
# OJHA INSTITUTE OF CHEST DISEASES (OICD)

## DOW UNIVERSITY OF HEALTH SCIENCES

# STRATEGIC PLAN

## (2024 – 2027)

**Pioneering Excellence | Inspiring Innovation**


**To Heal | To Educate | To Discover**


بسم الله الرحمن الرحيم

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## DIRECTOR'S MESSAGE:

At Ojha Institute of Chest Diseases (OICD), we're dedicated to making a profound difference in pulmonary healthcare, not only locally but also on a global scale. As a part of Dow University of Health Sciences (DUHS), we offer top-notch care, diagnosis, treatment, and rehabilitation for pulmonary diseases completely free of cost.

Our commitment covers all aspects of care, from consultations to complex surgeries, including lab tests, medications, ICU services, and advanced procedures. This ensures that everyone, regardless of their financial circumstances, can access high-quality treatment. We take immense pride in training the next generation of medical professionals through fellowships, master's, and diploma programs in pulmonary medicine. Our esteemed faculty is at the forefront of cutting-edge research, pushing the boundaries of pulmonology and contributing to advancements in healthcare.

At OICD, our team is driven by a strong sense of duty and compassion, delivering healthcare services with heart and soul. Moreover, we're taking significant strides towards creating an environmentally conscious, technologically advanced healthcare environment.

We've implemented Electronic Computerized Physician Order Entry (CPOE) systems and are leveraging artificial intelligence for enhanced diagnosis and treatment.

OICD is proud to work closely day and night with the World Health Organization (WHO) on the WHO End TB Strategy post-2015. Our joint efforts aim to reduce TB-related deaths by an astounding 99% by the year 2035. We are committed to contributing to this global initiative and making a lasting impact on the fight against tuberculosis.

**Prof. Dr. Iftekhar Ahmed**

# EXECUTIVE SUMMARY

The Ojha Institute of Chest Diseases (OICD) is committed to advancing patient care, research capabilities, and operational efficiency through a comprehensive strategic plan that integrates AI-driven healthcare solutions and cutting-edge technologies to enhance outcomes. The plan focuses on twelve SMART objectives across key areas.

OICD will establish a 24/7 pharmacy, implement a Hospital Acquired Infection surveillance system, develop a dedicated TB ICU, and invest in minimally invasive thoracic surgery technology to enhance patient care. AI-driven pharmacy automation will improve medication accuracy and reduce wait times by 20%. In terms of quality and efficiency, the institute will implement a quality assurance department, transition to a paperless hospital, and leverage blockchain technology for secure, transparent, and compliant patient data management. Human resource development efforts include strengthening critical care services, launching a thoracic surgery residency program, and developing a research department.

AI-powered talent analytics will predict retention risks and offer personalized career development. Research and collaboration will be enhanced by pursuing the WHO Collaboration Center designation for TB research and introducing a lung cancer screening program to improve early detection and treatment. This strategic plan is developed with input from leadership, faculty, and staff to ensure alignment with institutional goals.

A dedicated monitoring and evaluation framework with KPIs and AI-driven data analysis will track progress and optimize implementation. This roadmap positions OICD as a leader in patient-centered, technology-driven healthcare excellence.

# ABOUT THE INSTITUTE

The Ojha Institute of Chest Diseases remains a pioneering force in Pakistan's healthcare landscape. Through its specialized care units, advanced diagnostics, educational pursuits, and unwavering commitment to patient well-being, OICD stands tall as a beacon of hope for those battling respiratory illnesses, particularly tuberculosis.

## Brief History of OICD

### Origins and Early Years (1927-1949):

- The seeds of the institute were sown in 1927 with the vision of philanthropist Deep Chand Ojha, a renowned philanthropist. He aimed to establish a facility dedicated to treating tuberculosis patients.
- Following his passing, his brother, Maha Raja Sakram Dad Ojha, and their family carried forward the legacy. In 1937 (sources suggest 1939 might be more accurate), they purchased 127 acres of land and founded the Ojha Sanatorium with just 5 cottages.
- The sanatorium initially functioned with a limited capacity, focusing on isolating and treating very sick TB patients.
- World War II (1939-1945) presented challenges. While sources don't confirm a complete shutdown, operations were likely disrupted or scaled back. Interestingly, the sanatorium also served a unique role during this period, functioning as a:
    - Prisoners of War Camp
    - Polish Refugee Camp
    - American Army Station
- In 1945, the Ayurvedic TB Association took over the sanatorium, resuming and intensifying its focus on treating TB patients.
- With Pakistan's independence in 1947, the sanatorium faced new uncertainties. However, it found renewed support by 1948 when it was linked with the Jinnah Post Graduate Medical Center, marking a significant step forward.

### Growth and Recognition (1951-1973):

- The 1950s witnessed a period of significant development:

    - Bed capacity increased to 100 by 1951.
    - Crucial departments like radiology and operating theatre were established in 1954.
    - A turning point came in 1954 when the World Health Organization (WHO) donated an X-ray plant, significantly enhancing diagnostic capabilities.
    - The institute continued to expand, with bed capacity reaching 186 by 1957.

- A landmark achievement occurred in 1961 with the establishment of Pakistan's first state-of-the-art Thoracic Surgical Unit.
- Recognizing the institute's dedication and progress, the government upgraded it to a 350-bed facility in 1967.

### Transformation into a Leading Institute (1970-Present):

- 1970 marked the institute's foray into academics with the launch of a postgraduate diploma program.
- The institute's commitment to fighting TB shone brightly in 1995 when it became a frontrunner in implementing the DOTS program (Directly Observed Therapy, Short course) across Sindh province.
- In 1996, a dedicated program for treating drug-resistant TB was established, recognizing the growing challenge.
- A crucial milestone was reached in 2003 when the Ojha Institute became part of the Dow University of Health Sciences, further strengthening its academic and research capabilities.

### Continued Advancement and Expansion (2003-Present):

- The institute's dedication to providing free, high-quality care for all continues to this day.
- It boasts state-of-the-art facilities, including:
    - Pulmonology operation theatre
    - Intensive Care Unit (ICU)
    - High Dependency Unit (HDU)
    - Departments specializing in:
        - Infectious Diseases
        - Drug-Resistant Tuberculosis
        - Drug Sensitive Tuberculosis
        - Thoracic Surgery
        - Pulmonology
- Recent advancements solidify the institute's position as a leader in TB care:
    - CT Scan Unit was established in 2022
    - First dedicated HDU unit for pulmonology patients established in 2016
    - A dedicated MDR-TB site was established in 2022
    - Became Sindh's first TB-integrated site with Hepatitis B, C, and HIV services in 2023

# INTRODUCTION & OVERVIEW

The Ojha Institute of Chest Diseases (OICD), formally integrated into the Dow University of Health Sciences (DUHS) in December 2003, is an integral part of the university's healthcare network. Recognized by the World Health Organization (WHO) as a Centre of Excellence for Tuberculosis, OICD plays a vital role in combating this critical public health issue.

## Comprehensive Care Delivery System

OICD operates as a comprehensive care delivery system, encompassing a 248-bed hospital and five strategically located affiliated chest clinics across Karachi. These clinics – Malir Chest Clinic, Liari Chest Clinic, Nazimabad Chest Clinic, Iqbalyaad Chest Clinic, and MDR-TB Clinic – provide accessible and free diagnostic and therapeutic services to both inpatient and out-patients.

## Specialized Care Units

The OICD hospital features dedicated units for Drug Sensitive Tuberculosis, Pulmonology, Drug-Resistant Tuberculosis, Thoracic Surgery, and Intensive Care Unit. Each Unit is equipped with advanced technology and staffed by highly skilled professionals to ensure optimal patient care.

## Advanced Diagnostics and Laboratory Services

OICD houses the designated state-of-the-art "Provincial Reference Laboratory," playing a vital role in the rapid diagnosis of Tuberculosis for the whole of Sindh in Collaboration with the Center for Disease Control Sindh (CDC Sindh). The institute offers a comprehensive range of diagnostic services, including CT scans, X-rays, bronchoscopy procedures (including video bronchoscopy with endobronchial and transbronchial biopsies), closed percutaneous pleural biopsies, Pleuroscopy, tube thoracotomies, pleurodesis, ultrasound chest, ultrasound-guided procedures, and spirometry.

## Academic Excellence and Research Focus

OICD is committed to nurturing future generations of healthcare professionals. The institute offers accredited postgraduate programs in Pulmonology, including FCPS (Pulmonology), MD (Pulmonology), and a Diploma in Tuberculosis and Chest Diseases (DTCD).

