eZazi

Usability and Perceived Usefulness of the eZazi Mobile Application for Labour and Delivery Monitoring

Intelehealth
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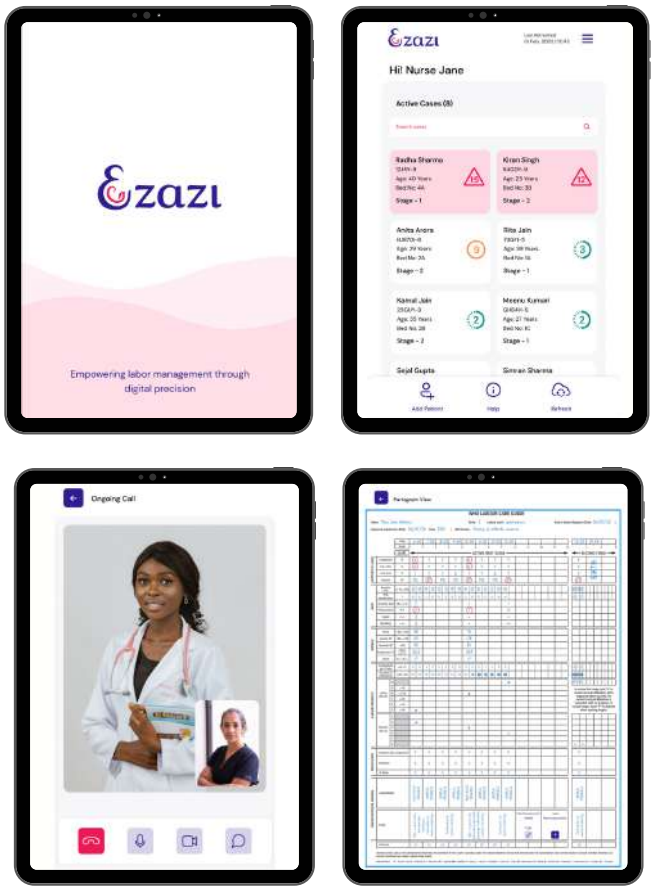
eZazi

The digital labor decision support system

Dramatically improve labor management, birth outcomes and provide high quality respectful maternity care



KEY FEATURES

Track progress of labor

Fully compliant with the WHO Labor Care Guide (2018) and new guidelines for intrapartum care that replace the Partogram

Risk scores, alerts & reminders

Easily triage patients with risk scores, alerts for abnormal readings. Identify areas of concern through visual and sound alerts.

Easy, accurate data entry

Drop down menus, voice to text, and many more features to reduce time for data entry. Reminders for timely data entry.

Collaborative tools & teleconsultations

Video, audio and chat consultations between remote providers and frontline health workers for shared decision making

Real time dashboards & interoperability

Monitor all labor cases at all hospitals through a central dashboard. Export data to surveillance systems or health information systems

Low cost, low bandwidth & offline

Works on low cost tablet and mobile devices. Records readings even when offline and syncs with a cloud server when internet is available

Skilled Birth Attendants using digital tools are more likely than those using paper to take action to maintain normal labor, such as ambulation, feeding, and fluid intake, and to address abnormal measurements of fetal well-being. They are more likely to be complaint with following evidence based guidelines for labor monitoring.

The use of digital tools for labor monitoring is associated with a 56% (95% CI 27%–73%) lower likelihood of suboptimal fetal outcomes (composite of FSB, early NND, Apgar 5 or below at 1 min, below 7 at 5 min, and newborn resuscitation need) than paper based tools.

Why eZazi?

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Background

The purpose of this study was to assess the perceived usability and usefulness of the eZazi mobile application for managing labour and adhering to WHO's Intrapartum Care guidelines, while supporting clinical governance systems. This report presents the feedback and experiences shared by ObGyns who reviewed the eZazi demonstration video. Through a mixed-method approach (quantitative and qualitative analyses), we explore the aspects of the eZazi application that doctors found most beneficial and identify areas that require refinement for enhanced usability and efficacy. The insights gathered from this evaluation will provide valuable guidance for further advancements and improvements in the eZazi application, ultimately promoting safe and effective labour care practices in alignment with WHO's latest guidelines.

