

Dissertation Training Report

at

**Emoha Elder Care
(Ignox Labs Pvt Ltd)**

**In-depth Analysis of Barriers to Adult Vaccination
Uptake in Gurugram**

by

DEV PARASHAR

PG/22/139

Under the guidance of

Dr. Nidhi Yadav

PGDM (Hospital & Health Management) 2022-24



**International Institute of Health
Management Research New Delhi**

This certificate is awarded to

Dev Parashar

A bonafide student of IIHMR Delhi has successfully completed

his internship with us

at

**EMOHA ELDER CARE
(IGNOX LABS PVT LTD)**

And has successfully completed his project on

In-depth Analysis of Barriers to Adult Vaccination Uptake in Gurugram

From

01-02-2024 to 30-04-2024

He comes across as a committed, sincere and diligent person who has

A strong drive and zeal for learning

We wish him all the best for future endeavors


AVP- Business Development
Emoha Elder Care
Ignox labs Pvt Ltd


Chief Operating Officer
Emoha Elder Care
Ignox labs Pvt Ltd

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr. Dev Parashar** student of PGDM (Hospital & Health Management) from International Institute of Health Management Research, New Delhi has undergone internship training at **Emoha Elder Care (Ignox Labs Pvt Ltd)** from **1st February 2024 to 30th April 2024**. The Candidate has successfully carried out the study designated to him during internship training and his/her approach to the study has been sincere, scientific and analytical. The Internship is in fulfillment of the course requirements.

I wish him all success in all his/her future endeavors.

Dr. Sumesh Kumar
Associate Dean, Academic and Student Affairs
IIHMR, New Delhi


Dr. Nidhi Yadav
Associate Professor
IIHMR, New Delhi

Certificate of Approval

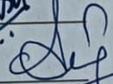
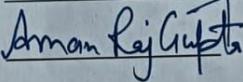
The following dissertation titled "**In-depth analysis of barriers to adult vaccination uptake in Gurugram**" at "**Emoha**" is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **PGDM (Hospital & Health Management)** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed, or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of dissertation.

Name

Dr. Piyush Kanti Khan
Dr. Atif Yaseen
Dr. Aman Raj Gupta

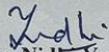
Signature

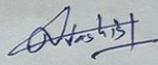




Certificate from Dissertation Advisory Committee

This is to certify that **Dev Parashar** a graduate student of the **PGDM (Hospital & Health Management)** has worked under our guidance and supervision. She is submitting this dissertation titled "**In-depth Analysis of Barriers to Adult Vaccination Uptake in Gurugram**" at "**Emoha Elder Care (Ignox Labs Pvt Ltd)**" in partial fulfillment of the requirements for the award of the **PGDM (Hospital & Health Management)**.

This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.


Dr. Nidhi Yadav
Associate Professor
IIHMR, New Delhi


Mr. Naveen Kumar Vashist
AVP- Business Development
Emoha Elder Care
(Ignox Labs Pvt Ltd)



**INTERNATIONAL INSTITUTE OF HEALTH
MANAGEMENT RESEARCH (IIHMR)**

Plot No. 3, Sector 18A, Phase- II, Dwarka, New Delhi- 110075
Ph. +91-11-30418900, www.iihmrdelhi.edu.in

CERTIFICATE ON PLAGIARISM CHECK

Name of Student (in block letter)	Dr./Mr./Ms.: DEV PARABHAR		
Enrollment/Roll No.	PG/22/139	Batch Year	2022-2024
Course Specialization (Choose one)	<input checked="" type="checkbox"/> Hospital Management	<input type="checkbox"/> Health Management	<input type="checkbox"/> Healthcare IT
Name of Guide/Supervisor	Dr./Prof.: NIDHI YADAV		
Title of the Dissertation/Summer Assignment	In-DEPTH ANALYSIS OF BARRIERS TO ADULT VACCINATIONS UPTAKE IN GURUGRAM		
Plagiarism detect software used	"TURNITIN"		
Similar contents acceptable (%)	Up to 15 Percent as per policy		
Total words and % of similar contents Identified	10%		
Date of validation (DD/MM/YYYY)	26/07/2024		

Guide/Supervisor

Name: **DR. NIDHI YADAV**

Signature:

Report checked by

Institute Librarian

Signature:

Date:

Library Seal



Student

Name: **DEV PARABHAR**

Signature:

Dean (Academics and Student Affairs)

Signature:

Date:

(Seal)

