



Enhancing Medication Adherence and Treatment Effectiveness through Digital Pills

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Introduction

Medication non-adherence leads to poor treatment outcomes and rising healthcare costs.

WHO estimates 50% average adherence to long-term therapies.

Traditional monitoring methods are insufficient.

Digital pills offer a novel real-time adherence solution.

What are Digital Pills?



- Pills embedded with ingestible sensors.
- Track ingestion in real-time via smartphone/wearable patch.
- Data accessible by patients, caregivers, and providers.
- Example: Abilify MyCite (FDA-approved for schizophrenia).

Objectives of the Study



Evaluate how digital pills impact real-world medication-taking behavior



Measure improvements in treatment outcomes through adherence



Capture perspectives of both patients and healthcare professionals



Identify practical, ethical, and technological barriers to wide-scale adoption

Research Methodology

Mixed-methods:
survey + secondary
data.

Location:
Ahmedabad
tertiary care
hospital.

Sample: 100
participants (60
patients, 40
providers).

Tools:
Questionnaire,
literature review,
graphs.

Survey Result: Medication Forgetfulness

60% of patients
forget doses.

20% occasionally
forget ; 20%
adhere.

No one reported
frequent
forgetfulness.

Digital pills can
help address
occasional lapses.

Survey Result: Willingness to Use Digital Pills

66.7% of respondents said YES to using digital pills.



26.7% said MAYBE – concerns about cost or privacy.



Only 6.6% said NO – indicates high acceptability.



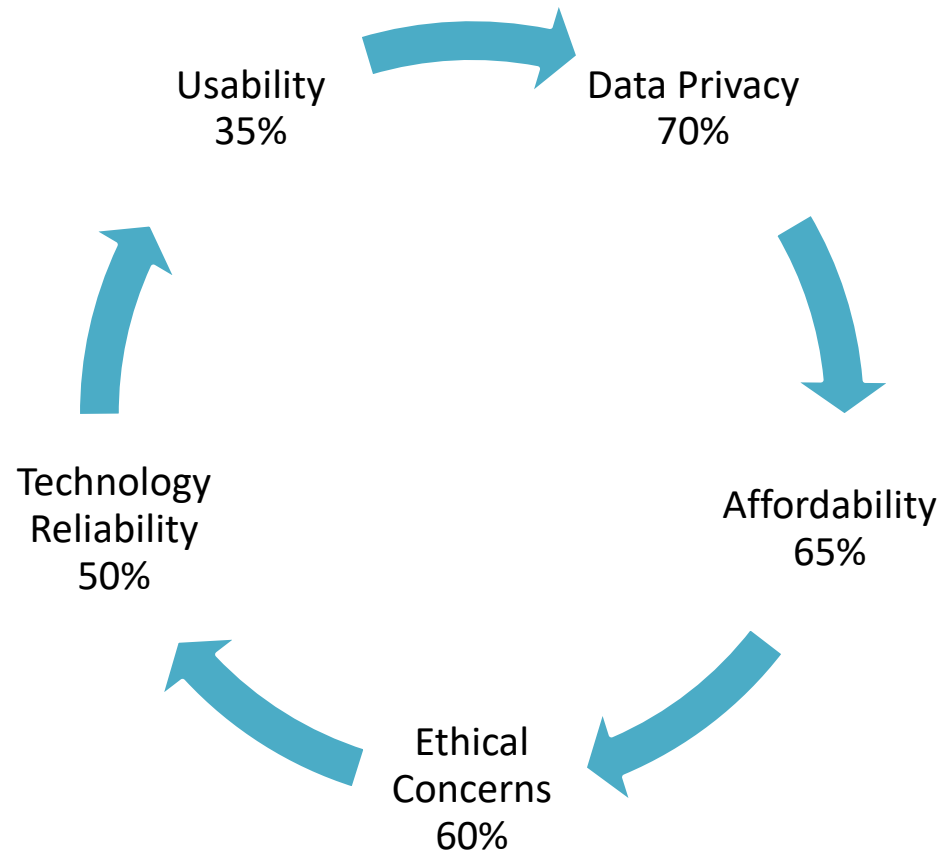
Awareness and education could shift 'maybe' to 'yes'.

