



Tamil Nadu Health System Reform Program
Operational Research Program - Dissemination Report
 ——— 2020 - 2021 ———



Patient Safety



108



Bio-medical waste Management

Antibiotic Resistance



Tamil Nadu Accident and Emergency Care Initiative

Breast & Cervix cancer



About Operational Research Program

This brochure contains details of the first set of seven studies carried out during 2020–21, supported by the Operational Research Program (ORP) of the Tamil Nadu Health Systems Reform Program (TNHSRP). This is an innovative and pioneering programme launched by the Department of Health and Family Welfare, as part of TNHSRP supported by World Bank.

The primary purpose of this program is to encourage and financially support “operational research” studies that would contribute to strengthening the public healthcare delivery system in Tamil Nadu. Research teams from across the country are encouraged to take part in this program. The program has a rigorous evaluation process for selection of research proposals, as these studies are expected to identify current challenges and operational impediments in the implementation of various healthcare interventions, and suggest operational measures to enhance the overall effectiveness and efficiency of delivery system.

So far, since 2020–2021, the program has initiated 23 studies (from about 150 research proposals received over the last three call for proposals), on diverse topics ranging from primary health care to higher tertiary hospital in Tamil Nadu. Research teams from several private and public Institutions have been engaged in this program. Indian Institute of Technology (Madras) serves as the Nodal Agency for implementing this program.

Eventually, this program is expected to (a) provide evidence for introducing operational measures to improve the performance of public health care delivery system, (b) build “research capacity” in public health system and (c) promote networking among research groups within Tamil Nadu and other parts of the country.

This brochure contains details of the first set of seven studies carried under the OR program, initiated in March 2020. It provides the overall objectives and study settings, key findings / results and suggestions / recommendations.

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Themes (2020-2021)

- 01** Patient Safety
- 02** Antimicrobial use
- 03** Bio Medical Waste Management
- 04** 108 Ambulance services
- 05** Tamil Nadu Accident and Emergency Care Initiative
- 06** Screening of Breast and Cervical cancer

Themes (2021-2022)

- 01** Mental Health
- 02** Reproductive and Child Health Services
- 03** Tuberculosis & Covid-19

Themes (2022-2023)

- 01** Quality (NQAS/ NABH)
- 02** Equipment Utilization
- 03** Health and Wellness Centre
- 04** Cancer Management
- 05** Emergency Care and Recovery Centres
- 06** Chronic Kidney Disease of Undetermined aetiology

Study 1

Process evaluation and Implementation Challenges of National Patient Safety Implementation Framework in Selected Public Healthcare Facilities in Tamil Nadu - A Mixed Method Study

-ESIC Medical College & PGIMSR, Chennai



Objective

- To perform the process evaluation of the National Patient Safety Implementation Framework
- To explore the implementation challenges of the strategies provided in the framework

Study Setting

Medical College/ DHQH/ GH from Tirunelveli, Tiruchirappalli, Salem, Pudukkottai, Villupuram and Theni districts

Study Population

- OP and IP patients - 4800 (Total for 6 districts)

Study Budget

Rs. 14,48,238.75/-

Results

- Absence of patient safety committee
- Lack of training on patient safety in public facilities
- Lack of awareness among patients about patient safety measures
- Lack of awareness about Adverse Drug Reaction reporting in GHs
- No periodic audits conducted
- Funds required for conducting research on patient safety

Recommendations

- Composition of Patient Safety Committee in Medical Colleges and District Hospitals
- A Core Multidisciplinary Expert Patient Safety Committee at a state level to frame modules and monitor patient safety
- Standard Operating Procedures, Checklist, Training module should be developed
- Observation of “World Patient Safety Day” on 17th September every year to create awareness about patient safety among patients, families, HCWs & general public

Study 2

Are antibiotics appropriately used in public health facilities as per the treatment guidelines for antimicrobial use in common syndromes?

