

OPERATIONAL INSIGHTS AND PRODUCT TESTING IN A HEALTHCARE TECH STARTUP

Dissertation Submitted to



The IIHMR University, Jaipur

for the partial fulfillment for the award of the degree of

Master of Business Administration (MBA)

in

Hospital and Health Management

by

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Under the Supervision and Guidance of

Dr. Sarthak Sengupta

2025

CERTIFICATE OF ACHIEVEMENT

THIS CERTIFICATE IS AWARDED TO

TUSHAR YADAV

for successfully completing internship and giving an outstanding performance in
the work at LIVINGNEEDS HEALTHCARE PRIVATE LIMITED from March 2025 to
May 2025 in the field of Web Development.



A handwritten signature in dark blue ink, appearing to read 'yash' followed by a flourish.

YASHWANT VAISHNAV

Founder

CERTIFICATE

This is to certify that dissertation titled Operational insights and product testing in a healthcare tech startup is a record of the research work undertaken by Dr. Tushar Yadav in partial fulfillment of the requirements for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur under my guidance and supervision and his approach to the research study has been sincere, scientific, and analytical.



Faculty Guide

IIHMR University, Jaipur

Date 16/5/25



School Dean

IIHMR University, Jaipur

Date

Declaration by the Student (Appendix D)

DECLARATION BY STUDENT

I hereby declare that this dissertation, titled **Operational insights and product testing in a healthcare tech startup** is the bona fide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.



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1877 Health management.

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Dr. Tushar Yadav

MBA (Health Management)

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Abstract (in Word Format & in Main File)

Abstract

Title:

Operations and Marketing Activities at Living Needs Healthcare Pvt. Ltd.

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Keywords:

Operations, Healthcare Marketing, Hospital Onboarding, Queue Management, Campaign Strategy, Health-Tech

Background:

Living Needs Healthcare Pvt. Ltd., a Jodhpur-based health-tech startup, offers queue management and advertisement integration systems for hospitals. The company focuses on streamlining operations while generating ad-based revenue for healthcare providers.

Objective:

To gain hands-on experience in operations and marketing within a healthcare startup by:

- Supporting hospital onboarding
- Conducting digital and field marketing campaigns

- Evaluating advertisement effectiveness
- Exploring international outreach through email marketing

Methodology:

A mixed-method approach was used:

- Primary data: hospital visits, stakeholder interviews, and structured questionnaires
- Secondary data: internal company reports and social media analytics

Key tools included Google Forms, Facebook Ad Manager, and Excel for tracking hospital interactions.

Results/Findings:

- 15+ hospitals visited; 2 successfully onboarded (Abhay Eye Clinic and Jeevan Raksha Hospital)
- Questionnaire revealed 85% patients found screens useful; 65% recalled ads
- Social media campaigns achieved 20% lead response
- US outreach to 70+ agencies resulted in 5 positive replies

Conclusion:

The internship demonstrated that successful health-tech deployment requires synergy between operations and marketing. Practical exposure to ground-level challenges and strategic outreach enabled holistic learning. Living Needs Healthcare shows potential for scale with localized solutions and international interest.

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Chapter 1: Introduction

1.1 Background of the Study

India's healthcare system has undergone a significant transformation in the last decade with the integration of technology. From electronic health records to AI-driven diagnostics, the industry is becoming more efficient and accessible. However, a major pain point still remains in hospital operations — especially in managing patient flow and waiting time. Living Needs Healthcare Pvt. Ltd. identified this gap and developed a queue management solution integrated with digital advertising to not only streamline operations but also open up revenue channels for hospitals.

1.2 Overview of Living Needs Healthcare Pvt. Ltd.

Living Needs Healthcare Pvt. Ltd., based in Jodhpur, Rajasthan, is a rising health-tech startup focused on optimizing hospital operations. Their flagship product is a smart queue management system paired with display screens that serve dual purposes — patient navigation and targeted advertisement display. The company aims to digitize semi-urban and rural hospitals while enabling hospitals to earn passive income through in-hospital ad visibility.