The eZazi application is designed to improve labour management and enhance the quality of care provided to expectant mothers during childbirth. To ensure the application's effectiveness and user-friendliness, this assessment sought to understand how well it meets the needs of doctors and skilled birth attendants. By adhering to WHO's Intrapartum Care guidelines, the eZazi application aims to support evidence-based decision-making and elevate the standards of clinical governance in labour care.

Methods

Study Design

The study used Key Informant Interviews (KIIs) to investigate the perceived usability and usefulness of the eZazi application among medical professionals. This audience was selected to understand the perspectives of leaders who would serve as clinical champions for eZazi in their healthcare facilities.

Sampling

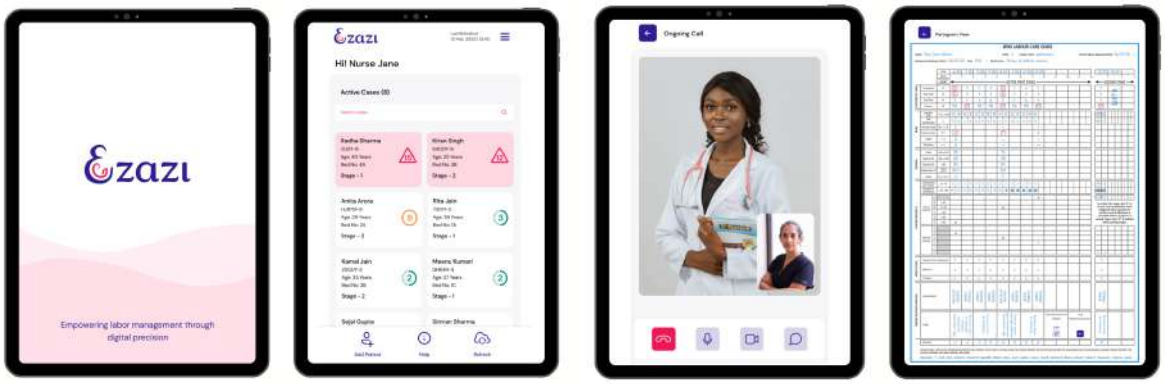
Convenience sampling was chosen due to its practicality in accessing participants easily. We invited a total of eleven (11) clinical champions (ObGyns) from various medical facilities from our partner networks (UNICEF, MSF, Jhpiego, FOGSI, etc.), and eight agreed to participate.

Data Collection

Data was collected through virtual interviews conducted via Zoom meetings. The virtual mode allowed for flexibility in engaging with clinical champions from various locations.

The data collection process was structured to include three key steps. Firstly, a demonstration of the eZazi mobile application (midwife/Skilled Birth Attendant portal) was presented to the participants, followed by a demonstration of the web application (remote ObGyns/Supervisors portal). This visual presentation aimed to provide participants with a comprehensive understanding of the application's features and functionalities (see screenshots of the application presented below).

Subsequently, participants were administered the structured questionnaire. The questionnaire covered multiple sections, addressing usability, user interface design, workflow integration, and the overall acceptability of the eZazi application. Participants' responses were gathered during the virtual interviews and recorded for further analysis.



Data Analysis

Both quantitative and qualitative data from the software demonstrations and questionnaire were analyzed to provide a comprehensive understanding of participants' experiences and perspectives regarding the eZazi application.

Quantitative Analysis: Quantitative data obtained from the questionnaire were subjected to descriptive statistical analysis. This involved the calculation of percentages and frequencies to effectively summarise participants' responses. Through this method, the distribution of opinions and experiences was quantified, however, due to the small sample size, these results are not representative.

Qualitative Analysis: Delving deeper into the insights shared by participating ObGyns, qualitative analysis was conducted using a thematic approach. Thematic analysis, characterized by its systematic and iterative nature, was employed to identify recurrent themes and patterns embedded within the qualitative responses.

Results

Respondent profile

The respondents in this study had a balanced distribution of overall experience of working as a ObsGyn with half (4, 50%) having 3-15 years of experience and the remaining (4, 50%) having 16-30 years of experience. Further, the same distribution was found for the experience in labour care and delivery. Half of the participants (4, 50%) were currently using paper-based labour care guides or Partograms, while the other half were not. All participants were aware of the WHO Labour Care Guidelines (LCG). All participants were considered to by clinical champions in their respective institutions.