Dev 4

ORIGINALITY REPORT

10% SIMILARITY INDEX	10% INTERNET SOURCES	4% PUBLICATIONS	3% STUDENT PAPERS
--------------------------------	--------------------------------	---------------------------	-----------------------------

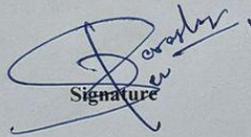
PRIMARY SOURCES

1	www.gcsmc.org Internet Source	5%
2	www.tandfonline.com Internet Source	2%
3	Submitted to Maryville University Student Paper	1%
4	Submitted to University of Bradford Student Paper	1%
5	Submitted to University of Glasgow Student Paper	<1%
6	Rege, Vidyanidhi. "The Perceived Values of Professional Certification to Hospitality Workers: A Value-Attitude-Behavior (VAB) Model", Iowa State University, 2024 Publication	<1%
7	digitallibrary.usc.edu Internet Source	<1%
8	www.msjonline.org Internet Source	<1%

INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT
RESEARCH, NEW DELHI

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled “and submitted by **Dev Parashar** Enrollment No- PG/22/139 under the supervision of **Dr. Nidhi Yadav** for award of PGDM (Hospital & Health Management) of the Institute carried out during the period from to 2022- 2024 embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.


Signature

FEEDBACK FORM

Name of the Student: Dev Parashar

Name of the Organization in Which Dissertation Has Been Completed: Emoha Elder Care
(Ignox Labs Pvt Ltd)

Area of Dissertation: Operations and Business Development

Attendance: 100%

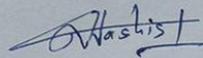
Objectives achieved: Supported health launch in various operations & business development functions

Deliverables: for vaccinations, sessions engagement, new territory findings.

Strengths: Hard working, sincere resource

Suggestions for Improvement: May focus on graphic designing & data courses.

Suggestions for Institute (course curriculum, industry interaction, placement, alumni):



Signature of the Officer-in-Charge/
Organization Mentor (Dissertation)

Date: 25/07/2024

Place: Gurugram

ABSTRACT

Although childhood vaccination rates in India have significantly improved, adult vaccination remains extremely low. This study aims to raise awareness about the importance of immunizing adults. The exact impact of vaccine-preventable diseases (VPDs) on Indian adults is unknown, but they are especially at risk during outbreaks due to factors such as a lack of immunization, decreasing immunity, chronic health conditions, and an epidemiological shift. India lacks national guidelines for adult immunization, and while several medical organizations have issued their own guidelines, they often differ, creating confusion about who should be vaccinated based on age, health conditions, etc. Additional challenges to adult immunization include vaccine hesitancy, missed opportunities, and cost. Enhancing adult vaccination rates could involve establishing national guidelines, educating healthcare providers and the public, and promoting vaccination throughout life. Increasing adult vaccine coverage could significantly reduce the burden of VPDs, particularly among older adults.

Vaccination is essential throughout life to prevent VPDs and their complications. Historically, vaccination programs have focused primarily on children. In adult healthcare, the focus has traditionally been on managing chronic diseases, although there is a growing emphasis on preventing infectious diseases. Despite recommendations, adult vaccination rates remain low for most vaccines. Adults may be less vulnerable to traditional infectious agents, but the risk of exposure has increased due to globalization and increased travel. Addressing the issue of adult immunization is urgent. The adult immunization framework is complex, involving various vaccines and a diverse population. Unlike childhood vaccination, there is no coordinated public health system for adult immunization, and healthcare providers often lack coordination in vaccine delivery. To reduce the health impact of VPDs among adults, significant improvements in adult vaccination are needed. Routine evaluation of adult vaccination needs, recommendations, and administration of necessary vaccines should be integrated into regular adult healthcare.

ACKNOWLEDGEMENT

While we look back on the past three months, which have been incredibly busy and eventful, I would want to express our gratitude to everyone who has provided us with invaluable counsel and direction. This report would not have been possible without the support of these named below.

First of all, I am extremely thankful to Captain. Harsh Kumar Singh (Chief operating Officer) for giving me chance to work at Emoha Elder Care (Ignox Labs Pvt Ltd), as well as to my mentor Dr. Nidhi Yadav for all her guidance and support throughout journey.

A special thank you goes to my organization mentor Mr. Naveen Kumar Vashist (AVP-Business Development) for their guidance, encouragement, and for providing me with the opportunities and resources to balance my professional responsibilities with my academic pursuits. Their support has been critical in allowing me to complete this dissertation.

To my office mates, thank you for your camaraderie, moral support, and insightful discussions. Your encouragement and advice have been a source of motivation and inspiration.

