Airtable #17 AMIA 10x10 Summary

**IHS and Human Center Design section**

This section is aimed at educating individuals on the high-level goals of the Indian Health Services (IHS) Modernization Project, as well as addressing how a Human-Centered Design (HCD) was applied to those high-level goals. The Modernization Project aims to provide a comprehensive assessment of the people, processes, and technology that comprise an existing IHS HIT system. Additional goals include increasing cultural sensitivity and articulating the value of an HCD approach in clinical informatics projects.

The section then outlines the purpose of the Modernization Project as putting emphasis on a strategy to modernize the EHR system and IT systems, additionally the objectives are to evaluate the current state of HIT across areas and identify and evaluate alternative EHR solutions for HIT modernization. Other project objectives include producing recommendations regarding the guiding principles of people, processes, and technology. A final objective listed is to define a “roadmap” to implement the recommendations.

Next, this section shows how an HCD approach was used to develop and implement a three-pronged approach to better understand the current state of the IHS HIT systems and the unique needs of the users. This three-pronged approach is broken into Understand User Perspectives and Needs, Understand System Capabilities, and Determine Options and Best Practices, all of which contribute to Analysis of Alternatives, Community of Practice (CoP) Plan, Capability Maturity Model and Toolkit, and the Roadmap.

Finally, this section concludes with an explanation of the value of the HCD approach. It is able to account for the local need that traditional data collection methods cannot effectively address. This approach also produces empathy through intentional listening and emphasizing a person-centered approach. It allows for fostering a rapport and understanding of the user. Additionally, this intentional listening uncovers “why” by capturing user thoughts in their own words and gaining a deep understanding of the findings. Lastly, it generates an end-user buy-in for future solutions by engaging the user in the development process which ultimately leads to the development of a more widely accepted product by the users.

**HCD Project Approach and Methods section**

The learning objectives for this section highlight that the attendees should be able to understand considerations that influence the decision to use an HCD approach. There are several visuals that are presented to help explain the how an HCD approach is used. These visuals include a flow of the Iterative Systems Development Life Cycle, the Design Thinking Process, and how HCD was used in the SDLC and which stages of the Iterative Process and Design Thinking Process had been addressed thus far.

This section then goes into more detail of the HCD Methods for the HIT Modernization Project, outlining the goals. These include engaging HIT end-users by listening to a diverse group of healthcare personnel and capturing the HIT needs and desires of the people who rely on the system daily. Ultimately, they want to gain an understanding the what the HIT modernization looks like from the end-users perspective. There is also a visual showcasing the criteria that comprise the method considerations for an HCD approach.

The next piece of this section addresses how teams can prepare, what challenges they may face, and the minimal approach they can take when using an HCD approach. There are also several examples of how HCD has been used to fulfil the Understand User Perspectives and Needs element of the three-pronged approach. There is an example for each sub-element, Site Visits, Virtual Sessions and Data Calls, and how to apply the HCD method.

Lastly, this section concludes with how to use the information gained from the participants to make a concrete description of what they explained organized into categories and relationships of “what is” and what “could be.”

**HCD Tooling, Process, and Findings section**

Similarly to previous sections, this one begins with the learning objectives. These include applying HCD methods and tools to real-world settings, observing how the method meets the needs of the project, and analyzing the findings. There are first practical considerations that need to be taken into account for the IHS Modernization Project. It needs to be iterative, thorough, comprehensive, and intentional.

The iterative element of the HCD approach is explained as the need to evaluate the method and modify it to better achieve the research goals. The tools selected can help to do this. The presentation stipulates some thoughts to consider when choosing the appropriate tool when using the HCD method. Examples are also provided for how to evaluate the tools by whether they are beneficial or detrimental to achieving the research goals to choose the most effective method for that project. Airtable is a promoted tool for data collection as it allows for the comparison of information gathered from the many sites and groups. The collected data can then be organized by user needs to identify areas that may need additional questions and compile the findings to create a user story for later review. These stories offer the user perspective on the issue, but no one story is representative of all other user experiences. Deeper analyses of multiple users are beneficial to have a better understanding of how to design HIT that meets end-user needs.

This section concludes with a future vision for HIT with a visual of the concepts that a future state of HIT should include. These are Collaborative Federal-Tribal Relationship, Consistent Governance, Convenient, Patient-focused Care, Engaged End Users, Strong Security, Improved Business Intelligence, Complete Interoperability, and Modern IT Infrastructure. These components were revealed from the qualitative data and determined by the HHS IHS HIT Modernization Project.

**HCD Challenges and Lessons Learned**

This section begins with the challenges that may arise when using the HCD approach. One challenge faced is that the emerging themes from interviews can begin to look consistent, but there is still more that can be learned. A lack of in-depth responses as well as a lack of context pose difficulty in learning about what the users really want and need. Per these challenges, the HCD method must be reassessed to improve upon those areas for future application. Specifically, one-on-one interviews can be implemented to gain more in-depth information from the users. This also allows the facilitator to foster a better relationship with the user, so they open up more about their experiences.

Some deliverables that help to reassess the HCD method include Service Blueprints, Ecosystems and Profiles of Facilities, Archetypes, and lastly, Use Cases. Examples of Archetypes and Ecosystems are provided to describe the user groups based on their Health IT needs. Service Blueprints describe scenarios that can improve the Health IT modernization services. These scenarios are based on health disparities in AI/AN communities and involve high-risk pregnancy, guardianship of grandchildren, suicide ideation, ATV accident, recovering from opioid addiction, diabetes comorbidities, and end-of-life care. An example of what a service blueprint might look like is included in the presentation to serve as a guide for implementation of this method.

From the service blueprints and archetypes, use cases can be created to provide a list of all requirements for Health IT modernization so IHS can evaluate options. Examples of a fill-in-the-blank statement that can be used for developing use cases in included, as well as a full list of how use cases can be sorted based on the source, and type of information provided in the fill-in-the-blank statement. This allows for easier analysis of interviews.

This section concludes with lessons learned regarding the HCD approach. It highlights that it is important to continue qualitative research so long as new information is being collected and to keep in mind how data will be managed. There is no use in collecting data without a sense of how it will be used. Another lesson is to be intentional about perfecting the method so that it is continuously being improved. Finally, adapt the lesson for remote teams to make data collection easier, especially for teams in different time zones.

The conclusion of this presentation as a whole includes discussion questions and answers about using HCD methods in health informatics projects