Regarding training on using Partograms and the new WHO LCG guidelines, (2, 25%) had received training on Partograms only, while (6, 75%) had received training on both Partograms and the new WHO LCG guidelines. Among the respondents, (3, 37.5%) expressed the need for training on the new WHO LCG guidelines, while (5, 62.5%) did not require additional training in this regard.

Section 1: General Feedback of Users about the eZazi Application

The general feedback from users regarding the eZazi application was predominantly positive, with (5, 62.5%) rating their overall experience as "Good" and (3, 37.5%) as "Very good." Additionally, (6, 75%)

of the respondents found the app's user interface to be "Very understandable," while (2, 25%) considered it "Somewhat understandable." Moreover, the majority of users (6, 75%) found the eZazi application to be "Very useful" in their work, with (2, 25%) stating it was "Somewhat useful."

Qualitative Feedback from health providers on the eZazi Application:

Positive Feedback: The clinical champions provided positive feedback on several aspects of the eZazi application:

1. Ease of Use: Doctors appreciated the application's user-friendly interface. They felt it was easy to navigate and interact with the application.
2. Simplicity: The intuitive design and functionality of the app were appreciated.
3. Visualisation: Doctors found the visual displays of the LCG and other information helpful in understanding labour progress and decision-making.
4. Chat and Video: The inclusion of chat and video features enabled real-time communication and remote patient monitoring.
5. Prioritisation: Doctors commended the app's ability to prioritise cases based on risk profile, facilitating efficient patient management.
6. Digital Printing: The feature of digital printing for the Partogram streamlined documentation and record-keeping during labour care.
7. Decision Making: The app captured crucial inputs for informed decision-making during labour.
8. Data Capturing: Doctors found the ease of data capturing valuable for recording maternal and fetal well-being observations.

Areas for Improvement: The doctors also identified areas for improvement in the eZazi application:

1. Layout (Font Size, Style, etc.): Adjusting font size and style to enhance readability was suggested.
2. Terminology: Using more specific terminology, like "doctor" instead of "provider," was recommended to avoid ambiguity.
3. Multiple Data Points: Streamlining and organising data inputs for ease of use, especially when tracking multiple data points, was advised.
4. Task Shifting (Nurse): Standardising certain decisions, currently dependent on nurses' judgment, could reduce discrepancies.
5. Patient Communication Pathway: Improving patient communication and decision-making alerts, especially for medication prescriptions, was proposed.
6. Smartphone Compatibility: Optimising the app for compatibility with a wider range of smartphones was emphasised.
7. Limited Training: Additional hands-on experience and practical training were suggested to enhance proficiency in using the app.

Section 2: Usability

The usability assessment of the eZazi application indicated that (3, 37.5%) of respondents found it "very easy" to use, (4, 50%) found it "somewhat easy," and (1, 12.5%) expressed a neutral opinion.

In terms of instructions, 87.5% of respondents found them "very clear," and (1, 12.5%) found them "somewhat clear."

The label or icons used in the eZazi application was perceived positively, with (5, 62.5%) finding it "very clear," (2, 25%) finding it "somewhat clear," and (1, 12.5%) expressing a neutral opinion.

However, while implementing eZazi in real-life situations, (7, 87.5%) of respondents anticipated encountering difficulties, challenges, or barriers, with only (1, 12.5%) stating they would not encounter any.

This section presents an analysis of the qualitative responses collected from the users with experiences and insights about the difficulties they expect to encounter during the integration of the eZazi application into their daily workflows and the potential areas for improvement.

Perceived Difficulties, Challenges, and Barriers in Implementing eZazi Application:

Several difficulties, challenges, and barriers to the implementation of the eZazi application were identified:

1. Operational Challenges: High-risk situations and sudden events may require immediate attention, posing challenges while relying on the app. In high-volume settings with limited resources, effective app usage may be difficult. Connectivity issues in remote areas can hinder app usage for case referrals.
2. Data Accuracy and Timeliness: Ensuring data accuracy during critical events and entering data in real-time pose challenges. Time constraints and scarce resources may lead to delays in data entry.
3. Cultural Shift and Documentation Practices: Encouraging real-time data entry and transitioning from retrospective recording may require a culture change. Managing multiple patients by one midwife/SBA may hinder consistent data entry.
4. Interoperability and Multiple Staff Management: Smooth data sharing between healthcare providers is vital for effective collaboration and continuity of care.
5. Unforeseen Challenges: Anticipating all potential difficulties during real-life implementation remains uncertain until the app is fully used.