To my family, especially my parents, thank you for your unconditional love, patience, and unwavering support. Your belief in me has been my driving force and I am deeply appreciative of your encouragement throughout this journey.

Thank you all for your invaluable contributions and support.

TABLE OF CONTENTS

LIST OF FIGURES	09
LIST OF ABBREVIATIONS.....	10
ABOUT THE ORGANIZATION.....	11
INTRODUCTION.....	15
LITERATURE REVIEW	19
METHODOLOGY.....	21
RESULT	25
CONCLUSION.....	27
LIMITATION.....	28
QUESTIONNAIRE (ANNEXURE).....	29
REFERENCE.....	30

LIST OF FIGURES:

S. No.	Figure Number	Figure Content
1.	Fig 1	Plain Language Summary
2.	Fig 2	Reported cases of selected VPDs
3.	Fig 3	Barriers to adult vaccination
4.	Fig 4	Summary of adult vaccination recommendation
5.	Fig 5	Distribution of correct knowledge of vaccines among the respondents (n=244)

LIST OF ABBREVIATIONS:

S. No.	LIST OF ABBREVIATIONS	FULL FORM
1.	IT	Information Technology
2.	PAN	Presence Across Nation
3.	VPDs	Vaccine-Preventable Diseases
4.	NCDC	National Centre for Disease Control
5.	HPV	Human Papillomavirus
6.	PTS	Patients
7.	CMI	Cell-Mediated Immune
8.	ABs	Antibodies
9.	ISN	International Society of Nephrology
10.	IMA	Indian Medical Association

ABOUT THE ORGANIZATION

INTRODUCTION:

Emoha Elder Care is a unique elderly care service provider in India that works to improve the lives of older adults. India is witnessing a huge demographic change with an increasingly ageing population and therefore the demand for specialized elder care services will only increase. Emoha Elder Care differentiates through a comprehensive approach to seniors care i.e. Healthcare, safety and engagement and convenience.

MISSION AND VISION:

Emoha's mission is to provide elders with all the support they need so that seniors can live independently and securely in their homes. The organization has a vision for an old age that is empowered, respected and given force to live capably in the society with dignity and meaning.

SERVICES OFFERED:

1. Healthcare Services:

- **24/7 Medical Support:** In case of an emergency, our health care professional's details are always in your hand - Emoha ensures that the help is a call away.
- **Doctor Visits and Consultations:** e-Monitoring of health conditions through frequent doctor visits and easy access to teleconsultations.
- **Nursing Care:** Specialized Nursing services are provided to individuals who need medical assistance in their home, including post-hospitalization care, chronic disease management and palliative care.
- **Physiotherapy:** We have expert physios organizing home consultation sessions to manage mobility, pain and rehabilitation queries.

- **Medication Management:** Help with your medication schedule, refills and other prescribed regimens.

2. Emergency Response:

- **Emergency Coordination:** Emoha's in-app SOS feature ensures that you are able to get immediate help at time of a medical or safety emergency.
- **Ambulance Services:** Prompt re-schedulement of ambulance services for quick transport to health centers.

3. Safety and Security:

- **Safety Audits:** Detailed safety audits of residential properties or households, that can either be completed in isolation to identify point risks and developments recognized following a fall;
- **Emergency Devices:** Provision of emergency response devices and wearables that can alert caregivers and emergency services.
- **Monitoring Services:** Regular check-ins and monitoring to assist seniors who live alone.

4. Engagement and Enrichment:

- **Social Engagement:** Activities and events designed to keep seniors socially active and engaged.
- **Learning Opportunities:** Workshops hosted to enrich the mind, spirit and personal growth.
- **Companionship Services:** Companions trained to give emotional support and companions.

5. Convenience Services:

- **Housekeeping and Maintenance:** Help with daily tasks, housework and home maintenance.
- **Transportation:** Safe, responsible modes of transportation to medical appointments, running errands and for social visits.
- **Medication Delivery:** Convenient door step services for the necessary and required medication.

UNIQUE APPROACH:

Emoha operates with a client-centered approach and emphasizes the individual needs of every senior in care. The organization design unique care plans for each client that reflects the most relevant care aspects which the senior needs and attends. This approach requires a blend of technology, compassionate caregiving and professional assistance.

INFORMATION TECHNOLOGY:

Emoha uses technology to improve its services and make its supply chain more effective. The most essential IT solutions are:

1. **Emoha App:** The versatile application connects the caregiver, senior & the senior's family. The app has all the necessary information about the care package purchased, warning capabilities for emergencies, health records & socializing activities.
2. **Telehealth Services:** Video appointment and health measurements facilities to keep handy access to the physician.