Furthermore, the dedicated Research Department actively engages in collaborative research efforts with national and international partners, contributing to advancements in the field of chest diseases. The institute also boasts an Infectious Diseases Department, which plays a crucial role in implementing infection prevention and control (IPC) measures and antibiotic stewardship programs throughout the healthcare facility.

## Holistic Patient Care and Vocational Training

OICD prioritizes not only medical treatment but also patient well-being. Tailored vocational training programs in activities like candle making, embroidery, and sewing are offered to patients with extended stays, fostering a sense of purpose and empowerment.

## Faculty and Alumni Legacy

The institute boasts a remarkable and committed faculty dedicated to delivering high-quality education and research. Their expertise shapes future generations of healthcare professionals, with numerous graduates contributing their skills both within Pakistan and internationally.

## Building a Strong Foundation: Recent Accomplishments

The past five years have witnessed significant strides at OICD. Here are some key highlights:

- **Enhanced Patient Care:**
    - Establishment of the PMDT site at Malir Chest Clinic for comprehensive TB management.
    - Creation of dedicated intensive care units (ICUs) for Pulmonology and Thoracic Surgery.
    - Integration of a TB program with a dedicated TB Integrated Site and Pediatric TB OPD.
    - Establishment of a Pharmacy within the operating theatre for improved medication access.
    - Dedicated free of Cost CT Scan Chest Services in OICD
- **Strengthened Infrastructure:**
    - Restructuring of the BSL Lab-III at the Provincial Reference Lab (PRL).
    - Establishment of an Infectious Diseases Department.
    - Development of a dedicated Research Department.
    - Implementation of a state-of-the-art Hospital Management Information System (HMIS) with Computerized Physician Order Entry (CPOE).
    - Streamlined inventory management through computerization.

- Education and Research:
    - Regular Tumor Board Meetings to discuss complex cases and improve treatment strategies.

## Investing in the Future

In addition to its postgraduate programs including rotational training in Pulmonology and Thoracic Surgery from different institutes of Sindh, OICD takes an active role in educating future medical professionals. The institute delivers lectures to undergraduate students pursuing MBBS, BDS, Medical Technology, Pharmacy, Physiotherapy, and Respiratory Therapy programs. It also facilitates various training for healthcare providers and staff on revised medical guidelines.

## SECTION I: OVERVIEW OF STRATEGIC PLANNING PROCESS

The Ojha Institute of Chest Diseases (OICD) is committed to continuous improvement and delivering the highest quality of care to patients. To achieve this vision, we have identified a series of strategic objectives that will guide our growth and development over the next few years.

### A Collaborative Approach

The strategic planning process will be a collaborative effort involving key stakeholders across all departments at OICD. This includes:

- **Executive Leadership Team:** Provides overall direction and strategic guidance.
- **Department Heads:** Lead the development of departmental action plans aligned with the overall objectives.
- **Faculty and Staff:** Contribute their expertise and experience to ensure the successful implementation of initiatives.

### Objective-Driven Planning

Our strategic objectives are **SMART** (Specific, Measurable, Achievable, Relevant, and Time-bound) to ensure clarity, focus, and feasibility. Here's an overview of each objective and its associated planning process:

1. **Establish a 24/7 Pharmacy Service:**

    - Conduct a needs assessment to determine staffing requirements and hardware requirements to **establish an AI-driven Pharmacy Automation System to manage drug dispensing, accurate administration**
    - **Train staff on AI-driven Pharmacy Automation system.**
    - Develop operational protocols and workflows.
    - Secure necessary funding and resources.
    - Establish a timeline for implementation.
    - Implement AI to monitor infection patterns and manage pharmacy operations, ensuring real-time interventions for infection control and optimizing drug dispensing.
    - Implement a barcode-enabled inventory management system by Q2 2025 for real-time tracking of medications and supplies, reducing errors and improving efficiency.

2. Implement a Hospital-Acquired Infection (HAI) Surveillance System:

    - Research and choose a suitable HAI surveillance system and incorporate IoT-enabled monitoring devices in ICU units to track patient vitals and environmental conditions, ensuring a safe and controlled environment.
    - Assessment of hardware requirement
    - Train staff in data collection and reporting procedures.
    - Develop an action plan for addressing identified HAI issues.
    - Evaluate and refine the system based on data collected.
    - Use blockchain technology for managing patient data, ensuring secure and tamper-proof records for regulatory compliance
    - Implement AI-based systems to monitor infection patterns and manage pharmacy operations, enabling real-time interventions that process large volumes of data quickly, detect patterns, and reduce HAI rates by 15%, while also optimizing drug dispensing for more efficient infection control

3. Develop and Implement a Dedicated TB ICU Unit:

    - Develop a dedicated TB ICU Unit by analyzing patient needs and resource availability.
    - Design the layout and staffing requirements for the unit, ensuring adherence to stringent infection control protocols specific to TB patients.
    - Equip the ICU with advanced technology, such as IoT devices for real-time patient monitoring and AI-powered clinical decision support systems to optimize treatment plans.
    - Train staff comprehensively on TB infection control, critical care nursing, and the use of advanced medical equipment.
    - Collaborate with international experts to adopt best practices and improve patient outcomes, analyze patient needs, and resource availability.
    - Establish a timeline for construction/renovation and equipment acquisition.

4. Create a Fully Functional Quality Assurance Department:

    - Define the scope and responsibilities of the Quality Assurance Department.
    - Recruit qualified personnel with expertise in quality improvement methods.

- Develop policies and procedures for monitoring and evaluating patient care processes.
- Implement a system for receiving and addressing patient feedback.
- Leverage blockchain for secure, tamper-proof patient records and data management, ensuring transparency and compliance with global healthcare standards.

5. Achieving a Paperless Hospital:
    - Conduct a technology assessment to identify the most suitable electronic health record (EHR) system.
    - Develop a data migration plan for transitioning from paper records to electronic format.
    - Train staff in using the EHR system effectively.
    - Establish a timeline for phased implementation across different departments.
6. Strengthening Human Resources in Critical Areas:
    - Conduct a human resource (HR) gap analysis to identify areas requiring additional staff.
    - Develop recruitment strategies specific to critical skill sets.
    - Design training and development programs for existing staff.
    - Implement initiatives to improve employee retention and satisfaction.
    - AI-based talent analytics (Q2 2025) to predict retention risks and offer personalized career development programs to high-performing staff.
7. Establish Critical Care Services:
    - Invest in specialized equipment and technology for critical care units.
    - Collaborate with partner institutions for training and knowledge sharing in critical care medicine.
    - Develop protocols and guidelines for managing critically ill patients.
    - Recruit qualified critical care specialists if needed.

8. Develop and Launch a Thoracic Surgery Residency Program:

- Obtain accreditation for the residency program from relevant regulatory bodies.
- Develop a curriculum aligned with national and international standards.
- Secure faculty with expertise in thoracic surgery to mentor residents.
- Identify clinical training opportunities within the OICD facilities.

9. Build a Comprehensive Research Department to Support WHO Collaboration:

- Develop a research agenda focused on areas of expertise and WHO priorities in TB.
- Recruit and retain qualified researchers to staff the Research Department.
- Establish collaborations with national and international research institutions.
- Secure funding opportunities to support research activities.
- Use big data analytics to identify research trends, evaluate the impact of clinical trials, and optimize funding applications for high-priority projects.

10. Initiate a Lung Cancer Screening Program:

- Develop screening protocols and guidelines based on best practices.
- Raise awareness within the community about lung cancer risk factors and the benefits of early detection.
- Secure resources for providing low-cost or subsidized screening options.

11. Invest in Minimally Invasive Thoracic Surgery Technology and Services:

- Conduct a cost-benefit analysis of adopting minimally invasive surgical techniques.
- Secure funding for acquiring the necessary equipment and technology.
- Train surgeons and other healthcare professionals on minimally invasive surgical procedures.

12. Secure WHO Collaboration Center for TB Research Designation:

- Develop a strategic proposal outlining OICD's research capabilities and its alignment with WHO priorities.
- Identify key personnel to serve as liaisons with the WHO.
- Compile data and documentation to support the application process.

### 13. Establish a Molecular Lab for HBV, HCV, & HIV in OICD

- Set up a small molecular lab at Ojha Hospital equipped with the Cobas 5800 system.
- Ensure protocol adherence testing.
- Monitor test accuracy
- Measure the average turnaround time for viral load results
- Evaluate the percentage of patients completing the testing process.