Section 3: User Interface Design

The eZazi application received positive feedback on its visual appeal, with (7, 87.5%) finding it "Appealing" and (1, 12.5%) finding it "Very appealing." Regarding the design's alignment with its intended purpose, (6, 75%) found it "Very Well," (1, 12.5%) found it "Moderately," and (1, 12.5%) found it "Perfectly" matched its purpose.

Users generally found it easy to capture information in different sections of the application. In the patient registration section, (5, 62.5%) found it “Very easy,” and (2, 25%) found it “Somewhat easy.” In the observation section, (6, 75%) found it “Very easy,” and (2, 25%) found it “Somewhat easy.” In the assessment and medicine section, (5, 62.5%) found it “Somewhat easy,” and (3, 37.5%) found it “Very easy.”Respondents found the clinical words used in the application to be familiar, with (7, 87.5%) finding them “Very familiar” and (1, 12.5%) expressing a neutral opinion. The logo used in the application was well-received, with (3, 37.5%) finding it “Very appealing,” (4, 50%) finding it “Somewhat appealing,” and (1, 12.5%) expressing a neutral opinion.

Users considered the font used in the eZazi application legible, with (4, 57.14%) finding it “Very legible,”. Meanwhile, the remaining three users expressed various opinions, with "Neutral," "Somewhat illegible," and "Somewhat legible" each accounting for 14.29% of the font usage, indicating a relatively even distribution among these categories.

Regarding its impact on job easiness, (4, 50%) of respondents strongly agreed that the eZazi application would make their job easier, (3, 37.5%) somewhat agreed, and (1, 12.5%) expressed a neutral opinion.

Regarding the usefulness of data captured by the eZazi application for remote assessment by clinical champions, (6, 75%) found it “Very useful,” and (2, 25%) found it “Somewhat useful.”

Resistance to using the eZazi application towards its adoption by intended users was reported by (1, 12.5%) as “Very likely,” (4, 50%) as “Somewhat likely,” (1, 12.5%) as neutral and (2, 25%) as “Somewhat unlikely”.

Critical information required for informed decision-making about the patient and the labour care:

ObGyns identified critical information required for informed decision-making:

1. Identification of C-Section Process: The app should provide visual cues or indicators when a patient requires urgent attention and a possible C-section.
2. Multiple Fetal Heart Rates: Tracking multiple fetal heart rates is crucial for understanding fetal well-being and making informed decisions.
3. Determining High-Risk Patients: Additional indicators or algorithms are needed to identify high-risk cases even when vital signs appear normal.
4. Urgent Alarms to Doctors: The app should include urgent alarm features for sudden changes in patient conditions, requiring prompt intervention.

ObGyns’ feedback on the eZazi application’s perceived usefulness:

The usefulness of the eZazi application was seen in various aspects:

1. Improved Decision-Making and Supervision: The app facilitated remote supervision and evidence-based decision-making.
2. Workload Reduction and Stress Management: The app was anticipated to ease the workload and reduce stress related to patient conditions.

3. Enhanced Communication and Feedback: Remote follow-up and feedback features facilitated seamless communication and decision-making.
4. Data Storage and Backup: Data storage and backup capabilities were viewed as beneficial, ensuring data security.
5. Alerts and Real-Time Information: Constant alerts and real-time information were valuable for timely interventions.
6. Impact on Nurses and Documentation: The app's impact on nurses' documentation practices depended on facility-specific factors.
7. Ease of Information Access and Partogram Management: The app's ease of information access and Partogram management streamlined processes.