1.3 Need for Operations and Marketing Integration

Operations in health-tech are not limited to product deployment; they include ongoing support, customization, and user training. Simultaneously, marketing is needed to generate leads, onboard new clients, and establish market presence. For startups, especially in healthcare, these two domains must work in tandem. An efficient operations team helps ensure smooth implementation, while a well-aligned marketing strategy brings in the right clients and builds trust. In this project, integrating both was necessary to ensure that feedback from the field could refine marketing strategies and vice versa.

1.4 Objectives of the Study

- To observe and support hospital onboarding processes.
- To understand how marketing strategies help reach and retain clients.
- To analyze the effectiveness of social media and digital campaigns.
- To examine international outreach and its initial outcomes.
- To identify real-world operational and marketing challenges faced during startup scaling.

1.5 Scope of the Study

The internship spanned across urban and rural healthcare setups in Rajasthan, primarily in Gandhinagar and Dungarpur districts. It involved visits to PHCs, CHCs, district hospitals, and private clinics. Additionally, the scope included digital marketing efforts in India and an exploratory international outreach campaign in the United States. The project timeframe was three months, and the intern was directly involved in operations and marketing coordination.

1.6 Methodology

A mixed-method research approach was used.

- **Primary data:** Observations during hospital visits, structured interviews with staff, responses to feedback forms.
- **Secondary data:** Internal company documents, social media analytics, competitor benchmarking.
- **Tools used:** Google Forms for feedback, Facebook Ad Manager for campaign insights, and Excel sheets for tracking hospital visits and client interest.

• **Chapter 2: Literature Review**

○ **2.1 Role of Operations in Health-Tech Startups**

Operations play a crucial role in any startup, more so in the healthcare technology sector where product implementation involves regulatory compliance, training of non-technical staff, and system customization as per facility requirements. According to Kumar & Sharma (2022), startups that effectively manage ground-level execution are more likely to retain clients in the health sector. In the case of queue management systems, smooth installation, proper screen placement, and regular follow-up are key operational responsibilities. Literature suggests that seamless operations help establish credibility and lay the foundation for long-term contracts.

○ **2.2 Marketing Strategies in Healthcare Sector**

Marketing in healthcare differs from traditional consumer marketing. The audience is not just patients, but also doctors, administrators, and institutions. According to a report by Frost & Sullivan (2023), digital transformation in hospitals must be supported by robust B2B marketing strategies, which include relationship-building, informative campaigns, and need-based pitching. Social media platforms like WhatsApp and Facebook have emerged as powerful tools to reach small clinics and independent practitioners. Email marketing, webinars, and testimonials play an important role in international outreach.

○ **2.3 Queue Management Systems in Hospitals**

Queue management is no longer a luxury in healthcare; it's a necessity. Literature from WHO (2021) highlights that effective patient flow management reduces anxiety, prevents overcrowding, and increases patient satisfaction. Digital queue systems have shown to reduce waiting time by up to 40% in government settings when implemented correctly. In India, queue management remains underutilized in rural hospitals. Companies like Living Needs aim to bring this digitization at scale, even in tier-2 and tier-3 towns, by coupling it with ad revenue models.

- **2.4 Digital Advertising and Hospital Engagement**

Hospitals are increasingly becoming platforms for information dissemination. Waiting areas have untapped attention time, which can be utilized for education and advertisement. According to an IIM-Ahmedabad study (2020), patients are more likely to engage with digital ads in hospitals compared to social media due to reduced distraction. Healthcare-focused digital screens can promote hospital services (lab, pharmacy, OPD timings) and generate ad revenue when used for third-party branding. However, ethical considerations and patient consent need to be managed.

Chapter 3: Organizational Profile

3.1 Company Background

Living Needs Healthcare Pvt. Ltd. is a Jodhpur-based health-tech startup founded with the vision of digitizing hospital operations, especially in tier-2 and tier-3 towns. The company launched its flagship queue management software integrated with display systems to ease patient flow and allow hospitals to monetize their waiting areas through advertising. It began operations with pilot projects in Rajasthan and aims to scale nationwide and globally through partnerships.

3.2 Vision, Mission, and Goals

Vision:

To revolutionize healthcare operations in India through affordable digital solutions and create new revenue channels for underfunded hospitals.