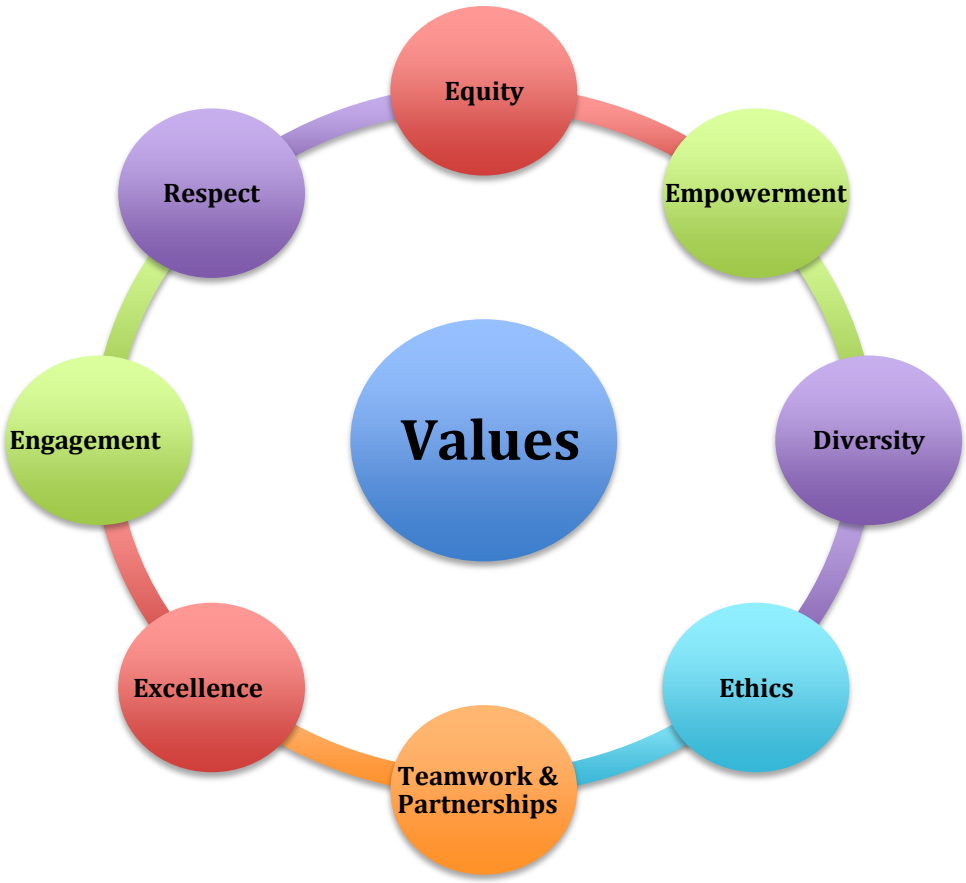
## SECTION II: VISION, MISSION & VALUES

### VISION

To be a pre-eminent academic institution committed to changing and saving lives.

### MISSION

Providing outstanding patient-centered education, training, and clinical care informed by cutting-edge research and innovation, generating and disseminating new knowledge.




### VALUES

- Customer Service
  - Put students first

- Empathy & Compassion
  - Understand before you judge
  - Be concerned for the sufferings and misfortunes of others

- Excellence
    - Be the best and commit to exceptional quality and service

- Innovation
    - Encourage curiosity, imagine, create, and share
- Teamwork
    - Engage and collaborate
- Integrity & Leadership
    - Be a role model and influence others to achieve their best
    - Have the courage to do the right thing
    - Hold yourself and others accountable

- Respect & Collegiality
    - Be kind
    - Listen to understand
    - Value different opinions

## STATEMENT OF PURPOSE

The Ojha Institute of Chest Diseases (OICD) is committed to being at the forefront of the battle against tuberculosis and other pulmonary diseases in Pakistan. With a legacy that dates to 1937, OICD has evolved from a modest sanatorium into a premier center dedicated to excellence in TB care, research, education, and community service. We strive to provide contextually relevant, high-quality healthcare and education, promoting research that leads to groundbreaking advancements in the prevention, diagnosis, and treatment of chest diseases. Our mission is to serve and rehabilitate the community, contribute to the global fight against infectious and non-infectious pulmonary diseases, and foster a culture of public awareness and treatment adherence.

## SECTION III: ASPIRATIONAL INSTITUTIONS

We aspire to the following institutes

1. Aga Khan University Hospital
2. Shanghai Pulmonary Hospital China

## SECTION IV: STRATEGIC GOALS

**Goal 01:** **Enhance Patient Care Efficiency & Accessibility**

**Objective 1:** Integration of Microsoft Azure with HMIS

**Goal 02:** **Enhance Patient Care Quality & Safety**

**Objective 1:** Implement HAI Surveillance System

**Objective 2:** Establish a Specialized TB ICU for Enhanced Patient Care and Outcomes

**Goal 03:** **Achieve Operational Excellence & Compliance**

**Objective 1:** Create a Fully Functional Quality Assurance Department

**Objective 2:** Achieve Paperless Hospital

**Goal 04:** **Expand Service Offerings & Research Capacity**

**Objective 1:** Build a Comprehensive Research Department

**Objective 2**: Establish Critical Care Services (Physio & Nutrition)

**Goal 05:** **Strengthen International and National Collaboration**

**Objective 1:** Secure WHO Collaboration Center for TB Research Designation

**Objective 2:** Enhance diagnostic capabilities at Ojha Hospital by establishing a fully functional molecular laboratory for HBV, HCV, and HIV viral load testing within three months

# OBJECTIVES, OKRs & KPIs

| Goal 01: Enhance Patient Care Efficiency & Accessibility | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Goal Statement: Enhance Patient Care Efficiency & Accessibility by Implementing AI** | | | | | | | |
| **Objectives & Key Results (OKRs)** | | | | | | | |
| **Objective 1: Integration of Microsoft Azure with HMIS** | | | | | | | |
| **Objective** | **Key Results** | **KPI** | **Measurement Method** | **Target** | **Person Responsible** | **Resource Requirement** | **Timeline** |
| Establish AI-Driven 24/7 Pharmacy Service | 24/7 Pharmacy Services | Track operational hours | Time taken from prescription request to medication dispensing. | 24/7 Pharmacy Services | Dr. Hassan Raza | 4 Pharmacists for Inpatient pharmacy 6 Pharmacists for Clinic, 1 Pharmacist for OT Pharmacy | Jun-2025 |
| | IV Dilution Program | Percentage of IV dilutions prepared | Number of Diluted prescriptions given to nurses | 100% diluted IV preparations where necessary | Dr. Hassan Raza | 4 IV Dilution Trained Technicians and Laminar Flow Hood | Dec-2025 |
| | 100% AI-driven Paperless Pharmacy | Percentage of pharmacy processes that are paperless | Track the number of processes that are fully digital (e.g., prescription entry, inventory management, patient records). | Achieve 100% paperless processes. | Dr. Hassan Raza | Integration of Microsoft Azure with HMIS | Dec-2027 |

| Goal 02: Enhance Patient Care Quality & Safety | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Goal Statement: Enhance patient care and safety, ensure timely infection control, improve treatment outcomes, and optimize healthcare infrastructure.** | | | | | | | |
| **Objectives & Key Results (OKRs)** | | | | | | | |
| **Objective 1: Implement HAI Surveillance System** | | | | | | | |
| **Objective** | **Key Results** | **KPI** | **Measurement Method** | **Target** | **Person Responsible** | **Resource Requirement** | **Timeline** |
| Implement HAI Surveillance System and response system. | Achieve 90% data entry compliance within the first 1 year | Data Entry Compliance Rate | Calculate the percentage of required data fields completed for each reported HAI event within the system | 90% data entry compliance within 1 year | Dr. Saima Samad | * Infection Control Nurse * Data Analyst * Training for staff | Dec-26 |
| | Reduce the average time to identify and report a potential HAI outbreak by 50% within 1 year. | Outbreak Detection and Reporting Time | Measure the time elapsed from the first indication of a potential outbreak (e.g., clustering of similar infections) to the official report being generated within the surveillance system. | Reduce the average time by 50% within 1 year. | Dr. Saima Samad | * Infection Control Nurse * Data Analyst * Training for staff | Dec-26 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Increase the number of hospital units actively using the HAI surveillance system to 100% within 12 months. | Track the number of hospital units (e.g., ICU, surgical wards, etc.) that are consistently entering data into the HAI surveillance system. | Track the number of hospital units (e.g., ICU, surgical wards, etc.) that are consistently entering data into the HAI surveillance system. | 100% of hospital units are using the system within 12 months. | Dr. Saima Samad | * Infection Control Nurse * Data Analyst * Training for staff | Dec-26 |

