

# EXPLORING THE PERCEPTION OF ARTIFICIAL INTELLIGENCE AND THE USE OF WEARABLES BY HEALTHCARE PROFESSIONALS: A SCENARIO-BASED INTERVIEW

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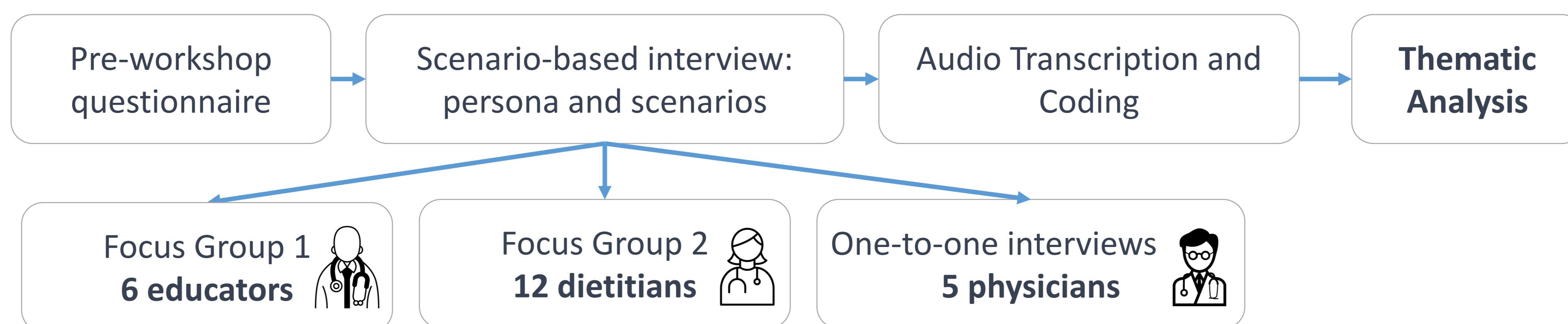
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## Objective

- Design an **Augmented Intelligence** system to help doctors better support patients with diabetes, using wearable data to provide valuable health scores and physical activity recommendations.
- Conduct a **scenario-based interview with healthcare professionals** at HMC to thoroughly understand their
  - clinical workflow
  - perception of Artificial Intelligence (AI)
  - use of wearable data.

## Methodology



## Outcomes

Main **findings** about the diabetic clinic workflow

- Most patients are transferred to diabetic clinics through PHCCs and private clinics.
- Sleep and physical activity are some of the frequently collected data by questionnaires. *→ This can be enriched using wearables.*
- Face-to-face meetings are frequent. *→ This can be supported by an augmented intelligence interface.*

## Persona and Scenarios

### 1 Persona

**Fatima**

**Age:** 50  
**Weight:** Obese  
**Occupation:** Housewife  
**Marital Status:** Married  
**Location:** Qatar

### 5 Scenarios

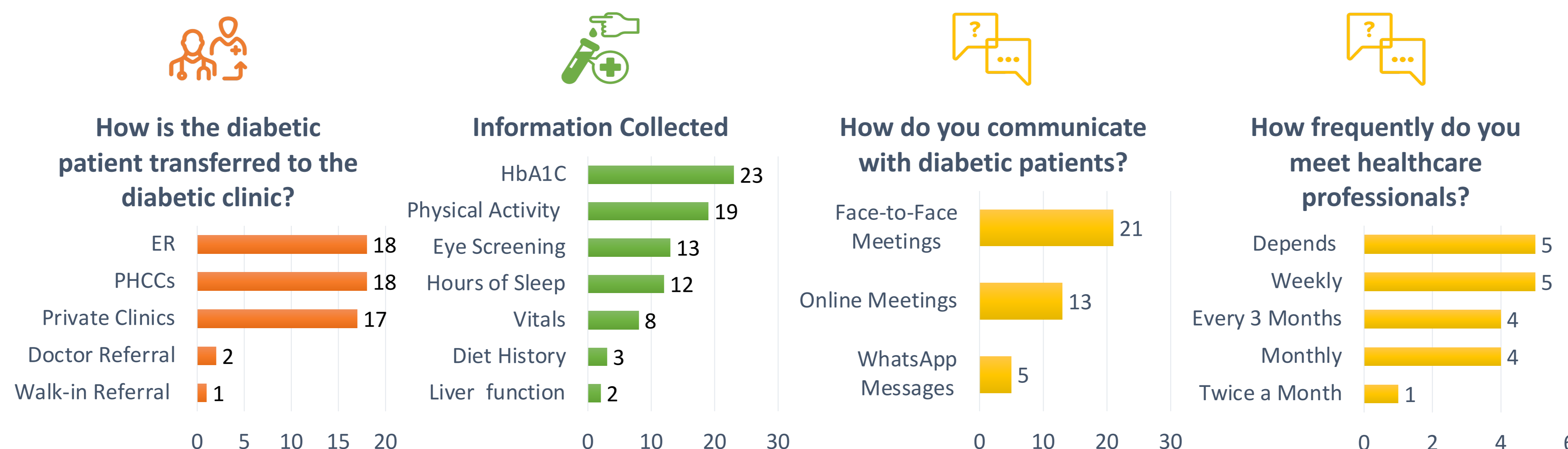
Patient Referral    Types of data collected    Communication of Patient Data    Wearables    Perception of AI and wearables

