

Challenges Faced by Physicians in Developing Countries in Following Necessary History-Taking Steps

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Extended Abstract

History-taking is a fundamental aspect of clinical practice, providing physicians with essential patient information that influences approximately 76% of diagnoses [1]. In developing countries like Bangladesh, physicians perform history-taking during consultations, following key procedural steps. While there is no fixed standard, common elements include: (1) Greetings, (2) Chief Complaint (CC), (3) History of Present Illness (HPI), (4) Past Medical History (PMH), (5) Medications, (6) Family History, (7) Social History, (8) Systematic Review, (9) Patient's Ideas, Concerns, and Expectations (ICE), and (10) Empathy [2-4]. However, limited resources and overburdened healthcare systems hinder the process. This study investigates the challenges physicians face in following these steps in Bangladesh and proposes a digital health solution to address them. The study utilizes a quantitative research design, targeting physicians from various backgrounds, working in both public and private healthcare settings in Bangladesh. The respondents were required to have at least two years of professional experience and represented different medical disciplines, including general practitioners and specialists. An online questionnaire, comprising 22 questions, was distributed, and responses were collected from 104 physicians.

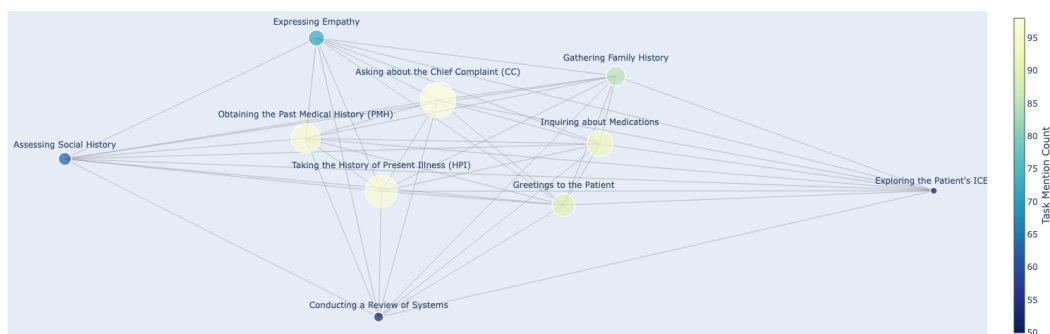


Figure 1: History taking tasks performed by a physician.

The study revealed that 70.19% of our sample of 104 physicians in Bangladesh were unable to consistently follow all necessary history-taking steps during consultations, emphasizing the challenges in delivering comprehensive care. The adherence rates for specific tasks varied significantly. The most frequently followed step was Inquiring about the Chief Complaint (CC) at 94.23%, while other critical steps such as Obtaining the Past Medical History (PMH) and Taking the History of Present Illness (HPI) were adhered to by 85.58% and 83.65% of physicians, respectively. Steps like Inquiring about Medications (79.81%) and Gathering Family History (76.92%) were also commonly followed.

However, tasks like Expressing Empathy (60.58%) and especially Exploring the Patient’s Ideas, Concerns, and Expectations (ICE) (48.08%) were less frequently completed. Fig. 1 shows a network graph that visually illustrates these findings, where larger nodes, such as Chief Complaint (CC), represent higher adherence, while smaller nodes, like ICE, indicate lower adherence. The connections between tasks demonstrate that physicians tend to prioritize immediate medical concerns, often at the expense of more patient-centered steps, such as understanding the patient’s ideas and expectations. This study introduces the Smart Health Gantt Chart (SHGC), a digital health solution designed to enhance the history-taking process, particularly in resource-limited settings like Bangladesh. The AI-powered SHGC collects, stores, and visualizes a patient’s medical history, allowing physicians quick access to essential information during brief consultations. By automating record-keeping, it ensures that all critical history-taking steps are efficiently covered. Key features include comprehensive data collection, concise summaries for decision-making, shareable medical data, and predictive AI for assessing future health risks presenting a visual timeline of the patient’s history, improving care quality, and reducing the risk of missed information [5]. Fig. 2 illustrates the lifelong medical history summary in a single chart, while Fig. 3 outlines the data processing steps. This study highlights the significant challenges physicians in Bangladesh face when conducting comprehensive history-taking, primarily due to limited time and an imbalanced physician-to-patient ratio. These constraints result in incomplete patient histories, potentially compromising care. Digital health solutions like the Smart Health Gantt Chart (SHGC) provide a promising way to address these issues by giving physicians quick access to complete medical histories. By reducing the cognitive load and ensuring critical information is not overlooked, these systems can substantially improve healthcare outcomes in resource-limited settings.

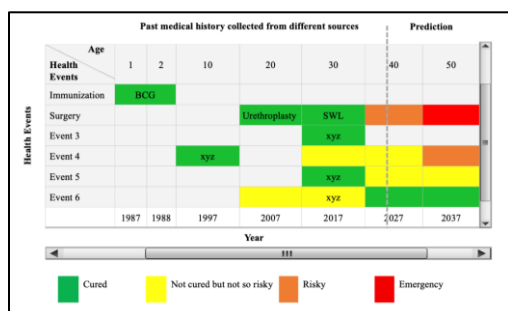


Figure 2: Dashboard concept of the SHGC for life-long history management.

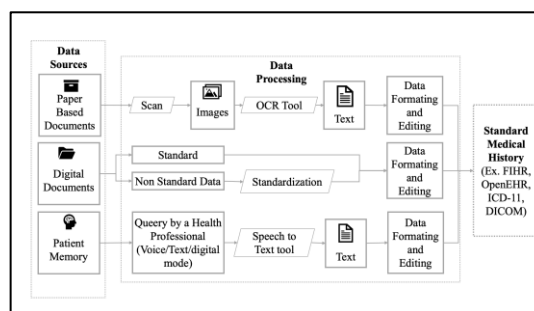


Figure 3: Various types of health data processing in SHGC.

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