| Objective 2: Establish a Specialized TB ICU for Enhanced Patient Care and Outcomes | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Objective** | **Key Results** | **KPI** | **Measurement Method** | **Target** | **Person Responsible** | **Resource Requirement** | **Timeline** |
| Develop and Implement a Dedicated TB ICU | Establish a fully operational TB ICU unit within 2 years | TB ICU Operational Status | Through HMIS Data | 100% Functional T ICU | Dr. Vijay Kumar | - Medical Staff (Doctors, Nurses, Therapists) - Ward Boys | Jun-25 |
| | Achieve a specific patient capacity within the TB ICU unit. | Number of operational TB ICU beds | Through HMIS Data | 100% Occupancy | Dr. Vijay Kumar | - ICU Beds & Equipment (Ventilators, Monitors) - PPE Supplies - TB Medications & Consumables | Dec-25 |
| | Achieve a targeted patient outcome within the TB ICU. | TB Treatment Success Rate / Mortality Rate in the TB ICU | Through HMIS Data | 50% reduction in mortality of all patients admitted to ICU | Dr. Vijay Kumar | - Dedicated Unit Space (HVAC System Upgrade Needed) | Dec-25 |

| Goal 03:Achieve Operational Excellence & Compliance | | | | | | | |
|---|---|---|---|---|---|---|---|
| Goal Statement: Achieve Operational Excellence & Compliance by establishing a fully functional Quality Assurance Department and transitioning to a paperless hospital through AI-driven systems | | | | | | | |
| Objectives & Key Results (OKRs) | | | | | | | |
| Objective 1: Create a Fully Functional Quality Assurance Department | | | | | | | |
| **Objective** | **Key Results** | **KPI** | **Measurement Method** | **Target** | **Person Responsible** | **Resource Requirement** | **Timeline** |
| Establish a Fully Functional Quality Assurance Department for Continuous Improvement | Establish a fully operational Quality Assurance (QA) Department within 1.5 years. | QA Department Operational Status | Track completion of key milestones (e.g., hiring of staff, procurement of equipment, development of QA processes and procedures). | Achieve full operational | Dr. Ghulam Murtaza Soho (Deputy Director) | Quality Assurance Manager - Quality Assurance Officer | Dec-25 |
| | Develop and implement a comprehensive Quality Management System (QMS). | Number of QMS elements implemented | Track the number of key QMS elements implemented (e.g., document control, risk management, internal audits, corrective and preventive actions). | Implement all core QMS elements within 1 year. | Ms. Hurain Iqbal (QA Officer) | Computers & Software for Data Analysis/Reporting - Office Supplies | Jun-26 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Increase the number of hospital units actively using the HAI surveillance system to 100% within 12 months. | Conduct a specified number of internal audits within the first year. | Number of internal audits conducted | Track the number of completed internal audits across different departments /processes. | Ms. Hurain Iqbal (QA Officer) | HMIS upgradation required | Jun-26 |

| Objective 2: Achieve Paperless Hospital | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Objective** | **Key Results** | **KPI** | **Measurement Method** | **Target** | **Person Responsible** | **Resource Requirement** | **Timeline** |
| Transition to a Fully Digital and AI-Driven Paperless Hospital | Successful Implementation of Upgraded AI-powered CPOE System | CPOE System Usage Rate | Track the percentage of all medical orders | Achieve a CPOE usage rate of 100% within 3 years | Dr. Hassan Raza | Procurement of AI services | Dec-26 |
| | Enhanced Patient Safety | Adverse Drug Reaction (ADR) rate reporting in HMIS | Through HMIS Data | 100% ADR reporting | Dr. Hassan Raza | Procurement of Hardware | Dec-26 |
| | Reduced Paper Usage and Improved Environmental Sustainability | Reduction in paper consumption | Track the volume of paper used for medical records, | Reduce paper consumption by 1 year | Dr. Hassan Raza | Upgradation of HMIS | Dec-25 |

| Goal 04: Expand Service Offerings & Research Capacity | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Goal Statement: Advance patient care and medical innovation by establishing a comprehensive Research Department and fully integrated Critical Care Services for physiotherapy and nutrition, ensuring evidence-based practice and improved patient outcomes.** | | | | | | | |
| Objectives & Key Results (OKRs) | | | | | | | |
| Objective 1: Build a Comprehensive Research Department | | | | | | | |
| **Objective** | **Key Results** | **KPI** | **Measurement Method** | **Target** | **Person Responsible** | **Resource Requirement** | **Timeline** |
| Establish a Comprehensive Research Department to Advance Medical Knowledge and Innovation | Establish a fully functional Research Department | Research Department Operational Status | No. of Research Published | 10 Published Research | Dr. Sana Siddiqui | - Statistician<br>- Data Entry Operator | Dec-25 |
| Objective 2: Establish Critical Care Services (Physio & Nutrition) | | | | | | | |
| **Objective** | **Key Results** | **KPI** | **Measurement Method** | **Target** | **Person Responsible** | **Resource Requirement** | **Timeline** |
| Develop Comprehensive Critical Care Services for Physiotherapy and Nutrition to Enhance Patient Recovery | Establish a fully functional Physiotherapy Department | Physiotherapy Services Utilization Rate | Track the number of critical care patients receiving physiotherapy interventions. | Provide Physiotherapy services to all eligible patients | Dr. Ghulam Murtaza Soho | Appointment of Staff, Procurement of Relevant Equipment | Jun-25 |
| | Establish a fully functional Nutritional Support Service | Nutritional Support Coverage Rate | Track the percentage of critical care patients receiving appropriate nutritional support. | Achieve 100% coverage of nutritional support for critical care patients | Ms. Sabica Zehra | Appointment of Staff, Procurement of Relevant Equipment | Jun-25 |

| Goal 05: Strengthen International and National Collaboration | | | | | | | |
|---|---|---|---|---|---|---|---|
| Goal Statement: Enhance infectious disease research and diagnostics and establish a state-of-the-art molecular laboratory. | | | | | | | |
| Objectives & Key Results (OKRs) | | | | | | | |
| Objective 1: Secure WHO Collaboration Center for TB Research Designation | | | | | | | |
| **Objective** | **Key Results** | **KPI** | **Measurement Method** | **Target** | **Person Responsible** | **Resource Requirement** | **Timeline** |
| Attain WHO Collaborating Center Designation for TB Research to Enhance Global Collaboration and Impact | Designation by WHO | No. of Activities per Month in Predesignating Period | No. of Activities per Month in Predesignating Period | Designation by WHO | Dr. Hassan Raza | Statistician | Jun-25 |
| Objective 2: Enhance diagnostic capabilities at Ojha Hospital by establishing a fully functional molecular laboratory for HBV, HCV, and HIV viral load testing within three months | | | | | | | |
| **Objective** | **Key Results** | **KPI** | **Measurement Method** | **Target** | **Person Responsible** | **Resource Requirement** | **Timeline** |
| Enhance diagnostic capabilities at Ojha Hospital by establishing a fully functional molecular laboratory for HBV, HCV, and HIV viral load testing within three months. | Establish a fully operational molecular laboratory within three months. | Laboratory Operational Status | Track completion of key milestones | Achieve full operational status by June 2025 | Dr. Fatima Fasih | Test Kits will be required | Jun-25 |

## SECTION V: RESOURCE PLANNING FOR ACHIEVING GOALS

This involves a collaborative approach with executive leadership, department heads, and staff.