### Example of storyboard used for the interviews

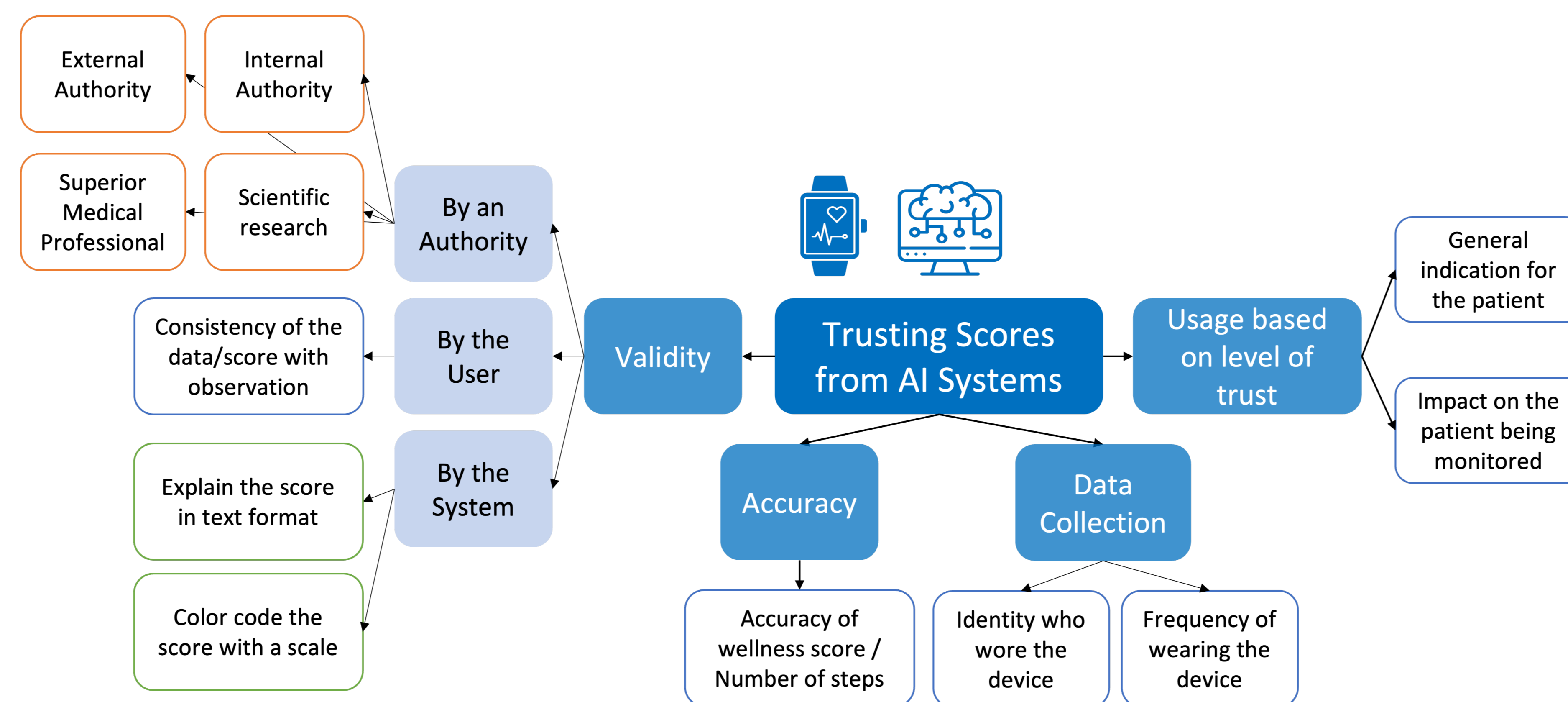
When exploring her FitBit, Fatima notices that she rarely exercises, and her cardio fitness score is very low

She visited her doctor for some guidance

## Questionnaire Feedback



## Thematic Analysis



Main **themes** about trust in AI-generated scores

- Participants would require information on who wore the device and how frequently.
- Participants would use AI-generated scores as a general indication rather than as the sole basis for important decisions.
- Participants would prefer to have access to raw data to verify the score's accuracy.
- Participants would trust scores validated by higher authority or explained by the system.

## Future Work

- This is the first workshop in a series of three.
- The second workshop will focus on determining the system's design elements (e.g., level of detail, representativity).
- The third workshop will involve finalizing the system's design to meet healthcare professionals' needs and testing its functionalities.

**Acknowledgment** This research was made possible by the NPRP award [NPRP11C-0115-180010] from the Qatar National Research Fund. The statements made herein are solely the responsibility of the authors.

# Abstract

This project aims to devise an interactive augmented intelligence system to assist clinicians in better supporting diabetic patients by utilizing wearable data to deliver relevant health scores and physical activity recommendations. It can be challenging to design an interactive system that meets the expectations of clinicians and medical professionals. We conducted a series of scenario-based interviews in workshop settings to better understand their perception. The workshop consisted of the presentation of a persona and a series of scenarios. The purpose is to investigate several aspects of diabetic patient care, such as patient referral, data collecting, patient data communication, perception of artificial intelligence (AI), and usage of wearable data. These workshops were held with groups of educators and physicians. The same scenarios were also investigated with physicians in a number of one-on-one meetings conducted online. All sessions were recorded, and a thematic analysis approach was employed to understand their perception of the use of AI and wearable devices. Participants indicated greater trust in AI-generated scores if they were validated by a higher authority or explained by the system. Understanding the frequency of wearable device usage is another aspect that they discussed. The physicians stated that they were more likely to consider the scores as a broad guideline rather than making critical decisions based simply on the data. Furthermore, they preferred to have access to the raw data used to generate the score to determine its accuracy. The scenario-based interview approach provided useful insights into healthcare professionals' perceptions and experiences with AI-generated scores from wearable data in the management of diabetic patients.