Anticipated resistance and challenges in adopting eZazi application:

Potential resistance to the adoption of the eZazi application was anticipated for the following reasons:

1. Cost and Resource Concerns: Implementation costs and resource requirements may raise concerns from management.
2. Change in Process and Accountability: More senior staff and midwives may resist changes in processes and added accountability associated with digital documentation.
3. Workload and Post-Natal Care: Increased workload and switching between digital and paper documentation for post-natal care may cause resistance.
4. Tech Resistance and User Preferences: Not all healthcare providers may be interested in using the app, and some may prefer traditional pen and paper methods.
5. Challenges in Shifting from Paper Pen-Based Tool to eZazi Application: Shifting from paper-based tools to the eZazi app may pose challenges in workload, work practices, capacity building, process changes, device availability, connectivity, culture change, time consumption, and existing digital partograms.

Section 4: Workflow

Users responded positively to the workflow integration of the eZazi application. Most users (5, 62.5%) felt that it fits somewhat well into their current day-to-day operations, and (2, 25%) found it to fit extremely well. Only a small percentage (1, 12.5%) had a neutral opinion.

Regarding training time, (5, 62.5%) estimated that it would take 2-4 hours to get trained on the eZazi application, and (2, 25%) estimated 1-2 hours. A smaller proportion (1, 12.5%) estimated that it would take more than 4 hours.

The eZazi application's impact on efficiency was well-received, with (5, 62.5%) of users believing that it would significantly help them complete tasks more efficiently. Additionally, (2, 25%) thought it would help somewhat, and (1, 12.5%) had a neutral opinion.

Users found the application valuable for providing data used in day-to-day operations, with (5, 62.5%) rating it as “Very Well”. For improving service quality through information retrieval, (3, 37.5%) rated it as “Very Well,” 50% as “Moderately,” and 12.5% as “Perfectly.”

The majority (7, 87.5%) found that the e-Zazi application made it easier to track and manage patient data, while (1, 12.5%) found it somewhat helpful for this purpose. Overall, users were satisfied with the eZazi application’s workflow integration and the potential to improve efficiency in their work.

eZazi application customisations suggested by the doctors:

Doctors suggested several customisations for the eZazi application, to enhance its functionality and usability.

Here is a detailed breakdown of their suggestions,

- Time limit customization: Users should have the option to adjust time limits as needed for different tasks or assessments within the application.
- Comprehensive data collection: Collect more comprehensive data, including information related to a woman's married life and past pregnancies.
- Tabular eLCG outcome: Present eLCG outcomes in a tabular format for easier interpretation.
- Inclusion of the type of delivery: Include details about the type of delivery (e.g., normal, cesarean section) in the records.
- Link to national reporting template: Create a seamless link to the current national reporting template, preferably in Excel format, to streamline data entry and improve acceptability.
- Patient receiving delivery summary: Ensure that patients receive a summary of their delivery for better postpartum care.
- Decision support features: Implement decision support tools to aid healthcare providers in making informed decisions during childbirth.
- Additional text boxes: Add extra text boxes for capturing additional information when necessary.
- Doctors' notification alerts: Enable doctors to receive real-time notifications and alerts related to patient care.
- Language customization: Allow users to customize the language of the application to accommodate different language preferences.
- Customizing types of providers: Provide options to customize the types of healthcare providers using the application.
- Customizing the number of beds: Allow customization of the number of beds to match the specific needs of healthcare facilities.
- Offline communication capabilities: Ensure that the application supports offline communication, especially in areas with unreliable internet connectivity.

Training and implementation recommendations:

Training Requirements:

- Training on LCG guidelines and clinical decision-making
- Technical training on app functionality
- Training for management personnel
- Device upkeep and maintenance training
- Connectivity and Internet handling training

Aspects for smooth adoption and implementation:

- Involvement of key personnel and departments
- Highlighting the benefits of on-time data recording
- Conducting cost implication analysis
- Considering the country context and device procurement
- Ensuring adequate connectivity and device allocation
- Continuous support and mentorship from the app providers
- Providing specific and sufficient training time
- Conducting motivation sessions and advocating for the benefits of the eZazi application.

Section 5: Acceptability

The eZazi application received positive feedback regarding its acceptability among users. Fifty percent of respondents expressed that they are likely to use the eZazi application in their daily work, while (3, 37.5%) said they are very likely to do so. In terms of confidence in using the application effectively, (3, 42.86%) were somewhat confident, and the same percentage felt very confident. As for feasibility, (6, 75%) of users found it somewhat feasible, and (2, 25%) considered it very feasible to use the eZazi application, assuming nurses have the necessary training.