| GOALS | OBJECTIVES | RESOURCE PLANNING |
|---|---|---|
| **Goal 1: Enhance Patient Care Efficiency and Accessibility** | **Objective 1.1:** Implement a 24/7 AI-driven, barcode-enabled pharmacy and deploy pharmacists to chest clinics by Q4 2025 and Q2 2025 respectively. | Requires recruitment of pharmacists requires training, procurement of a Lemina Flow Hood, an AI-based inventory system, and IT infrastructure upgrades. |
| | | Implementation involves phased recruitment, system selection, pilot testing, and full deployment over three years. |
| **Goal 2: Enhance Patient Care Quality and Safety** | **Objective 2.1:** Implement an AI/IoT-powered Hospital-Acquired Infection (HAI) surveillance system. | Requires recruitment of an Infection Control Nurse and Data Analyst, training, and procurement of computers, IoT devices, and AI software. |
| | | Implementation spans two years, including training, pilot testing, and full rollout. |
| | **Objective 2.2:** Develop a dedicated TB ICU with advanced technologies. | Requires recruitment of ICU-trained medical staff, procurement of specialized equipment, PPE, AI-powered monitoring systems, and HVAC system upgrades. |
| | | Implementation spans two years, including recruitment, equipment procurement, training, and unit launch. |
| **Goal 3: Achieve Operational Excellence and Compliance** | **Objective 3.1:** Establish a Fully Functional Quality Assurance Department for Continuous Improvement | Allocate budget for hiring a QA Manager and Officer, alongside HMIS upgrades and data analysis software, while ensuring office space and supplies for the new department. |
| | | Establish a phased hiring plan to meet the December 2025 operational deadline and prioritize QMS development and internal audit training to meet June 2026 targets. |

| | | |
|---|---|---|
| | **Objective 3.2** Transition to Fully Digital and AI-Driven Paperless Hospital | Allocate budget for AI-powered CPOE system procurement, hardware upgrades, and HMIS enhancements, while focusing on staff training for full digital adoption. |
| | | Establish a phased implementation plan targeting 100% CPOE usage and ADR reporting by December 2026 and prioritize HMIS upgrades to achieve paper reductions by December 2025. |
| **Goal 4: Expand Service Offerings and Research Capacity** | **Objective 4.1:** Build a Research Department for WHO collaboration, leveraging AI and data science. | Requires recruitment of a Statistician, Data Entry Operator, and Data Scientist, and procurement of research tools. |
| | | Implementation in 6 months. |
| | **Objective 4.2:** Establish Critical Care Services (Physiotherapy & Nutrition). | Requires recruitment of Physiotherapists and a Nutritionist, equipment procurement, and space allocation. |
| | | Implementation in 6 months. |
| **Goal 05: Strengthen International and National Collaboration** | **Objective 5.1:** Leverage the Research Department to achieve WHO designation. | Requires potential additional recruitment of TB specialists, development of a research agenda, and collaboration with WHO. |
| | | Implementation in 1 year. |
| | **Objective 5.2:** Establish a molecular lab for HBV, HCV, and HIV viral load testing. | Requires setup, validation, training, and monitoring of the Cobas 5800 system. |
| | | Implementation in 3 months |

## SECTION VI: IMPLEMENTATION AND MONITORING FOR OICD'S STRATEGIC PLAN

To ensure effective implementation, working groups are established for each strategic objective, with designated Responsible Persons under the Director OICD's supervision:

- Goal 1:
    - Pharmacy Service (1.1): Chief Pharmacist
    - HAI Surveillance (1.2): Infectious Diseases Consultant
- Goal 2:
    - TB ICU (2.1): Infectious Diseases Consultant & ICU Physician
    - Quality Assurance (2.2): Deputy Director & Quality Assurance Manager
- Goal 3:
    - Paperless Hospital (3.1): Deputy Director
    - Strengthen HR (3.2): Deputy Director
- Goal 4:
    - Critical Care Services (4.1): Deputy Director & Nursing Matron
    - Research Department (4.3): Research Associate
- Goal 5:
    - WHO Collaboration (5.1): Chief Pharmacist (WHO Secretary)

### Implementation Timeline and Resource Planning:

- Each working group will develop detailed action plans with specific timelines and resource requirements based on the previously defined objectives.
- This includes addressing human resources, financial needs, equipment, and infrastructure.

### Challenges and Mitigation Strategies:

- **Limited Human Resources:** Leverage existing expertise, cross-train, and prioritize recruitment.
- **Financial Constraints:** Explore grants, and partnerships, and prioritize resource allocation.
- **Lack of Dedicated Quality Assurance:** Utilize the Chief Pharmacist initially and recruit a dedicated manager.
- **Time Constraints:** Prioritize tasks, establish realistic timelines, and consider phased implementation.

Communication and Stakeholder Engagement:

- Maintain regular communication with department heads, staff, patients, and Dow University administration.
- Share success stories and updates through staff meetings, newsletters, and relevant channels.
- Detailed SOP development and KPI monitoring will be used for the Molecular lab implementation.

Key Focus:

- The plan emphasizes leveraging existing resources while proactively addressing potential challenges.
- It promotes a collaborative and communicative approach to ensure the achievement of OICD's strategic goals.
- The molecular lab implementation is given a clear and short timeline.

## SECTION VII: LIST OF APPENDICES

| No. | DESCRIPTION |
|---|---|
| A | List Of Existing Research Projects |
| B | Publications |
| C | SWOT Analysis |
| D | TOWS Matrix |

# APPENDIX A: LIST OF EXISTING RESEARCH PROJECTS

1. Pharmacovigilance in Drug Sensitive and Drug-Resistant Tuberculosis
2. Implementation of the Hospital Patient Safety Initiative Program
3. Case report on Neck synovial sarcoma
4. Original article on outcome of Hand swen gastroesophageal neck anastomosis in meckeown
5. Esophagectomy in carcinoma of the esophagus

# APPENDIX B: PUBLICATIONS

## Published Research of Professor Pulmonology Prof. Dr. Faisal Fayyaz Zuberi

1. Ghafoor L, **Zuberi FF**, Khan GM, Ismail M. Yield & Accuracy of Gastric Lavage in Non-Expectorating Adults with Suspected Pulmonary Tuberculosis. Pak J Med Sci. 2023; 39(5): 1468-1472.
2. **Zuberi FF**, Bader N, Rasheed T, Zuberi BF. Association between insulin resistance and BMI with FEV1 in non-hypoxemic COPD out-patients. Clin Respir J. 2021 May;15(5):513-521. Doi: 10.1111/crj.13336. Epub 2021 Feb 5
3. **Zuberi FF**, Zuberi BF, Ali FS, Bader N. Muscle weakness assessment in non-hypoxemic COPD out-patients at tertiary care hospitals. Pak J Med Sci. 2021;37(2):536-542
4. **Zuberi FF**, Haroon MA, Haseeb A, Khuhawar SM. Role of Montelukast in Asthma and Allergic rhinitis patients. Pak J Med Sci. 2020;36(7):1517-1522
5. Khan GM, **Zuberi FF**, Bizat-uz-Zahra S, Ghafoor L. Frequency of Blood Eosinophilia in newly diagnosed Chronic Obstructive Pulmonary Disease patients. Pak J Med Sci. 2020;36(4):750-754
6. Hameed S, **Zuberi FF**, Hussain S, Ali SK. Risk factors for Mortality among Inpatients with Smear-Positive Pulmonary Tuberculosis. Pak J Med Sci. 2019;35(5):1361-1365
7. Ali SK, **Zuberi FF,** Hameed S. Frequency and Risk Factors of Bronchopleural Fistula in Tube Thoracostomy patients. J Dow Uni Health Sci 2019;13 (2): 95-101
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11. **Zuberi FF**, Zuberi BF, Ali SK, Hussain S, Mumtaz F. Yield of Closed Pleural Biopsy and Cytology in Exudative Pleural Effusion. Pak J Med Sci. 2016;32(2):356-360
12. Azam F, Shaheen A, **Zuberi FF**. Comparative effect of ATT alone and in combination with Vitamin D on physiological and laboratory parameters in pulmonary TB. J Dow Uni Health Sci 2015; 9(3): 92-98.
13. Zuberi BF, **Zuberi FF**, Bader N, Alvi H, Salahuddin J. Comparison of British Thoracic Society and American Thoracic Society reintroduction guidelines for anti-tuberculous therapy-induced liver injury. J Pak Med Assoc.2014 Aug;64(8):896-9