COMMUNITY AND SOCIAL IMPACT:

Emoha Elder Care is dedicated to making a difference and ensuring seniors get the required communities they need. This includes:

- 1. Community Events:** Promote social interaction, and build a sense of community through regular community events.
- 2. Volunteer Programs:** Opportunities for volunteers to engage with seniors and provide support.
- 3. Awareness Campaigns:** Efforts to increase awareness about elderly care challenges and encourage healthy aging.

CHALLENGES AND SOLUTIONS:

- 1. Healthcare Accessibility:** In some remote parts, it is not easy to avail timely and quality healthcare for senior citizens. Emoha works to address this by providing telehealth services as well a network of healthcare professionals.
- 2. Emergency Preparedness:** Managing well during an emergency is about system & training. An MSME, Emoha prides itself for having an emergency response system in place with frequent drills to combat injuries or illness.
- 3. Social Isolation:** For loneliness and isolated Seniors, Emoha's engagement programs and companionship services help mitigate these issues.
- 4. Affordability:** High-quality elder care can be expensive. Emoha offers flexible service packages to cater to different financial capacities.

FUTURE PLANS:

Emoha Elder Care aims to expand its services across PAN India, reaching more seniors in need of quality care. Future plans include:

- 1. Geographic Expansion:** Extending services to more cities and rural areas.
- 2. Service Diversification:** Introducing new services such as mental health support and advanced rehabilitation programs.
- 3. Technology Enhancement:** Continuously improving technology to enhance service delivery and care quality.

PROJECT REPORT

In-depth Analysis of Barriers to Adult Vaccination Uptake in Gurugram

INTRODUCTION:

In order to help people maintain immunity against some vaccine-preventable illnesses (VPDs) and establish protection against other diseases, immunization against infections is crucial for both adults and new-borns.

Vaccinations are an important public health measure in the twenty-first century, representing a major breakthrough in the battle against infectious illnesses. The likelihood of contracting illnesses has grown due to factors like globalization, mutation, and increasing travel. As a result, there are serious problems arising from the increase in infectious diseases, such as VPDs, which have affected thousands of individuals and resulted in high rates of morbidity, death, and economic costs worldwide.

Adult vaccines are routinely ignored despite recommendations, especially in India.

Although adults are often less susceptible to classic infectious agents, they are nonetheless more likely to come into contact with them. Adult immunization is therefore a necessary topic. Adult vaccine-preventable diseases are mainly ignored, and every nation should have appropriate immunization policies for adults. Comprehensive guidelines for adult immunization are lacking in India. Vaccine uptake for adult immunization is essential to lowering morbidity and death. Regular clinical care for adults should include routine evaluation of adult patients' immunization needs as well as recommendations and offers of necessary immunizations. One of the biggest cost- and life-saving medical initiatives in history is vaccination. Older adults are more likely to contract influenza, pneumococcal illness, and shingles (herpes zoster).

Despite the fact that vaccines are widely accessible across the country, a significant percentage of adults lack vaccinations. Many people have misconceptions about immunizations meant to prevent illness or are unaware of the importance of adult vaccinations. Adult vaccines should therefore be given more consideration.

Infectious diseases continue to be a major global public health concern. Vaccine-preventable diseases (VPDs) affect thousands of adults globally, resulting in high rates of illness, mortality, and financial hardship. In addition, unvaccinated people can spread illnesses like pertussis to young children who have not yet gotten their vaccines. Improving adult immunization rates may be advantageous for people as individuals, families, and communities. Additionally, it might help save healthcare costs, which is particularly important for those with lower incomes. Numerous conversations have emphasized how inadequate adult vaccination coverage is in India and how coverage has to be increased. This study draws together and expands upon existing conversations to highlight the significance of adult vaccination as a fundamental component of "life-course immunization."

For Example: In the United States, pneumonia and influenza are two of the main causes of death. Vaccination can prevent certain infections, but the rate of adoption is poor and steadily declining. Even in nations with publically financed immunization programs, adult vaccination rates are still below ideal levels despite the proven benefits of vaccinations. An estimated 226,000 hospital admissions are linked to influenza each year in the United States alone, where influenza-related mortality account for 36,000 annual deaths.



Fig 1: Plain Language Summary.