-ESIC Medical College & PGIMSR, Chennai

Objective

- To evaluate the appropriateness of antimicrobial use in public health facilities in Tamil Nadu at the facility, prescription, patient care levels as per the ICMR standard treatment guidelines for antimicrobial use
- To categorize the various health facilities and the districts based on the appropriateness of antimicrobial use as per the ICMR guidelines

Study Setting

1 MCH, 1 DHQH and 1 GH from Tirunelveli, Tiruchirappalli, Salem, Pudukkottai, Villupuram, Theni districts

Study Population

Case sheets and OP prescriptions - Total 6,339 (1,844 IP and 4,495 OP)

Study Budget

Rs. 14,42,463.75/-

Results

- In the inpatient settings third-generation cephalosporins, which belong to the watch group were used extensively
- Overuse of third-generation cephalosporins for routine surgical prophylaxis
- High utilization of antibiotics for normal vaginal delivery
- In the outpatient settings, there was an excessive inappropriate use of Amoxicillin and dosing (including duration) of antibiotic use.
- Weak antimicrobial stewardship practices in most health facilities

Recommendations

- Composition of Antimicrobial Stewardship Committee at Medical College and District Hospital
- Multidisciplinary Expert Committee at the state level to discuss
- Periodic audits to be conducted at institutions
- State-level surveillance of antimicrobial use

Study 3

Operational Challenges in Adopting Bio-Medical Waste Management Protocols in Public Health Facilities

-Development Solutions, Delhi



Objective

To understand the operational challenges in bio-medical waste management in the public health facilities in Tamil Nadu

Study Setting

Stanley MCH, Chengalpattu MCH, Tambaram DHQH and Kanchipuram DHQH, Pollution Control Board and Common Treatment Facilities Chennai and Kanchipuram

Study Population

30 Sample size [14 respondents (stakeholders) from each district and 3 state officials]

Study Budget

Rs. 14,37,535/-

Results

- The processes of segregation, storage, transfer, transport, disposal and monitoring are largely in place.
- Systems for record keeping are in place, both at the point of segregation and the storage facility.
- Challenges in segregation from patients, attendants
- Liquid waste management is a challenge in old facilities
- The frequency of monitoring meetings varies across facilities
- Monitoring both by the health system and pollution control board is a challenge given workload

Recommendations

- Liquid waste management, especially in older health facilities, needs early attention
- The BMW committee should also focus on audits of the BMW practices in the HCFs
- Systems for better coordination with the Pollution Control Board and periodic visit to the facility from the TNPCCB

Study 4

Challenges of Rural People in Effective Utilization of 108 Emergency Ambulance Services in Tamil Nadu - An Empirical Study

-Madras Christian College, Chennai



Objective

- 1.To study the socio-demographic profile of the rural people in the state of Tamil Nadu.
- 2.To understand the health profile of the rural people in the state of Tamil Nadu.
- 3.To study the challenges of rural people in using 108 Emergency Ambulance Services.
- 4.To explore the needs of rural people in availing 108 Emergency Ambulance Services through the 5 C's Model approach.
- 5.To study the challenges and expectations of 108 Ambulance Pilots and Emergency Medical Technicians in providing 108 Emergency Ambulance Services in rural areas.

Study Setting

Rural Sub-Districts of Kancheepuram District

Study Population

Rural population from Kanchipuram district (N=370), 108 pilots (N=10) and Emergency Medical Technicians (N=10)

Study Budget

Rs. 5,00,000/-

Results

- 98 % of people are aware of 108 ambulance services
- Pregnancy-related usage of 108 tops the list with 35%
- People were not able to differentiate between emergency and non-emergency medical cases

Recommendations

- Grievance redressal system from rural people who availed 108 emergency ambulance services
- Identify and maintain parking Bay facilities(with minimum infrastructure such as toilets, resting space..etc for the 108 staff) in rural areas.
- Signages of ambulance parking to be exhibited in the villages
- 108 Pilots should be provided with devices that are enhanced with high-end GPS tracking technology to trace the caller's exact location.
- High-distance traveled ambulance should be replaced with the new model vehicle
- To perform periodic vehicle inspection

Study 5

Evaluation of Tamil Nadu Accident and Emergency Care Initiative (TAEI) Programme in selected districts of Tamil Nadu, 2021

-Tirunelveli Medical College

Objective

- To evaluate the inputs to the program, including the activities conducted and the human and financial resources invested
- To evaluate the processes of the program, including the mechanisms used to transform these activities into outcomes.
- To evaluate the outcome of the program, including the benefit in terms of better health.