14. **Zuberi FF**, Zuberi BF, Salahuddin M. Asthma and Myths: An online survey. Pak J Med Sci 2011;27(1): 157-161
15. **Zuberi FF,** Khan JA. Prospective comparison of prediction rules of mortality risk for CAP in a developing country. Int J Tuberc Lung Dis. 2008 Apr; 12(4):447-52.
16. Haque AS, Zubairi ABS, Shiraz A, **Zuberi F,** Karim SI, Pervez R, Awan S. Asthma Know-how and Approach among Pakistani Family Physicians and the Impact of an Educational Program. Int J Tuberc Lung Dis. 2007 Nov;11(11):1260-5
17. Zuberi BF, Alvi H, **Zuberi FF**, Rasheed T, Nawaz Z, Fatima-tuz-Zohra. Frequency of minimal hepatic encephalopathy in illiterate patients with compensated cirrhosis. Pak J Med Sci. 2016;32(3):595-598.
18. Zuberi BF, **Zuberi FF**, Hasan SR, Kumar R, Memon SA, Afsar S. Frequency of Acute Hepatitis C after needle stick injury and its treatment outcome. Pak J Med Sci 2009; 25(5): 766-769
19. Zuberi BF, **Zuberi FF**, Vasvani A, Faisal N, Afsar, Rehman J, Qamar B, Jaffery B. Appraisal of the knowledge of internet users of Pakistan regarding hepatitis using an on-line survey. J Ayub Med Coll Abbottabad. 2008 Jan-Mar;20(1):91-93.
20. Zuberi BF, **Zuberi FF**, Memon SA, Qureshi MH, Ali SZ, Afsar S. Sustained virological response based on rapid virological response in genotype-3 chronic hepatitis C treated with standard interferon in the Pakistani population. World J Gastroenterol 2008;14(14): 2218-2221.
21. **Zuberi FF**, Zuberi BF, Khan MA, Khan MH. Frequency of rectal varices in patients with cirrhosis. J Coll Physicians Surg Pak 2004; 14 (2): 94-97

Published Research by Associate Professor Dr. Saifullah Baig

1. Baig S, Rizvi N, Saifullah N. To determine the acquired resistance of Mycobacterium tuberculosis by culture to 1st line anti-tuberculous drugs in non-responding smear-positive patients who have taken category 1. European Respiratory Journal 2011 38: p2622.
2. Shah SA, Qayyum S, Abro R, Baig S, Creswell J. Active contact investigation and treatment support: an integrated approach in rural and urban Sindh, Pakistan. The International Journal of Tuberculosis and Lung Disease. 2013 Dec 1;17(12):1569-74.
3. "Outcome of Mediastinal Lymph Node Biopsy by Cervical Mediastinoscopy. “Soomro, Niaz H., Aneeqa A. Zafar, Saifullah Baig, and Nisar A. Rao. Journal of Surgery Pakistan (International) 19 (2014): 4.
4. Soomro NH, Zafar AA, Baig S, Maxood G, Rao N. MANAGEMENT CHALLENGE IN CHEST WALL NEOPLASMS. The Professional Medical Journal. 2015 Sep 10;22(09):1176-80.
5. Saifullah N, Baig S, Soomro NH, Rizvi N. EXUDATIVE PLEURAL EFFUSION; Comparison of diagnostic yield between pleuroscopic and closed percutaneous pleural biopsies in patients. Professional Medical Journal. 2016 Aug 1;23(8).

6. Saifullah N, Baig S, Soomro NH, Rizvi N, Zafar AA. DIAGNOSTIC YIELD OF PLEURAL BIOPSY USING ABRAMS NEEDLE. Gomal Journal of Medical Sciences. 2016 Jul 15;14(2).
7. Qamar A, Baig MS, Saifullah N. Obstructive sleep apnea and metabolic syndrome; causal association or co-existence. In Med Forum 2017 (Vol. 28, No. 4, pp. 188-92).
8. Soomro NH, Baig S, Rao N, Zafar AA, Hashmat F, Awan SB, Ullah H. GENEXPERT OF CERVICAL LYMPH NODE SPECIMENS IN THE DIAGNOSIS OF EXTRAPULMONARY TB AND RIFAMPICIN RESISTANCE. Gomal Journal of Medical Sciences. 2017 Aug 17;15(1).
9. Qamar A, Haque Z, Baig MS, Owais M, Iffat W, Qamar A. OBSTRUCTIVE SLEEP APNOEA: A PREDICTOR OF ABNORMAL GLUCOSE METABOLISM. Pakistan Journal of Physiology. 2018 Dec 31;14(4):5-8.
10. Baig S, Khan RA, Khan K, Rizvi N. Effectiveness and Quality of Life with Montelukast in Asthma–A double-blind randomized control trial. Pakistan journal of medical sciences. 2019 May;35(3):731.
11. Rasheed W, Rao N, Adel H, et al. (August 15, 2019) Diagnostic Accuracy of Xpert MTB/RIF in Sputum Smear-Negative Pulmonary Tuberculosis. Cureus 11(8): e5391. doi:10.7759/cureus.5391.
12. Qamar A, Qureshi M, Nazar S, Baig S, Iffat W, Owais M. Physical activity and apnoea-hypopnea index in obstructive sleep apnoea. PJP [Internet]. 26 Nov.2019;15(3):670.http://www.pjp.pps.org.pk/index.php/PJP/article/view/1116
13. Sharif N, Baig MS, Sharif S, Irfan M. Etiology, Clinical, Radiological, and Microbiological Profile of Patients with Non-cystic Fibrosis Bronchiectasis at a Tertiary Care Hospital of Pakistan. Cureus. 2020 Mar 8;12(3):e7208. doi: 10.7759/cureus.7208. PMID: 32269886; PMCID: PMC7138467.
14. Ali S, Luxmi S, Anjum F, Muhaymin SM, Uddin SM, Ali A, Ali MR, Tauheed S, Khan M, Bajwa M, Baig SU, Shalim E, Ahmed I, Khan AS, Quraishy S. Hyperimmune anti-COVID-19 IVIG (C-IVIG) Therapy for Passive Immunization of Severe and Critically Ill COVID-19 Patients: A structured summary of a study protocol for a randomized controlled trial. Trials. 2020 Nov 2;21(1):905. Doi: 10.1186/s13063-020-04839-5. PMID: 33138867; PMCID: PMC7604645.
15. Alamgir, M., Sajjad, M., Baig, M., & Noori, M. (2021). Mutational Frequencies in Mycobacterial rpoB gene using GeneXpert/MTB Rif Assay in Rifampicin Resistant patients at a tertiary care setting in Urban Sindh, Pakistan: Analysis from Five years. Pakistan Journal of Medical Sciences, 37(4). https://doi.org/10.12669/pjms.37.4.3875.
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17. Akhter S, Saifullah N, Zaina F, Durrani N, Baig MS. Validation of Screening Tools and comparison of Anthropometric Characteristics in Diagnosis of Obstructive Sleep Apnea. Med Forum 2021;32(6):107-111.
18. Qamar A, Haque Z, Zehra S, Baig M. OBSTRUCTIVE SLEEP APNOEA AND ROLE OF INTERLEUKIN-6 AS A CIRCULATORY BIOMARKER: A CROSS-SECTION STUDY. PJP [Internet]. 30Jun.2021 [cited 25Sep.2021];17(2):15-9. Available from: http://www.pjp.pps.org.pk/index.php/PJP/article/view/1346
19. Qamar A, Haque Z, Zehra S, Baig MS. Obstructive sleep apnea: Potential role of tumor necrosis factor-alpha as a circulating biomarker. Journal of the Pakistan Medical Association. 2022 Feb 19.
20. Moin M, Rizvi SA, Baig MS, Asad F, Rizvi SH. Impact of Continuous Positive Airway Pressure Therapy on Body Weight in Patients with Obstructive Sleep Apnea. Pakistan Journal of Medical & Health Sciences. 2022 Apr
21. Hussain, R., Hussain, S., Baig, M. S., Rao, N. A., Ali, R., Ali, S. and Qalb-i-Hyder, S. (2022) "Study on Frequency of Impaired Lung Function in Treated Tuberculosis Patients in Tertiary Care Hospital of Pakistan", Journal of Pharmaceutical Research International, 34(46B), pp. 1-6. Doi: 10.9734/jpri/2022/v34i46B36383.
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23. Impact of Continuous Positive Airway Pressure Therapy on Body Weight in Patients with Obstructive Sleep Apnea, Madiha Moin, Sameera Ali Rizvi, Mirza Saifullah Baig, Faisal Asad, Syeda Hina Rizvi, Ubedullah, P J M H S Vol. 16, No. 04, APR 2022.DOI: https://doi.org/10.53350/pjmhs2216466