Burdens of VPDs in India:

Pneumococcal illnesses including pneumonia and meningitis are frequently linked to high RATES OF MORBIDITY AND MORTALITY IN INDIA. THE BEST WAY TO LESSEN THE IMPACT OF THESE INFECTIOUS diseases is by immunization. The successful implementation of childhood immunization programs has led to a significant drop in the incidence of VPDs in India over time.

In comparison to the world's population, India exhibited an abnormally high number of reported instances of specific diseases in 2017, according to data. In particular, while making up only 18% of the world's population, India was responsible for 60% of instances of diphtheria, 44% of cases of Japanese encephalitis, and 40% of cases of tetanus. Additionally, according to data from the National Centre for Disease Control, India reported almost 39,000 instances of H1N1 seasonal influenza in 2017, which led to 2,270 deaths.

VPD	Earliest year in India	2017 (% of world cases)	Cases per million population (2017) in India
Polio	18,975 (1980)	0 (0%)	0
Diphtheria	39,231 (1980)	5,293 (60%)	3.95
Neonatal tetanus	11,849 (1988)	295 (13%)	0.22
Total tetanus	45,948 (1980)	4,946 (40%)	3.69
Pertussis	320,109 (1980)	23,766 (17%)	17.7
Measles	114,036 (1980)	12,032 (7%)	8.98
Rubella	1,232 (2012)	2,748 (17%)	2.05

Fig 2: Reported cases of selected VPDs

Adult vaccine-preventable diseases (VPDs) are becoming more and more important, but many people still don't know enough about them. In India, for instance, cervical cancer ranks second in terms of cancer-related mortality, accounting for nearly 60,000 deaths and 97,000 diagnoses among women each year. Random tests for Human Papillomavirus (HPV) among 890 women conducted between 2009 and 2012 showed that 12% of them tested positive for the virus, while 4% tested borderline positive.

Apart from cervical cancer, there have been instances of VPD outbreaks in India, mostly affecting adults. Meningococcal disease, chickenpox, hepatitis A, diphtheria, influenza A, measles, and hepatitis B are among these illnesses.

Reasons for VPDs in Adults:

1. **Absence of Adult Immunization:** In India, adult immunization rates are still quite low despite notable advancements in kid vaccination rates. Even among individuals who are aware of immunization and screening, many adults have never had a vaccination. In Bangalore, for example, a 2014 survey discovered that 155 female healthcare personnel had not received the HPV vaccine.
2. **Waning Immunity:** As time passes, the levels of protective antibodies against certain antigens decrease, weakening the immune response and making booster doses necessary. Age-related health conditions can heighten the risk of vaccine-preventable diseases (VPDs) and their complications, and immunosenescence can affect the effectiveness of some vaccines.
3. **Epidemiological Shift:** Diseases that were once contracted during childhood are now affecting adults due to increased vaccine coverage in children. This shift results in adults being more susceptible to VPDs.

LITERATURE REVIEW:

1. **Gajala Deethamvali Ghousepeer, Pawan Sharma, V. Samuel Raj and**

1. **Ramendra Pati Pandey, 2021:** Unlike the heavy emphasis on childhood .In India, adult immunization and vaccination are still overlooked. Grownups are often thought to be less vulnerable to conventional infectious pathogens, however their likelihood of coming into contact with infectious diseases has grown as a result of several elements include international travel, urbanization, and the rise in chronic illnesses circumstances. Although there have been notable advancements in kid vaccination Adult immunization needs to be prioritized in India in order to avoid VPDs and lower the associated mortality and morbidity. Creating thorough guidelines, Increasing vaccination accessibility and awareness are essential first steps in ensure improved adult health outcomes. By giving adult vaccination priority, India may expand on its achievements in children immunization by developing a strong, a lifelong vaccination plan.

2. **Resham Dash, Ashish Agrawal, Vasant Nagvekar, Jayesh Lele, Alberta Di Pasquale, Shafi Kolhapure and Raunak Parikh, 2019 :** Enhancing adult. In India, immunization rates are essential to lowering the prevalence of VPDs. especially in the elderly. The implementation of national policies, instruction of medical professionals, the general public, and life-course promotion .Vaccination is a necessary first step toward increasing vaccine coverage. removing obstacles including vaccine apprehension, lost opportunity, and expense will assist in making sure adults obtain the immunizations they require to safeguard their health.

3. **Bharti Mehta, Sumit Chawla, Vijay Kumar Dharma, Harashish Jindal and Bhumika Bhatt, 2013 :** A significant advancement in adult immunization is required to lessen the negative effects of VPDs on adult health. An coordinated endeavor including public health infrastructure, healthcare providers, and awareness-raising campaigns are crucial to achieving this objective. Through incorporation regular evaluation and vaccination recommendation in clinical settings, enhancing accessibility and affordability, raising public knowledge, and promoting adult. The rate of vaccinations can be greatly increased.