Study Setting

Nanguneri GH (Tenkasi District), Virudhunagar MCH and Thoothukudi MCH

Study Population

- 110 patients in each centre who got admitted due to Injury (RTA, Assault and accidental injury) - selected randomly.
- 320 people from the community (160 rural and 160 urban) from each centre were selected for the interview.

Study Budget - Rs. 15,62,098/-

Results

- The beneficiaries admitted in the TAEI ward and the surgeries (Intercostal drainage, K wire fixation, Wound exploration, craniotomy etc.) done within 6 hours have increased.
- Patient care given within 10 - 15 mins after implementation of TAEI centre.
- Referral of patients with Head injury, polytrauma and vascular injury have increased due to non-availability of specialists.
- All medical officers, staff posted and 90 % of paramedical staff in TAEI ward were trained in TAEI protocol. Two trainings once in three months are being conducted.

Recommendations

- Rehabilitation program should be improved in TAEI centers to enhance the productivity and quality of the injured patients
- Improve TAEI registry entries by including the treatment particulars even the minor surgical procedures. This will help to improve the success rate of TAEI program
- Deployment of 108 ambulances according to real-time traffic conditions and accident zones, to prevent time delays in reaching the hospital thereby decreasing the mortality rate.
- Neurosurgeon and vascular/ plastic surgeon availability in all level 1 TAEI centers with infrastructure for reducing the mortality from head injury.

Study 6

Reasons for the delay in diagnosis of common cancers (Breast and Uterine Cervix) among women in Tamil Nadu: A Qualitative Approach

-Tamil Nadu Dr MGR Medical University, Chennai



Objective

To explore the factors for the delay in diagnosis among women with breast and uterine cervix cancers

Study Setting

1. Government Royapettah hospital, Chennai
2. Kilpauk Medical College, Chennai.
3. Cancer Institute (WIA), Adyar, Chennai.
4. Institute of Obstetrics and Gynaecology (IOG), Chennai
5. Rajiv Gandhi Government General Hospital, Chennai.

Study Population

- Breast and Cervix cancer patients (N=89)
- Non-cancer patients (N=100) attending O&G, OPD.
- Family members(6), HCW(12)
- Total - 207

Study Budget

Rs. 14,04,700/-

Results

Barriers for Early Diagnosis:

- Lack of knowledge or awareness (71% - Ca Pt) about the screening and fear of disease
- Delay in diagnosis was noted majorly due to patient delay(60%) in which family support and economy were the major reasons
- Only 6% of patients had knowledge on Self-examination of breasts

Recommendations

- Improve Screening Awareness among 18+ age group
- Encourage Grass-root collaboration with Community-based NGOs to educate people on Cancer awareness and screening
- State to incorporate implementation of HPV vaccine in regular immunization schedule
- Create promotional videos covering case scenarios - on the benefits of early diagnosis and the consequences of late diagnosis
- Periodical performance review of MLHP by concern officials

Study 7

Factors for poor acceptance of screening for cancer cervix and cancer breast

-LEAD Krea University, Chennai

Objective

- To Understand the operational aspects of supply-side factors behind the poor acceptance of screening.
- Identify the demand-side factors that operate at the women's individual, social, behavioral and economic levels.

Study Setting

Annur Taluk – Coimbatore district

Study Population

- Key Informant Interviews (KII) and Group Discussion (GD): District programme officials, Medical Officers (Doctors), NCD staff, Senior staff and VHN (N = 50)
- Semi-structured surveys: Screened (N=85) and Non screened beneficiaries (N = 155)
- Total - 290

Study Budget

Rs. 14,50,078/-

Results

- Nearly 40% of patients said there is no fear of disease and embarrassment associated with screening and bad social influence
- Better knowledge(85%) about the disease and screening promoted by HCW
- Constraints in Permission from family members, day-off from work, household chores, distance from the facility, and time taken for screening (mean:6-8/10)
- Poor privacy (mean:7/10) in screening centers and camps
- 90.6% of patients prefer female physicians in the screening center

Recommendations

- Annual Screening (Ca Cx and Ca Br) to be made mandatory for working women both in public and private sector
- Promotion of IEC activities in public places and also in the waiting area of hospitals on the nature of the disease and vaccination (HPV)

Operational Research Program Team

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This Brochure contains summary of projects.

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