Furthermore, an overwhelming majority (6, 75%) of participants reported that they would highly recommend the eZazi program to other nurses and doctors in the maternity ward. The results indicate a favourable level of acceptability for the eZazi application among its intended users.

Summary of results

Positive Feedback on eZazi Application: Doctors lauded several features of the eZazi application, including its ease of use, simplicity, and visualisation capabilities. The application's chat and video features enabled real-time communication and remote patient monitoring. The prioritisation feature based on risk profiles facilitated efficient patient management. The digital printing of Partograms streamlined documentation, and the application captured critical data for informed decision-making.

Areas for Improvement: To enhance the application's usability, doctors suggested addressing concerns related to font size, using specific terminology, managing multiple data points, and

standardising decision-making criteria. Improvements in patient communication pathways, decision alerts, smartphone compatibility, and providing adequate training were also recommended.

Difficulties, Challenges, and Barriers in Implementation: Doctors identified several challenges in implementing the eZazi application, including managing sudden events and high-risk situations, ensuring data accuracy, and adapting to cultural shifts around documentation practices. Connectivity issues in remote areas and interoperability between multiple staff were also highlighted.

Anticipated Resistance and Challenges in Adoption: Doctors anticipated resistance to application adoption due to cost and resource concerns, change in processes, increased workload, and potential tech resistance among users. Challenges during the shift from paper-based tools included time consumption for data entry, device availability, and connectivity issues.

Critical Information Required for Informed Decision-Making: Respondents stressed the need for the eZazi application to capture multiple fetal heart rates and provide visual cues for C-section processes. They emphasised the importance of accurately determining high-risk patients and incorporating urgent alarms for sudden changes in patient conditions.

Perceived usefulness: Doctors foresee the eZazi application's positive impact on decision-making, patient supervision, and stress reduction. Enhanced communication, data storage, and real-time information were perceived as advantageous. However, some concerns about increased documentation for nurses and preference for mobile app usage were raised.

Annexure

eZazi – Figma Demo Feedback Questionnaire

Labor management is complex, requiring skilled birth attendants to record periodic observations of maternal and fetal well-being, use these data to distinguish normal from abnormal progress, and predict and plan next steps over the course of labor. Interpreting a single measurement such as fetal heart rate is relatively simple, but evaluating combinations of measurements, e.g., labor progression in relation to frequency and duration of contractions, is complex. In 2018 WHO issued new guidelines for Intrapartum Care for positive birth outcomes, and has subsequently replaced the WHO partogram with the Labor care guide.

eZazi is an digital application for labour and delivery monitoring that incorporates WHO's new Intrapartum Care guidelines and conforms to the WHO LCG guide. This decision support tool is aimed at improving labor management, providing a better quality of care and supporting the desire to have workable clinical governance systems.

Please fill in your responses to the following question after reviewing eZazi Demonstration Video

Respondent Profile

A. Name of respondent

B. Years of experience

C. Years of experience in Labour care and delivery

D. Qualification

E. Are you currently using any paper based Labour care guide/ Partogram?
    a. Yes
    b. No

F. Are you aware about the WHO Labour care guidelines (LCG)?
    a. Yes
    b. No

G. Have you received any training on using partogram/ LCG ?
    a. Yes (only partogram)
    b. Yes (partogram, and new WHO LCG guidelines)
    c. None

H. Do you require training on the new WHO LCG guidelines?
    a. Yes
    b. No

Section 1: General Feedback

1. How would you rate your overall experience with the eZazi application?

    a. Very poor
    b. Poor
    c. Neutral
    d. Good
    e. Very good

2. How understandable is the user interface of the eZazi application?
    a. Very understandable
    b. Somewhat understandable
    c. Neutral
    d. Somewhat understandable
    e. Not very understandable

    3.1 **if the response is marked c,d,e then probe -** Which parts of the user interface were confusing or difficult to understand?