METHODOLOGY:

AIM: In-depth Analysis of Barriers to Adult Vaccination Uptake in Gurugram.

KEY OBJECTIVES:

1. To identify key barriers to adult vaccination uptake, including knowledge gaps, financial constraints, cultural beliefs.
2. To assess the accessibility and availability of vaccination services, including the distribution of healthcare facilities.
3. To suggest interventions and strategies that can address the identified barriers and improve adult vaccination rates.
4. To evaluate the level of awareness about adult vaccinations, the effectiveness of communication between healthcare providers and patients.
5. To investigate the role of vaccine hesitancy, social norms, gender disparities and misinformation in hindering adult vaccination.

STUDY DESIGN: Quantitative study design is used in the project with the aim to in-depth analysis of barriers to adult vaccination uptake in Gurugram.

STUDY POPULATION: Study including older adults (aged 50 and above).

SAMPLE SIZE: 244 pts (a/c to last 3 months existed adult vaccinated data there was 142 pts & after collecting data for next 3 months (Feb-April) there are total 244 pts.

DATA SOURCE: Existing patients record collection from the organization.

DATA ANALYSIS: Data is analyzed with the help of MS Excel.

DATA COLLECTION: Questionnaire (Annexure 1).

Barriers to Adult Vaccination:

Common reasons for incomplete immunization include:

- Absence of recommendations from healthcare providers,
- Unawareness of the significance of adult vaccination,
- Insufficient knowledge about vaccine safety and effectiveness,
- Lack of organized immunization programs for adults,
- Inadequate access to current vaccination records and tracking systems,
- Limited availability of publicly funded vaccines and reimbursement for providers,
- Insufficient access to updated records and tracking systems.

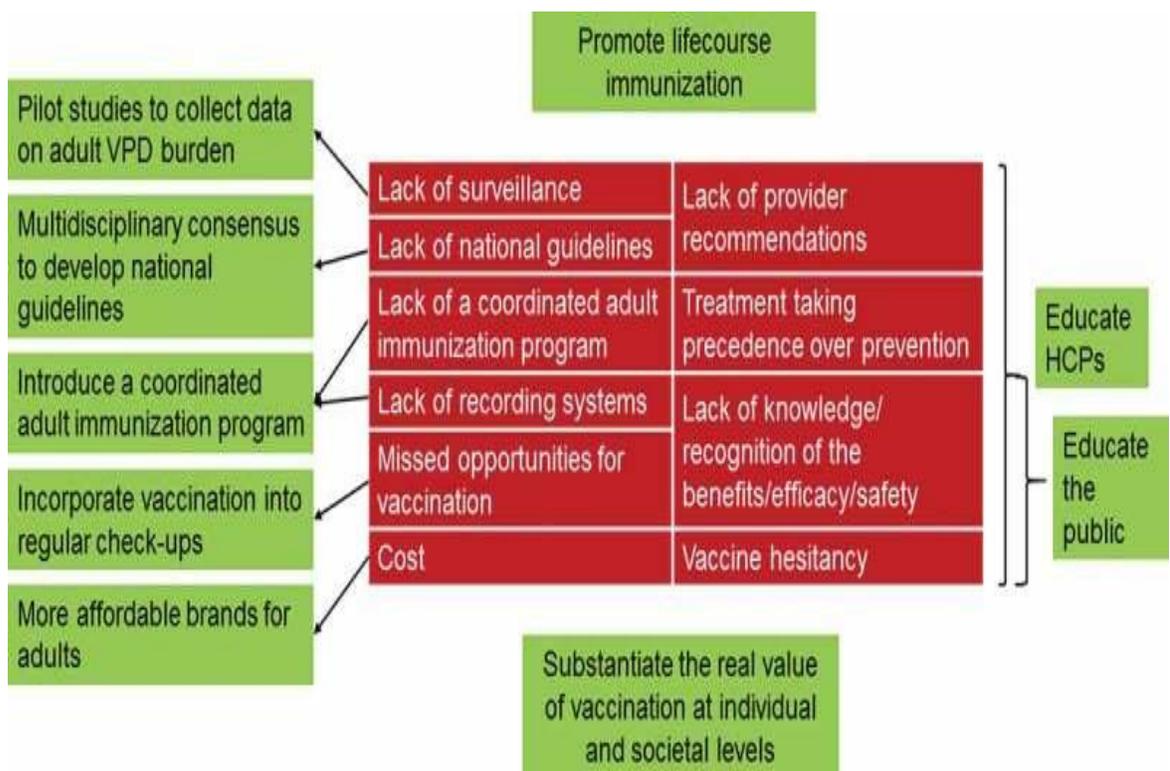


Figure 3. Barriers to adult vaccination

Challenges in Adult Vaccination:

1. In order to encourage good aging, it is imperative to promote better lifestyles throughout life, which includes avoiding barriers including obesity, sedentary behaviour, smoking, alcohol use, and infectious diseases.
2. Life-course immunization is still not widely used in society, despite being emphasized as a crucial tactic for improving population health.
3. Because a person's immune response to vaccinations might alter with time, age-related immunological responsiveness and immunosenescence provide problems for adult vaccination.
4. Compared to older infants, new-borns show lesser immunogenicity, durability of functional antibodies, and cell-mediated immune responses to vaccinations. Over time, both their innate and adaptive immune systems grow and mature.
5. It's critical to convert vaccines into vaccinations. In the interest of the general public, vaccination uptake should be required regardless of a vaccine's efficacy.

Guidelines to Improve and Increase Adult Vaccination:

1. Adult immunization is still a novel idea in India, where patients frequently choose to receive antibiotics or other therapies rather than vaccinations.
2. Vaccinations for adults are less expensive than those for new-borns, kids, and teenagers, based on regional guidelines in European nations.
3. Compared to secondary preventative measures, vaccinations are a more cost-efficient and highly effective choice.
4. It will take time and significant work to promote the national standards for adult vaccinations and emphasize the significance of adult vaccination.
5. In order to ensure the adoption of updated adult immunization guidelines, national guidelines should emphasize educating the public and medical professionals about the advantages of adult vaccinations.

Guidelines	Based on API and CDC	ISN	IMA
Diphtheria/tetanus/pertussis	Tdap once then Td 10-yearly; Tdap during each pregnancy	Td 10-yearly to 65 years; 3 doses if not immunized	Tdap 10–18 years (1 dose); Td 10-yearly; TT/Td early during pregnancy (2 doses); Tdap during third trimester of pregnancy (1 dose)
Influenza	Yearly (1 dose); during pregnancy (1 dose)	At risk, including during pregnancy (1 dose)	Yearly (1 dose); including pregnancy
HPV	Women ≤ 26 years (3 doses); men ≤ 21 years (3 doses)	9–26 years (2 or 3 doses)	Females 9–14 years: 2 doses; 15–45 years: 3 doses
Pneumococcal	≥ 65 years (1 dose); at risk (1 or 2 doses)	≥ 65 years (1 dose); at risk	At risk (2 doses)
Herpes Zoster	≥ 50 years (1 or 2 doses based on type of vaccine)	>60 years (1 dose)	
Rabies	At risk (3 or 4 doses)	At risk (3 doses)	At risk (3 or 4 doses)
Hepatitis B	At risk (3 doses)	At risk (3 doses)	Adults (3 doses)

Figure 4. Summary of Adult Vaccination Recommendation

RESULT:

1. The role of vaccines in adulthood is proven fact and there are certain vaccine preventable diseases which could prove grave if not prevented in adults as well. These include conditions like Meningococcal meningitis, Hepatitis B, Tetanus, Typhoid, Human Papilloma Virus, Rabies and so on. There are certain diseases which behave in different manner while affecting the adult, in contrast to the childhood counterpart. Pertussis, Pneumonia, Influenza and Herpes Zoster are some of the examples.
2. “I have highlighted five essential vaccines that are highly recommended for adults.”
 - Hepatitis B
 - Rabies
 - Pneumococcal
 - Seasonal Flu
 - Herpes Zoster
3. The study includes total no. of 244 participants out of which the data of 142 participants was collected from the existed records of the organization and remaining data of 102 participants was collected during the dissertation period of three months (February-April).

