ABSTRACT

Background: In urban settings, ensuring equitable access to routine immunization services presents a complex challenge, particularly for marginalized groups such as migrants, the urban poor, and other underserved populations. The National Urban Health Mission (NUHM) was launched to address the health concerns of the urban poor by facilitating equitable access through rationalizing and strengthening the existing health delivery capacity. Aims and Objectives: This study aims to explore the multifaceted barriers faced by underserved communities in accessing routine immunization services and proposes strategies to promote health equity in urban settings, ultimately bridging these gaps. Methodology: The framework of the NUHM was analysed to understand its impact on providing public health services to the urban population, with a specific focus on the urban poor and slum populations. The study examines the principles underpinning Universal Health Care, such as equity, participatory governance, and intersectoral collaboration, to address the social determinants of health. Results: Findings indicate that despite the NUHM’s efforts, significant barriers to routine immunization access persist for marginalized urban communities. These barriers include socio-economic disparities, inadequate healthcare infrastructure, and limited community engagement. Conclusion: To achieve health equity, there is a need for innovative strategies that address these barriers comprehensively. Strengthening intersectoral collaboration, enhancing community participation, and improving healthcare infrastructure are crucial steps toward promoting equitable access to immunization services for all urban residents, particularly the underserved.

KEYWORDS

Immunization; Universal Health Coverage; Urban Health; Urban poor

INTRODUCTION

Urbanization is a defining feature of the modern world, with millions of people going to cities in search of better opportunities. In recent years, urbanization has brought significant challenges to public health systems
worldwide (1). Addressing health disparities and improving access to essential health services, particularly routine immunizations, has become a critical focus in public health (2).

Urban areas often concentrate on diverse populations, including migrants, the urban poor, and other underserved groups, presenting unique challenges to routine immunization access (3). As per recent UN-Habitat estimates (2017), India will be 50% urban. As per the 2011 census, the number of internal migrants (both inter-state and within-state) in India at 45.36 crore, making up 37% of the country’s population (4). As per the report released by the Ministry of Statistics and Programme Implementation in June 2022, the migration rate was 34.9% in urban areas (5).

The Immunization Agenda 2030 strategy aims to ensure no one is left behind for new and existing vaccines (6). Furthermore, guidance notes outlining a strategic approach to reach zero dose children identify priority population as:

- Urban Slum and peri-urban area
- Migratory population
- Underserved population
- Pockets with vaccine hesitancy
- Hard to reach a population
- Tribal population

**Aims and Objectives**

- This study aims to explore the multifaceted barriers faced by underserved communities in accessing routine immunization services.
- It proposes strategies to promote health equity in urban settings, ultimately bridging these gaps.

**Understanding Urban Health Inequities**

Urban communities are characterized by complex social, economic, and environmental dynamics that contribute to health inequities (7). Migrants, often moving from rural to urban areas in search of economic opportunities, face challenges in accessing healthcare services, including routine immunization (8,9). Similarly, the urban poor, residing in informal settlements or slums, overcrowding, inadequate sanitation, and limited healthcare infrastructure, further exacerbate barriers to immunization (10). Underserved groups such as slum with migration, construction workers, brick kiln labourers, ethnic minorities and undocumented migrants also experience marginalization and discrimination, impeding their access to essential health services (11).

**Challenges in Routine Immunization Service Delivery**

Several challenges contribute to routine immunization service delivery:

- **Ever-expanding geographies**: Since urban areas are expanding rapidly, mapping boundaries is difficult. Area demarcation in the catchment is difficult.
- **Limited Healthcare Infrastructure**: Urban areas often lack sufficient primary healthcare facilities and outreach services tailored to the needs of marginalized populations.
- **High turnover of staff**: The turnover rate is very high in contractual and bonded Health staff in urban areas, due to low motivation.
- **Limited number of field level workers**: Field level workers are very less in proportion to underserved populations.
- **Unavailability of data on Migrants**: Outdated/inaccurate population denominators lead to insufficient resources allocated to vaccination among urban disadvantaged, new/informal settlements. No migrant tracking system to understand the population to serve. Difficult to understand the catchment area in non-notified slums, or temporary settlements (12).
- **Limited Intersectoral coordination**: Coordination between various departments is very limited, due to complex stakeholder challenges and fragmented governance.
- **Multiple players in service provision**: Private Hospitals/clinics and setups are widespread and have more reach. Many unregistered practitioners also play a vital role in providing services
- **Limited Data sharing**: No common platform for data sharing between Govt and private counterparts.
- **Advocacy constraints**: Advocacy for immunization services is constrained in urban areas due to competing priorities, perceived high coverage, misinformation, and fragmented public health system
Challenges in Routine Immunization Access

Several challenges contribute to urban communities in accessing routine immunization services:

**Unawareness:** Migrating population and urban poor are majorly unaware of the areas where routine immunisation services are delivered.