    Response:

3. Do you think the eZazi application would be useful to you in your work?

    a. Very useful

    b. Somewhat useful

    c. Neutral

    d. Not very useful

    e. Not at all useful

4. What are the three things you liked most about the eZazi application? (probe for reasons)

5. What are the three things you liked least about the eZazi application? (probe for reasons)

Section 2: Usability

6. Do you think the eZazi application is easy to use?
   a. Yes, very easy
   b. Yes, somewhat easy
   c. Neutral
   d. No, difficult
   e. No, very difficult

   6.1 **If the response is d, e then probe -** Why did you find the application difficult to use? Which parts of the application specifically were difficult to use?

7. Do you expect to encounter any difficulties when you use the e-Zazi application in a real-life scenario?
   (While implementing eZazi in a real life situation, do you think you will encounter any difficulties/challenges/barriers?)
   a. Yes
   b. No
8. If you answered yes to the previous question, please describe the difficulties/challenges/barriers you think you will encounter in implementing such an application in a real life scenario.

9. Were the instructions clear and easy to understand?
   a. Yes, very clear
   b. Yes, somewhat clear
   c. Neutral
   d. No, somewhat confusing
   e. No, very confusing

   9.1 If response is d, e probe - Which instructions in the application specifically were confusing? Why did you find these instructions confusing?

10. Were the labels or icons clear and easy to understand?
    a. Yes, very clear
    b. Yes, somewhat clear
    c. Neutral
    d. No, somewhat confusing
    e. No, very confusing

    10.1 If response is d, e probe - Why did you find the labels/icons confusing? Which labels/icons of the application specifically were confusing?

Section 3: User Interface Design

11. How visually appealing is the eZazi application?
    a. Very unappealing
    b. Unappealing
    c. Neutral

d. Appealing
e. Very appealing

12. How well does the design of the eZazi application match its intended purpose? (Instruction: Given that this is a paper based tool that has been digitized -Are the section in the application appropriate, does it account for all the data/information that has to be entered, is it functional etc.)

    a. Not at all
    b. Somewhat
    c. Moderately
    d. Very
    e. Perfectly

13. Does the application capture all the information required to make an informed decision about the patient and the labor which is in progress?

    a. Yes
    b. No

    13.1 **If no, then probe** - Are there any important information that the application is not capturing currently, please mention

14. Is the eZazi application capturing all the necessary information?

    a. Capturing all necessary information
    b. Capturing too much information
    c. Capturing too little information
    d. Not capturing the right information

    14.1 If the response is **a, c** -Do you feel the application captures less information than required or more information than required? What changes would you suggest?

15. How easy was it to capture the information in the patient registration section in eZazi application?

    a. Very easy
    b. Somewhat easy
    c. Neutral
    d. Somewhat difficult
    e. Very difficult

    15.1 **If the response is d,e probe** - what difficulties did you face while capturing information on the application?

16. How easy was it to capture the information in the observation section in the eZazi application?

    a. Very easy
    b. Somewhat easy
    c. Neutral
    d. Somewhat difficult
    e. Very difficult

16.i if response is **d, e** ask**:** Which information in the observation section is difficult to capture?

17. How easy was it to capture the information in the assessment and medicine section in the eZazi web application?

    a. Very easy
    b. Somewhat easy
    c. Neutral
    d. Somewhat difficult
    e. Very difficult

    17.i if response is **d, e** ask**:** Which information in the assessment and medicine section is difficult to capture?

18. Are the clinical words used in the eZazi application match with the clinician language you are used to ?

    a. Very familiar
    b. Somewhat familiar
    c. Neutral
    d. Somewhat unfamiliar
    e. Very unfamiliar

    18.1 If the response is **d, e** ask**:** Which clinical words are unfamiliar?

19. Do you think the eZazi application will make your job easier?

    a. Strongly agree
    b. Somewhat agree
    c. Neutral
    d. Somewhat disagree
    e. Strongly disagree

    19.1 How will the application make your job easier or difficult?

20. Is the data captured by the eZazi application useful information for a remote assessment by a doctor?
    a. Very useful
    b. Somewhat useful
    c. Neutral
    d. Not very useful
    e. Not at all useful

21. What do you think of the logo used in the eZazi application?

    a. Very appealing
    b. Somewhat appealing
    c. Neutral
    d. Somewhat unappealing
    e. Very unappealing

    21.1 **If the response is d,e then probe** - Why do you find the logo unappealing?