S. NO.	Vaccine	Vaccine awareness	Type of vaccine	Adult immunization	Recently vaccinated	Future vaccinations
		Correct response n (%)				
1.	Hepatitis B	201 (82.4)	225 (92.4)	225 (92.4)	234 (96.0)	222 (90.8)
2.	Rabies	187 (76.6)	244 (100.0)	229 (94.0)	234 (96.0)	192 (78.8)
3.	Pneumococcal	162 (66.4)	192 (78.8)	229 (94.0)	186 (76.4)	177 (72.4)
4.	Seasonal Flu	41 (16.8)	67 (27.6)	70 (28.8)	96 (39.2)	44 (18.0)
5.	Herpes Zoster	10 (4.1)	11 (4.4)	14 (5.6)	14 (5.6)	19 (7.6)

Figure 5. Distribution of correct knowledge of vaccines among the respondents (n=244)

- Most of the participant had correct and complete knowledge of vaccines named Hepatitis B (82.4%), Rabies (76.6%) and Pneumococcal (66.4%).
- Knowledge of participants about Seasonal Flu vaccine was less than 50% and very few know about the Herpes Zoster vaccine.
- All of them gave correct response about type of vaccination for Rabies. Only (4%) participants had correct knowledge about type of vaccination for Herpes Zoster vaccine.
- >80% of them were aware about type of vaccination for Pneumococcal vaccine.
- Most of them (94%) gave correct response about adult immunization for Rabies and Pneumococcal.
- Only (5.6%) participants had correct knowledge about adult immunization for Herpes Zoster.
- Most of the participant had correct knowledge about that they had been recently vaccinated for Hepatitis B (96%), Rabies (96%).
- Knowledge of participant regarding future vaccination for Hepatitis B was highest (90.8%).

Conclusion:

1. Educate potential vaccine recipients and promote vaccination through publicity.
2. Increase access to vaccination services in medical and non-medical settings, such as workplaces and commercial establishments (e.g., pharmacies).
3. Implement practices proven to improve vaccination coverage, including reminder-recall systems, efforts to eliminate administrative and financial barriers to vaccination, use of standing order programs for vaccination, and assessment of practice-level vaccination rates with feedback to staff.
4. Creating awareness and public education alone are insufficient to control infectious diseases without supporting recommendations.
5. It is necessary to make adult vaccinations mandatory in order to lessen the negative effects of vaccine-preventable diseases on adult health.
6. The best defense against vector-borne diseases (VPDs) such as influenza, pneumonia, and zoster is vaccination.
7. There is a correlation between higher patient vaccine uptake and healthcare providers' immunization recommendations.
8. National authorities should guarantee that vaccinations are affordable and available to all.
9. The significance of immunization programs should be understood by all. Public awareness should be increased through the usage of social media.
10. Adult immunization is currently seen as necessary in order to stop the spread of fatal diseases.

LIMITATION:

- 1. Data availability:** There may be a lack of comprehensive and up-to-date data on adult vaccination rates and barriers.
- 2. Generalizability:** Findings may not be universally applicable due to variations in healthcare systems, cultural norms, and vaccination policies across different regions or countries. Thus, results from one study may not fully represent the experiences and perspectives of all populations.
- 3. Complexity of Barriers:** The barriers to adult vaccination uptake are often interrelated, making it difficult to isolate the impact of individual factors. **For example**, socio-economic status can influence both access to healthcare and health literacy.
- 4. Recall Bias:** Data collected through retrospective methods, such as self-reported vaccination histories, may be subject to recall bias, where participants may have difficulty accurately recalling past vaccination experiences or factors influencing their vaccination decisions.
- 5. Policy & Health System Variability:** Frequent changes in healthcare policies and vaccination programs can affect the study's relevance. Policies implemented after the study period might address some of the identified barriers, rendering parts of the analysis outdated.

QUESTIONNAIRE (ANNEXURE):

S. NO.	QUESTIONS	ANSWERS	
1.	Have you heard about these vaccines ?	YES	NO
2.	Do you know for which disease these is given ?	YES	NO
3.	Do you think adults should also take these vaccines ?	YES	NO
4.	Have you taken any vaccine in last 1 year ?	YES	NO
5.	Do you think you need any specific vaccine in future ?	YES	NO

REFERENCES:

1. Ghousepeer¹ GD, Sharma² P, Pandey¹ VSR and RP. Vaccination Barriers for Adults. *J Drugs Addict Ther.* 2021 Dec 31;2(4):1–5.
2. Eiden AL, Barratt J, Nyaku MK. Drivers of and barriers to routine adult vaccination: A systematic literature review. *Hum Vaccines Immunother.* 18(6):2127290.
3. Dash R, Agrawal A, Nagvekar V, Lele J, Di Pasquale A, Kolhapure S, Parikh R. Towards adult vaccination in India: a narrative literature review. *Hum Vaccin Immunother.* 2020 Apr 2;16(4):991-1001. doi: 10.1080/21645515.2019.1682842. Epub 2019 Dec 2. PMID: 31746661; PMCID: PMC7227717.