## Published Research of Associate Professor Dr. Niaz Hussain Soomro

1. Niaz Hussain Soomro, Aneeqa A Zafar, Jamal Nasir, Aamna Binte Zahid, Mariam Fazal, Ubedullah Shaikh
    a. Extra pulmonary cervical tuberculous lymphadenopathy: more common than we think- a
    b. tertiary care hospital experience.
    c. Gomal Journal of Medical Sciences; Jan-Mar 2016, vol 14, No, 1; p 11-14
2. Niaz Hussain Soomro, Ali Shan Shariff, Aneeqa A Zafar, Omar Ehtisham, Guzel Maxood, Kinza Panjwani
    a. Patterns of mediastinal tumors; a two- and half-year experience.
    b. The Professional Medical Journal; Feb 2016, vol 23, No.02; P 223-227
3. Niaz Hussain Soomro, Aneeqa A Zafar
    a. Pattern of thoracic surgical diseases at a tertiary care hospital.
    b. Journal of Surgery Pakistan; Jul-Sept 2015, vol 20, No.3; p 111-114

4. Niaz Hussain Soomro, Aneeqa A Zafar, Saifullah Baig, Guzel Maxood, Nisar Ahmed Rao.
    a. Management challenge in chest wall neoplasms; a 2-year experience.
    b. The Professional Medical Journal; Sept 2015, Vol 22, No.9; P 1176-117
5. Niaz Hussain, Syed Waqar Ahmed, Aneeqa A Zafar, Khuram Rais, Anum Javed.
    a. Tuberculous cold Abscess of the chest wall. Is surgery mandatory at all?
    b. Pakistan Journal of Surgery; 2015, Vol.31, issue; P 45-48.
6. Niaz Hussain, Aneeqa A Zafar, Saifullah Baig, Nisar Ahmed Rao.
    a. Outcome of mediastinal lymph node biopsy by cervical Mediastinoscopy.
    b. Journal of Surgery Pakistan; Oct-Dec 2014, Vol 19, No.4; P 154-15
7. Niaz Hussain, Anum Javed, Javeria Kamran, Sana Wahab
    a. Complications and technical errors of tube thoracostomy and its underwater seal system.
    b. Journal of Surgery Pakistan; April-June 2014, Vol 19, No.2; P 75-78
8. Tanveer Ahmad, Syed Waqar Ahmed, Niaz Hussain Soomro and Khalil Ahmed Sheikh
    a. Thoracoscopic evacuation of retained post-traumatic hemothorax.
    b. J Coll Physician Surg Pak; 2013, Vol 23, No.3; p-234-236
9. Niaz Hussain, Khurram Rais, Syed Waqar Ahmed, Tanveer Ahmed.
    a. Outcome of pulmonary decortication in empyema thoracis.
    b. Pakistan Journal of Surgery; Apr-Jun 2011, vol. 27, No.2; p 91-94.
10. Riffat Tanveer, S.Waqar Ahmed, Tanveer Ahmed, Niaz Hussain, Iram Bokhari
    a. Chest wall tumors: A diagnostic Appraisal.
    b. Pak J of cardiovascular and thoracic surgery; 2010, vol 3, P 611 to 615.
11. Niaz Hussain, S.W.Ahmed, T.Ahmed ,A.B.Hafeez, R.Baloch, S.Ali.
    a. Experience of thymectomy by median sternotomy in patients with Myasthenia gravis.
    b. Journal of the Pakistan Medical Association; 2010; vol. 60, No 5; p 368-370.
12. Tanveer Ahmed, S.Waqar Ahmed, Niaz Hussain, Khuram Rais.
    a. Clinical Profile and Postoperative outcome in patients with simple and complex Aspergilloma
    b. of the lung.
    c. J coll Physican surg Pak; 2010, Vol 20; p 190-193.
13. Tanveer Ahmed, S.Waqar Ahmed, Niaz Hussain, M.Iqbal khan.
    a. Role of Urgent thoracotomy in improving the survival of patients in severe chest trauma.
    b. J coll Physican Surg Pak; 2009, vol. 19, No. 9; p 575-578.
14. Tanveer Ahmed, M.Iqbal khan, Niaz Hussain,Ehtesham Siddiqui,Zia-ul-Islam
    a. Perforation operation intervalas a prognostic fector in typhoid ileal perforation
    b. Journal of Surgery Pakistan; January-March 2009, Vol 14, No.1; P 11-14
15. Salim Ahmed S, Niaz Hussain,Bashir Ahmed, Mumtaz Mahar.

a. Predicting factors of seroma formation after breast cancer surgery.
b. Pakistan Journal of Surgery; 2006: vol. 22; issue 4, P 201-204.

16. A case report on "chest trauma with exposed and protruded lung,Life can be saved with prompt measures " is published in "Medical News" 2008, March 1-14 issue for general and medical community awareness. The circulation of Medical News is 15,000.
17. An article on "Fungal lung disease Aspergillosis" is published in "Medical News" 2008, April 15- 30 issue.
18. An article on "Parasitic lung disease-hydatidosis" is published in "Medical News"2008, May 15-31 issue.
19. A case report on "Late presentation of traumatic diaphragmatic hernia (TDH)" is published in "Medical News"2008 June 1-14 issue.
20. A case report on "TERATOMA-Benign germ cell tumor of the mediastinum" is published in "Medical News"2008 June 15-30 issue.
21. A case report on "Traumatic clotted hemothorax treated by Video-Assisted Thoracic Surgery (VATS)" is published in "Medical News"2008 August 1-14 issue.

Case Studies

1. Niaz Hussain Soomro, Bushra K Naeem, Sagheer Hussain, Sara Siddiqui, Atif Siddiqui, Hiba
   - Giant Esophageal Leiomyoma: Incidentally found tumor on thoracotomy for
   - Bronchogenic Mediastinal Cyst
   - J of the DUHS ; 2016, vol 10 (1), p 39-40
2. Niaz Hussain Soomro, Aamna Binte Zahid, Aneeqa A Zafar.
   - Nonfunctional paraganglioma of the mediastinum
   - JPMA; May 2016, vol 66, No. 5, p 609-611
3. Niaz Hussain Soomro, Aneeqa A Zafar, Faisal Fayyaz Zuberi, Amir Maqbool
   - Pulmonary synovial sarcoma: a rare primary lung tumor
   - J PIONEER MED SCI; Oct-Dec 2015, vol 5, issue 4, p 144-146
4. Niaz Hussain Soomro ,Aneeqa A Zafar Javed Ahmed.
   - Huge carcinoid tumor causing complete obstruction of the left main bronchus
   - and destruction of the left lung.
   - Journal of the Pakistan Medical Association. August 2015, Vol 65, No.08, p 901-903.
5. Niaz Hussain,Anum Javed,Sana Wahab,Anum Deedar
   - "Aneurysmal Bone Cyst of the rib-- A Rare chest wall tumor"
   - J of the DUHS Pakistan. 2015,vol.9 (2):p39-40.
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   - Case report: Re-recurrent dermatofibrosarcomaprotuberans of the chest wall.
   - JPMA. March 2015 Vol 65, No.03, P. 324-326.
9. Niaz Hussain Soomro, Aneeqa A Zafar.
   - Incidental finding of colo pleural fistula during percutaneous window
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10. Niaz Hussain Soomro, Sana Wahab, Anum Javed, Ahmer Mehmood
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11. Niaz Hussain Soomro, Aneeqa Ahsan Zafar, Shirin Siddiqi
    - Chest wall tumor; osteochondroma arising from the spinous process of scapula
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12. Niaz Hussain Soomro, Sanaullah Junejo, Aneeqa A Zafar, Shirin Siddiqi, G. Haider.
    - Case report: Mediastinal synovial sarcoma.
    - Journal of Surgery Pakistan. Jan -Mar 2014, Vol 19 No.1, P.45-47.
13. Niaz Hussain Soomro, S.Waqar Ahmed,Tanveer.Ahmed, M. Tauqeer Nasir
    - Case Report: Infected Benign cystic teratoma of the mediastinum
    - J of coll Physican surg pak; 2009: vol 19 (6), p 393-394
14. Niaz Hussain Soomro, S.Waqar Ahmed, Tanveer.Ahmed, S.Azfar Hussain.
    - Case Report: Morgagni's Hernia.

    J coll Physican Surg Pak; Apr 2008: vol 18 No.4; p 242-243.