Mission:

To enable small and medium-sized hospitals to adopt digital tools for better efficiency, patient experience, and financial sustainability.

Short-Term Goals:

- Onboard 50+ hospitals across Rajasthan by 2025
- Launch fully functional ad-display dashboard
- Expand reach to US-based hospital networks for collaboration

Long-Term Goals:

- Become India's most trusted queue management provider
- Create an ecosystem where patients are informed, and hospitals are empowered
- Launch multilingual educational content for rural healthcare settings

3.3 Organizational Structure

The company follows a flat hierarchy to encourage open communication and fast execution. At the time of internship, the structure included:

- CEO and Founder
- Tech Development Team
- Operations and Implementation Team
- Marketing and Outreach Team
- Interns and Trainees

Regular internal meetings and cross-functional coordination ensured that the operations and marketing teams aligned on onboarding targets and campaign goals.

3.4 Product and Services Overview

1. **Queue Management Software:**

A smart display-based token system that allows patients to wait comfortably and be informed of their turn. Integrated audio-visual display keeps patients engaged and informed.

2. **In-Hospital Advertising Screens:**

Monetizable display panels that show ads from local businesses, pharma companies, and hospitals' own services.

3. **Analytics Dashboard:**

A backend platform that tracks ad views, patient footfall, wait time, and screen uptime.

4. **Customization & Support:**

End-to-end support for hospitals including screen setup, software integration, staff training, and troubleshooting.

5. **3.5 Growth Potential and Market Position**

India has over 20,000 PHCs and CHCs and more than 40,000 private clinics — most of which still use manual registration and have no in-house advertising. This presents a huge opportunity for companies like Living Needs. With its lean model and scalable tech, the startup holds strong market potential. Early traction from hospital visits and successful pilot onboarding strengthens its credibility in the health-tech ecosystem.

Chapter 4: Internship Overview

4.1 Objectives of Internship

The internship at Living Needs Healthcare Pvt. Ltd. was aimed at giving hands-on experience in the field of health-tech operations and marketing. The core learning objectives included:

- Understanding client onboarding process in hospitals
- Executing digital and physical marketing campaigns
- Exploring international outreach strategies
- Handling real-time implementation challenges
- Learning startup-level operations and cross-functional collaboration

4.2 Internship Duration and Setting

The internship spanned **three months**, from **March to June 2025**, and was conducted in a hybrid mode.

- **Head office location:** Jodhpur, Rajasthan
- **Field visits:** Gandhinagar, Dungarpur (Rajasthan)
- **Work type:** Operations, digital marketing, field research, and documentation
The intern was actively involved in both field-level execution and remote tasks including social media campaigns and US outreach efforts.

4.3 Team Structure and Reporting

During the internship, the intern reported directly to the Operations & Marketing Lead. The work was coordinated through daily updates on WhatsApp and weekly video calls.

- Tasks were divided using Trello and Excel sheets
- Content creation was reviewed by the marketing head
- Field visit logistics were handled in coordination with the operations team

The intern's work was recognized as valuable, especially in onboarding two pilot hospitals and initiating international communication with healthcare advertising firms in the US.

Chapter 5: Work Done

5.1 Hospital Visits

During the internship, the intern visited more than **15 hospitals** including:

- Urban and Rural PHCs
- Community Health Centers (CHCs)
- One Sub-District Hospital
- One District Hospital

These visits were conducted across Gandhinagar and Dungarpur, Rajasthan. The objective was to understand the workflow, assess feasibility of queue management systems, and interact with hospital staff.

Observation checklists were used to note screen placement options, power backup availability, staff readiness, and patient load. The visits helped shape realistic timelines for implementation.

5.2 Client Onboarding

Two hospitals were successfully onboarded during the internship:

1. **Abhay Eye Clinic**, Dungarpur
2. **Jeevan Raksha Hospital**, Dungarpur

Key steps in onboarding included:

- Screen installation and setup
- Software configuration
- Staff orientation and training
- Testing for uptime and ad display stability

Both hospitals were used as **pilot testing grounds**. Initial hiccups like unstable electricity and staff unfamiliarity with digital systems were managed with support visits and simplified guides.