Adherence Before vs After Digital Pills

- Schizophrenia: 52% → 75%
- Hypertension: 60% → 83%
- Diabetes: 48% → 73%
- Digital pills significantly boost adherence in chronic care.



Top Barriers to Digital Pill Adoption



Key Research Results

68% of users reported improved adherence

66.7% of patients were open to using digital pills

Studies show 30–60% adherence improvement post-digital pill adoption

Ethical and financial concerns still exist but can be mitigated

Digital pills outperformed traditional methods in multiple global trials

Discussion Highlights



Improved adherence and timely intervention.



Patients feel more accountable.

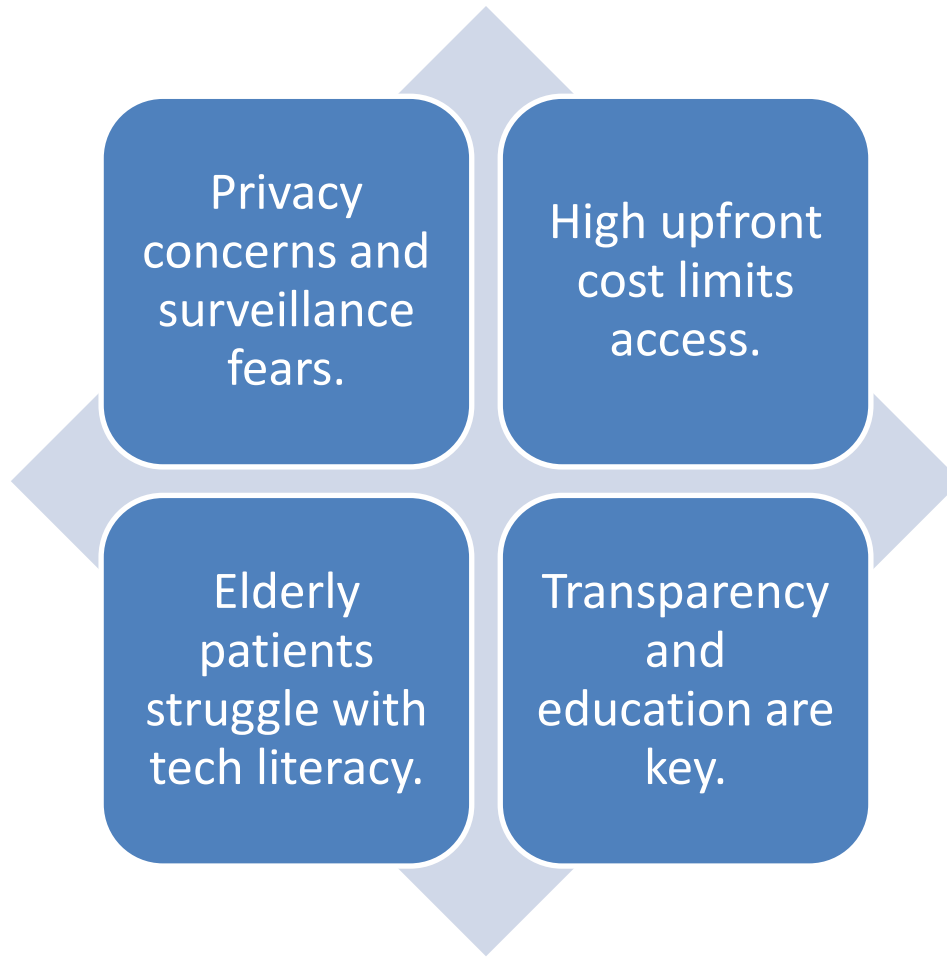


Providers can track and adjust in real-time.



Aligns with global digital health trends.

Ethical & Practical Challenges



Recommendations

1

Run pilot programs
in chronic disease
management.

2

Offer
insurance/subsidies
for digital pills.

3

Train healthcare
workers and
patients.

4

Strengthen data
security and EHR
integration.

Conclusion

- Digital pills offer real-time, measurable improvements in adherence and clinical care
- They empower both patients and providers to manage chronic conditions better
- Widespread implementation depends on affordability, literacy, and privacy safeguards
- With supportive policy and pilot programs, digital pills could redefine patient care in India and globally





Thank You!