**Financial Constraints:** Migrants and the urban poor may struggle to afford healthcare services, including transportation costs to reach immunization centres.

**Language and Cultural Barriers:** Ethnic minorities and migrants with limited proficiency in the local language may face challenges in understanding and accessing healthcare information.

**Stigma and Discrimination:** Undocumented migrants and certain ethnic groups may face discrimination and fear seeking healthcare services, including immunization.

**Vaccine hesitancy:** The more rapid spread of rumours and misinformation leading to lack of trust in health care systems

**Caregivers in full-time economic activity:** Communities often work for extended hours with no provision of leaves to go for immunisation services.

**Low community participation:** Community participation and community mobilisation is low in urban areas

**Recommended Strategies for Overcoming Barriers**

To address these challenges and reimagine public health strategies, innovative approaches are essential:

**Mobile Immunization Clinics:** Utilize mobile healthcare units to reach transient populations, ensuring continuity of care and timely immunizations. Eg: Dhanvantri Rath in Gujarat (a collaboration between the labour dept and health department for mobile units)

**Integrated Healthcare Delivery:** Integrate immunization services with primary health care and ICDS, to enhance accessibility and streamline service delivery.

**Data-Driven Approaches:** Utilize robust surveillance systems and data analytics to identify immunization coverage gaps, monitor vaccine uptake, and tailor interventions to specific urban populations' needs.

**Collaborative Partnerships:** Foster collaborations between public health agencies, non-governmental organisations, and community-based organisations to expand immunisation coverage and address social determinants of health. Eg: An Indore model of involving the smart city in immunisation service delivery

**Technology Solutions:** Leverage digital health tools, such as telemedicine and mobile apps, to facilitate appointment scheduling, reminders, and education on immunization (13).

**Community Engagement and Empowerment:** Implement culturally sensitive outreach programs that engage community leaders and trusted individuals to promote immunization awareness and access. Foster partnerships with community leaders, grassroots organizations, and faith-based institutions to build trust, raise awareness, and address cultural misconceptions surrounding immunization. Engaging local influencers to address vaccine hesitancy.

**School-Based Immunization Programs:** Leveraging educational institutions to deliver vaccines to school-age children can enhance coverage and contribute to community-wide immunity. Eg: The Measles Rubella campaign

**Conclusion**

Reimagining public health requires a comprehensive approach to address the unique challenges faced by urban communities in accessing routine immunization services. By employing innovative strategies that prioritize equity, community engagement, and multidisciplinary collaboration, we can strive towards achieving universal immunization coverage and improving health outcomes for migrants, the urban poor, and other underserved groups (14). This proactive approach not only enhances individual well-being but also strengthens the resilience and sustainability of urban public health systems in an increasingly complex global landscape. To achieve health equity, there is a need for strategies that address these barriers comprehensively. Key recommendations include:

1. **Strengthening Intersectoral Collaboration:** Coordinated efforts
between various sectors such as health, education, and social welfare to address the broader social determinants of health.

2. **Enhancing Community Participation**: Engaging community leaders and members in planning and implementing immunization programs to build trust and ensure culturally appropriate interventions.

3. **Improving Healthcare Infrastructure**: Expanding and upgrading health facilities in urban poor areas, ensuring adequate staffing, and making use of mobile clinics.

4. **Leveraging Technology**: Using mobile health (mHealth) initiatives to improve outreach and follow-up for immunizations.

5. **Policy Reforms**: Developing policies that ensure sustainable funding and resources for immunization programs, with a focus on underserved populations.

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**DECLARATION OF GENERATIVE AI AND AI ASSISTED TECHNOLOGIES IN THE WRITING PROCESS**
During the preparation of this work, the author used a software named Chat-GPT v-4 (free version) to check grammatical and language errors. After using this tool, the author has reviewed and edited the content as needed and takes the full responsibility for the content of publication.

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