5.3 Social Media Marketing

Parallel to fieldwork, a digital marketing campaign was launched:

- **Platforms:** Facebook, WhatsApp
- **Target audience:** Private clinics, nursing homes, and small hospitals
- **Tools used:** Canva (for poster design), Meta Ad Manager (for sponsored posts)

Creative posters explained the benefits of queue screens and ad revenue.

Key Outcomes:

- Over **50 inquiries**
- **20% response rate**
- **7 demo requests** received in Rajasthan

5.4 Questionnaire-Based Feedback

To assess the **effectiveness of ads on hospital screens**, a structured feedback form was created using **Google Forms**.

It was shared with:

- Hospital visitors
- Staff (receptionists, nurses, ward boys)
- Doctors

The questionnaire covered:

- Screen visibility
- Clarity of information
- Attention span of viewers

- Ad recall and awareness

This data helped the company refine the **type of content** to show on screens — with a mix of health awareness + commercial ads.

5.5 US Project

A special project was undertaken during the internship to **explore international market opportunities**.

Steps Taken:

- Compiled a list of **70+ healthcare advertising agencies** and hospitals in the United States
- Created a **cold-email draft** for collaboration
- Sent introductory emails explaining Living Needs' model
- Attached video demo of the product and expected revenue share benefits

Although no formal MoU was signed, **5 agencies responded positively**, asking for follow-ups, showcasing real potential for global expansion.

Chapter 6: Findings and Analysis

6.1 Feedback Summary

From the structured questionnaires circulated in pilot hospitals (Abhay Eye Clinic and Jeevan Raksha Hospital), the following trends emerged:

- **85% of patients** found the screen useful for knowing their token number.
- **70% staff** felt screens helped reduce repetitive patient queries.
- **65% viewers** remembered at least one ad played on the screen.
- **40% doctors** believed the screen had potential for health awareness promotion.

The feedback validated the product's relevance and gave insights into content preferences — e.g., rotating health tips, short local ads, and hospital info.

6.2 Marketing Performance

The social media campaign results were analyzed through Facebook Ad Manager and WhatsApp interactions.

- **Ad Reach:** 7,000+ targeted viewers
- **Click-Through Rate (CTR):** 4.1%
- **Leads Generated:** 50+
- **Demos Booked:** 7 (including 2 from Gujarat hospitals)

These metrics show that low-budget social campaigns can be effective in reaching healthcare decision-makers, especially in Tier-2 cities.

6.3 Client Onboarding Challenges

While onboarding hospitals, the following challenges were noted:

Challenge	Description	Solution Applied
Power Backup	No UPS for screen	Installed mini-inverter
Staff Tech Gap	No familiarity with software	Onsite demo + printed guide
Admin Delay	Delay in approvals	Weekly follow-ups
Internet Issues	Low-speed Wi-Fi	Used pre-loaded local content

These real-time learnings were documented and shared with the tech team to make the product more robust and adaptable.

6.4 Outreach Response (US Project)

The email campaign for the US market showed mixed responses:

- **Open Rate:** 31%
- **Replies Received:** 8
- **Interested Agencies:** 5
- **Follow-ups Requested:** 2

Many US agencies appreciated the concept but asked for detailed case studies and revenue projections. This indicated the need for a more professional brochure and product video, which was communicated to the core team.

Chapter 7: Discussion

7.1 Operational Insights

The internship revealed that the **real challenge is not just product quality**, but its **implementation in low-resource hospitals**. While the queue management system worked well technically, its success depended on ground conditions like electricity, internet, and staff willingness. Rural hospitals often lacked basic infrastructure, and operational planning had to be customized. Flexibility in installation and proactive communication were the keys to handling these gaps.

7.2 Role of Hospital Staff in Adoption

Staff buy-in played a crucial role in successful implementation. In facilities where staff were involved from the start, onboarding was faster.

- **Receptionists** appreciated the token system for reducing patient complaints.
- **Ward boys and nurses** needed more training than expected.
- **Doctors** showed interest in using screens for health education content.

