education materials about the respective procedure. This material will be drawn from the NIH MedlinePlus Connect API, which is available in both English and Spanish.

Other special features will include accessibility options (font size adjustment for the vision impaired, color-blind mode) and a Spanish language option (with the goal of expanding to include other language options in the future).

Reaching Users

Healthycent\$ will be promoted to its primary client base, patients, using innovative strategies such as scannable QR codes on flyers in clinic. We also envision that our site will be promoted through the websites/patient portals of associated insurance companies and healthcare providers, as these stakeholders will mutually benefit from increased patient engagement through our website. Research has shown that consumers are willing to "price shop" if given sufficiently clear price information, suggesting that savings will be conveyed to both consumers

and insurers. Healthcare providers who can make the case that they provide a variety of cost-effective services will benefit from promoting our website. Collaborating with other like-minded partners, such as public health departments, will also allow us to utilize social media outlets to increase usage of this website.

Furthermore, to place healthcare prices in the broader context of affordable healthcare and patient empowerment, healthycent\$ will provide relevant links to additional resources regarding healthcare costs and healthcare knowledge, such as NIH Medline Plus, MayoClinic, and GoodRX, with the potential to also include other sites such as the individual states' health insurance marketplace websites.

External Data Sets

- <https://www.leapfroggroup.org/data-users/leapfrog-hospital-safety-grade>
- <https://data.medicare.gov/data/hospital-compare>
- <https://medlineplus.gov/connect/service.html>

References and Other Web Resources Used:

- <https://www.pewresearch.org/internet/fact-sheet/mobile/#who-owns-cellphones-and-smartphones>
- <https://insight.kellogg.northwestern.edu/article/will-people-price-shop-for-healthcare>
- https://www.hopkinsmedicine.org/johns_hopkins_bayview/patient_visitor_amenities/community_health_library/finding_reliable_health_information_online.html
- <https://www.consumerreports.org/cro/2012/05/can-a-phone-app-help-you-find-cheaper-drugs/index.htm>
- <https://developer.android.com/guide/topics/ui/accessibility/index.html>