22. How do you rate the font used in the eZazi application?

a. Very legible
b. Somewhat legible
c. Neutral
d. Somewhat illegible
e. Very illegible

22.1 **If the response is d,e, then probe** - why are you unlikely to use the application?
Reasons:

22.2 Do you see any resistance to using the eZazi application towards its adoption by intended users?

a. Very likely
b. Somewhat likely
c. Neutral
d. Somewhat unlikely
e. Very unlikely

22.3 **If the response is a, b then probe** - Why do you anticipate resistance in using the application?

22.4 Do you see any challenges in shifting from a paper pen based tool to an eLCG application?

a. Yes
b. No

If yes, what challenges?

23. Would you like any customizations in the eZazi application?

a. Yes, I would like some customizations
b. No, the current application meets my needs

21.1 If response is a, then probe - what customizations would you suggest for the application?

a. Patient Registration
b. Case history
c. Partograph
d. Call/Video features
e. Recording information
f. Others

Section 4: Workflow

23. How well does the workflow of the eZazi application fit into your current day-to-day operation?

a. Fits extremely well

b. Fits somewhat well
c. Neutral
d. Does not fit well
e. Does not fit at all

24.1 **If response is d,e then probe** - which aspects of your current day-to-day operations do not fit well with the application's workflow?

24. How long do you estimate it would take to get trained on the eZazi application?

    a. Less than an hour
    b. 1-2 hours
    c. 2-4 hours
    d. More than 4 hours

25. Do you think the eZazi application will help you complete your tasks more efficiently?

    a. Yes, significantly
    b. Yes, somewhat
    c. Neutral
    d. No, somewhat slower
    e. No, significantly slower

26. How well can the application provide data to be used for day to day operations?

    a. Not at all
    b. Somewhat
    c. Moderately
    d. Very Well
    e. Perfectly

27. How well can the application help in improving quality of service through retrieving information ?

    a. Not at all
    b. Somewhat
    c. Moderately
    d. Very Well
    e. Perfectly

28. Will the e-Zazi application make it easier for you to track and manage patient data?

    a. Yes, significantly
    b. Yes, somewhat
    c. Neutral
    d. No, somewhat harder
    e. No, significantly harder

Section 5: Acceptability

29. How likely are you to use the eZazi application in your daily work?

    a. Very unlikely

b. Unlikely
c. Neutral
d. Likely
e. Very likely

31. How confident are you in your ability to use the eZazi application effectively?

    a. Very confident
    b. Somewhat confident
    c. Neutral
    d. Not very confident
    e. Not confident at all
    31.1 **If the response is d,e, then probe** - why do you feel unconfident while using the application.

32. Assuming nurses have the necessary training, how feasible is it to use the eZazi application?

    a. Very feasible
    b. Somewhat feasible
    c. Neutral
    d. Somewhat unfeasible
    e. Very unfeasible

    32.1 **if response is d,e probe** - what other reasons may make using the application unfeasible?

33. Did you think you will encounter any issues or concerns with the eZazi application that would prevent you from using it in your daily work?

    a. Yes
    b. No

34. If you answered yes to the previous question, please describe the issues or concerns you encountered.

35. What are there any training requirements that need to be addressed ?
    Response:

36. What are the aspects which need to be ensured for smooth adoption and implementation?

    Response:

37. How likely are you to use the eZazi application?

    a. Very likely
    b. Somewhat likely
    c. Neutral
    d. Somewhat unlikely
    e. Very unlikely

38. Would you recommend the eZazi program to other nurses and doctors in the maternity ward?

    a. Very unlikely

b. Unlikely
c. Neutral
d. Likely
e. Very likely

38.1 If the **response is a,b then probe further** - why would you not recommend the application to your colleagues?

39. Were labels legible and icons visible during this video demonstration?
    a. Yes
    b. No
40. Do you have any additional comments or suggestions for how we can improve the eZazi application

Thank you for your time and feedback!

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Cover photo: Intelehealth

Intelehealth is a tech-nonprofit that works to improve access to quality healthcare where there is no doctor through telemedicine. We help governments, NGOs and hospitals with technology and implementation services to set up telemedicine programs that improve health access for hard-to-reach communities.

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