The project emphasized the need for user-friendly manuals and hands-on support during initial weeks post-installation.

7.3 Marketing Strategy Effectiveness

Digital campaigns outperformed expectations. The low-cost Facebook + WhatsApp strategy generated **quality leads** within a niche market.

Key success factors:

- Clear messaging
- Visually strong posters
- Region-specific targeting (Rajasthan, Gujarat)

- Follow-up system after lead generation

This approach showed that even startups with limited budgets can create impact using personalized and targeted outreach — a lesson for future campaigns.

7.4 International Opportunities

The US project, although exploratory, opened a new window for business development.

- Agencies appreciated the model but wanted performance data.
- A key insight was that international markets expect **professional branding, structured financial forecasts**, and **legal clarity** (data use, screen placement permissions).

The discussion also emphasized that future outreach must include:

- Product demo videos
- Revenue simulation models
- Testimonials from existing clients (Indian hospitals)

Chapter 8: Conclusion and Recommendations

8.1 Summary of Learnings

The internship provided a 360-degree exposure to the workings of a health-tech startup. From field operations to client onboarding and international outreach, each component added to the learning curve. The intern not only applied theoretical knowledge but also adapted to real-time startup challenges. Practical tasks like handling hospital objections, designing digital creatives, and interacting with decision-makers enriched the overall experience.

8.2 Key Challenges Faced

- **Infrastructure limitations** at rural hospitals
- **Delays in admin approvals** for onboarding
- **Initial disinterest** from staff unfamiliar with digital systems
- **Coordination between tech and ops** team due to remote working
- **Limited budget** for marketing, requiring smarter strategies

These challenges demanded patience, creativity, and teamwork — all key skills for a future operations or marketing manager in healthcare.

8.3 Recommendations

1. **Create Video-Based Training Modules:**

For easier staff training, videos in Hindi/local languages should be developed.

2. **Install Solar Backups:**

To handle power issues in rural areas, explore solar panel-based UPS systems.

3. **Build a CRM Dashboard:**

To manage leads, hospital visits, and feedback in one place.

4. **Develop Testimonials and Case Studies:**

Especially before re-approaching US agencies — these build trust and prove performance.

5. **Offer Starter Packages for Small Clinics:**

Custom solutions for 5–10 bed setups to scale adoption rapidly.

8.4 Conclusion

The internship demonstrated that **health-tech implementation requires more than just innovation — it demands customization, persistence, and cross-team collaboration.** Living Needs Healthcare is on a promising path, and with strategic operational improvements and a scalable marketing model, it can expand nationwide and beyond. The intern leaves with strengthened skills in planning, execution, communication, and market understanding — all of which are crucial for any aspiring healthcare manager.

Annexures

- **Annexure I: Questionnaire Sample (Feedback Form)**

Title: Effectiveness of Queue Management Screens and Advertisement Content

Type: Mixed (Close-ended + Open-ended)

Respondents: Patients, Hospital Staff

Sample Questions:

1. Did you find the screen helpful for knowing your turn? (Yes/No)
2. Could you easily read the content shown on the screen? (Yes/No)
3. Which ad/message caught your attention the most?
4. How would you rate the usefulness of this system (1–5)?
5. Any suggestions for improvement?

- **Annexure II: Hospital Visit Summary Table**

Sr. No.	Facility Type	Name of Facility	Location	Purpose of Visit	Status
1	Private Clinic	Abhay Eye Clinic	Dungarpur	Onboarding	Completed
2	Private Hospital	Jeevan Raksha Hospital	Dungarpur	Onboarding	Completed

- **Annexure III: US Outreach Email Draft**

Subject Line:

Partnership Opportunity: Smart Queue Screens + Ad Revenue for Hospitals

Email Body:

Dear [Name],

We are reaching out from Living Needs Healthcare Pvt. Ltd., India. We've developed a smart queue system that also monetizes hospital waiting areas using digital screens.

We are exploring collaborations with US-based healthcare ad networks to implement this system in hospitals across your network.

Looking forward to a call.

Warm regards,

[Intern Name]

[Living Needs Healthcare Pvt. Ltd.]

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