## Published Research of Assistant Professor Pulmonology Dr. Faisal Asad

1. F Asad, M Moin at el. Correlation of Neck circumference and CPAP among patients of Obstructive Sleep. PJMH S 2022; 16(10): 485-7

2. Khan SA, Manohar M, Khan M, Hasan N, Zaheer S, Asad F, Adil SO. Utility of the serial portable chest x-ray for the diagnosis and quantification of COVID-19 patients, Journal of Taibah University Medical Sciences, https://doi.org/10.1016/j.jtumed.2022.09.006

3. M Moin, F Asad at el. Continuous Positive Airway Pressure therapy improves the Quality of Life among Obstructive Sleep Apnea individuals in the Pakistani Population. PJMH S 2022; 16(10): 105-7

4. Asad F, Sahito AA at el. Correlation of Epworth score and Neck circumference in Pakistani adults: A cross-sectional study. APMC 2022;16(2):79-82

5. F Asad at el. Relationship of Neck circumference and Obstructive sleep apnea: A cross-sectional study in Pakistani adults. JPRI, 34(44A):47-53, 2022; Article no. JPRI.89279

6. M Moin, H Rizvi, M S Baig, F Asad at el. Impact of Continuous Positive Airway Pressure Therapy on Body Weight in patients with Obstructive Sleep Apnea. P J M H S Vol. 16, No. 04, APR 2022

7. F Asad, AA Sahito, M Moin, U Ikhlaq, Ubedullah and F U Rahman. Role of Angiotensin-converting Enzyme Inhibitors (ACEI)/Angiotensin Receptor Blockers (ARBs) and Hydrocortisone in COVID-19 Patients Admitted to the Intensive Care Unit. JPRI, 34(26A): 7-12, 2022; Article no.JPRI.82598
8. Asad F. Pulmonary Hypertension still an 'Orphan Lung Disease' in Pakistan. Pak Heart J 2021;54(01):1-2
9. Dessai TD, Amini SS, Asad F, Kutty H. Prevalence of vestibular migraine in Dubai. Hamdan Med J 2019;12:19-22.
10. F Asad, A R Fernandez, A Kumar, Mohammad A S. Co-existence of Asthma with Allergic Rhinitis and Common Allergens in Al Ain, UAE. ASH & KMDC 20(2):137;2015
11. A Alzaabi, Asad F, J Abdou at el. Prevalence of Chronic obstructive pulmonary disease in Abu Dhabi, UAE. Respiratory medicine 105, 566-70; 2011.
12. Abstract Publication on preliminary data in Chest December 2010 "COPD prevalence in Abu Dhabi, UAE
13. Research thesis titled "Nosocomial infections in intensive care unit" approved by the College of Physicians & Surgeons of Pakistan for fellowship in internal medicine

Published Research of Assistant Professor Infectious Diseases Dr. Farzana Batool

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# APPENDIX C: SWOT ANALYSIS

| STRENGTHS | WEAKNESSES |
|---|---|
| 1. **Strong Infrastructure:** We have a computerized inventory management system, 3 off-site chest clinics in Karachi, Sindh's only provincial reference lab, and are among only two institutes offering free-of-cost major thoracic surgeries.<br>2. **Patient Care:** We offer free treatment including medicines, nutrition, and surgery. We have a post-graduation program for Pulmonology, which is the first TB-integrated site for TB, HIV, and Hepatitis,<br>3. **Collaboration with renowned Institutes:** We have a strong collaboration with the National TB Program and WHO and are in the pre-designation phase of becoming a WHO Collaboration Center for TB research.<br>4. **Reputation:** We can receive large grants and funds from NGOs.<br>Trained Staff: Our team is trained for Minimal Thoracic Invasive Surgery | 1. **Staffing:** We have a shortage of qualified healthcare professionals like physicians, physiotherapists, nurses, statisticians, and pharmacists. We also need a critical care consultant.<br>2. **Services:** We don't have a 24/7 Pharmacy service.<br>3. **Technology:** We lack Minimal thoracic invasive surgery equipment, though we have trained staff. |
| **OPPORTUNITIES** | **THREATS** |
| 1. **Become a leading TB center:** We can establish Pakistan's first free-of-cost TB ICU.<br>2. **Improve Patient Care:** We can implement a 24/7-unit dose dispensing pharmacy system, initiate a lung cancer screening program, establish antibiotic stewardship and IPC programs, and train postgraduates in thoracic surgery.<br>3. **Public Recognition:** We can become Sindh's first paperless public sector hospital and enroll in the Hospital Patient Safety Initiative.<br>4. **First, WHO Collaboration Center for TB Research:** We can become the first WHO Collaboration Center for TB Research. | 1. **Accreditation Issues:** We risk accreditation from Sindh Health Care due to the unavailability of pharmacists in Pharmacies and faculty.<br>2. **Competition:** The market offers competitive salaries to contractual healthcare workers. The rapid expansion of other funded hospitals might attract patients away. Grant distribution might shift towards new hospitals with similar programs.<br>3. **Staffing Regulations:** PMDC might object to us for not having mandatory faculty members. |

# APPENDIX D: TOWS MATRIX

| | OPPORTUNITIES | THREATS |
|---|---|---|
| | 1. **Become a leading TB center:** We can establish Pakistan's first free-of-cost TB ICU.<br>2. **Improve Patient Care:** We can implement a 24/7-unit dose dispensing pharmacy system, initiate a lung cancer screening program, establish antibiotic stewardship and IPC programs, and train postgraduates in thoracic surgery.<br>3. **Public Recognition:** We can become Sindh's first paperless public sector hospital and enroll in the Hospital Patient Safety Initiative.<br>4. **First, WHO Collaboration Center for TB Research:** We can become the first WHO Collaboration Center for TB Research. | 1. **Accreditation Issues:** We risk accreditation from Sindh Health Care due to the unavailability of pharmacists in Pharmacies and faculty.<br>2. **Competition:** The market offers competitive salaries to contractual healthcare workers. The rapid expansion of other funded hospitals might attract patients away. Grant distribution might shift towards new hospitals with similar programs.<br>3. **Staffing Regulations:** PMDC might object to us for not having mandatory faculty members. |
| STRENGTHS | SO | ST |
| 1. **Strong Infrastructure:** We have a computerized inventory management system, 3 off-site chest clinics in Karachi, Sindh's only provincial reference lab, | 1. **Leverage Strengths in TB Care and Research:** Establish a TB ICU and collaborate with WHO to become a leading TB center.<br>2. **Optimize Inventory Management and Pharmacy Services:** Utilize the existing computerized | 1. **Mitigate Occupational Hazards and Secure Funding:** Strengthen collaborations with the National TB Program (NTP) and WHO to address staff safety by enrolling in patient safety initiatives. This could also generate |

| | | |
|---|---|---|
| and are among only two institutes offering free-of-cost major thoracic surgeries. Patient Care: We offer free treatment including medicines, nutrition, and surgery. We have a post-graduation program for Pulmonology, which is the first TB-integrated site for TB, HIV, and Hepatitis,<br>2. **Collaboration with renowned Institutes:** We have a strong collaboration with the National TB Program and WHO and are in the pre-designation phase for becoming a WHO Collaboration Center for TB research.<br>3. **Reputation:** We can receive large grants and funds from NGOs.<br>4. **Trained Staff:** Our team is trained in | inventory system to implement a 24/7-unit dose dispensing system, improving efficiency and patient care. | additional funding for patient care.<br>2. **Retain Qualified Staff:** Offer competitive salaries and incentives to healthcare professionals to counteract market competition. |

| | | |
|---|---|---|
| Minimal Thoracic Invasive Surgery. | | |
| **WEAKNESSES** | **WO** | **WT** |
| 1. **Staffing:** We have a shortage of qualified healthcare professionals like physicians, physiotherapists, nurses, statisticians, and pharmacists. We also need a critical care consultant.<br>2. **Services:** We don't have a 24/7 Pharmacy service.<br>3. **Technology:** We lack Minimal thoracic invasive surgery equipment, though we have trained staff. | 1. **Address Equipment and Staffing Shortages:** Partner with Dow University of Health Sciences (DUHS) to acquire necessary equipment and recruit critical care consultants.<br>2. **Upgrade Pharmacy Services and Enhance Patient Trust:** Implement a barcode-enabled unit dose dispensing system across all OICD units, reducing medication errors and increasing patient confidence. | 1. **Maintain Competitiveness and Secure Funding:** Focus on upgrading technology and staff training to adapt to market competition and potential grant distribution shifts.<br>2. **Ensure Accreditation and Compliance:** Address faculty shortages and implement licensing/upgrading systems to comply with PMDC regulations. This includes establishing a Quality Assurance Department to meet standards set by the Sindh Healthcare Commission (SHCC), PMDC, Higher Education Commission (HEC), and ISO.<br>3. **Expand Pharmacy Services:** Implement a 24/7 pharmacy service to improve patient convenience and access to medication. |