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Opinion

Poor Urban Waste Management in Nigeria: A Neglected Public Health Emergency Requiring Community–State Co-Production

Paul Hassan Ilegbusi[1,2,3], Jonathan Amauche Ajah[4], Taoheed Abiola Olanrewaju[5], Adekemi Mercy Adeleye[6], Oladiran Isaiah Olagunju[7], Bukola Bosede Ogunro-Abiola[8,9], Omowumi Oluwabukola Okeya[1], Olatoye Lola Ololajulo[9] and Rotimi Anne Ogunniyi[10]

[1]*Community Health Department, Ondo State College of Health Technology, Akure, Nigeria*

[2]*Centre for Research Innovation Development and Entrepreneurship, United Kingdom*

[3]*College of Community Health, Wesley University Ondo, Nigeria*

[4]*School of Public Health, University of Port Harcourt, Nigeria*

[5]*Community Health Department, Lead City University, Ibadan, Nigeria*

[6]*Community Health Department, North South College of Health Technology, Ajase Ipo, Kwara State, Nigeria*

[7]*School of Community Health, Obafemi Awolowo University Teaching Hospital, Ile-Ife, Nigeria*

[8]*Department of Sociology, Faculty of Social Sciences, Federal University Oye Ekiti, Ekiti State, Nigeria*

[9]*Ondo State College of Health Technology, Akure, Nigeria*

[10]*Ekiti State College of Health Sciences, Ijero-Ekiti, Ekiti State, Nigeria*

***Corresponding author:** Paul Hassan Ilegbusi, Community Health Department, Centre for Research Innovation Development and Entrepreneurship, College of Community Health, Nigeria, United Kingdom.

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Abstract

Poor solid waste management remains one of the most persistent yet under-prioritised environmental health threats in rapidly urbanising Nigerian cities. Evidence from peri-urban communities such as Danjuma in Akure, Ondo State, demonstrates that indiscriminate dumping, irregular waste collection, and open burning are strongly associated with vector-borne, water-borne, and respiratory diseases, alongside psychosocial distress and environmental degradation. Despite high public awareness of sanitation regulations, structural constraints, including poverty, weak municipal capacity, and limited enforcement, continue to undermine safe disposal practices. This opinion paper argues that waste mismanagement in Nigerian urban settlements should be reframed as a public health emergency rather than merely an environmental nuisance. Drawing on environmental health theory and recent empirical evidence, the paper advocates a shift from technocratic waste control models to a community–state co-production framework that integrates primary health care, local governance, and community participation. Policy recommendations include decentralised waste infrastructure, subsidised household collection, behavioural risk communication, and institutional accountability mechanisms. Without urgent multisectoral action, preventable disease burdens linked to poor sanitation will continue to erode urban health equity and sustainable development gains.

Keywords: Urban waste management, Public health emergency, Environmental health, Community-state co-production

Introduction

Solid waste management has emerged as a defining environmental health challenge in Low- and Middle-Income Countries (LMICs), particularly in fast-growing urban and peri-urban settlements where infrastructure expansion has lagged behind population growth. Nigeria alone generates over 30 million tonnes of solid waste annually, much of which remains uncollected or improperly disposed, creating breeding grounds for disease vectors and rodents, contaminating water sources, and exposing residents to toxic emissions from open burning [4,13].

Findings from Danjuma Community in Akure, Ondo State, illustrate this reality vividly. Although most residents are aware of sanitation regulations, frequent exposure to uncollected waste persists, with malaria, diarrhoea, and typhoid fever dominating reported morbidities, alongside flooding and noxious odours that degrade quality of life [10]. These patterns mirror national and regional evidence linking poor waste disposal to communicable disease transmission, respiratory illness, and psychosocial stress [8,11,12].

This paper contends that Nigeria's urban waste crisis should be recognised as a systemic public health failure, rooted not only in individual behaviour but in governance deficits, socio-economic inequities, and weak integration of environmental health into primary health care planning.

Waste Disposal as a Social Determinant of Health

Environmental Health Theory posits that sanitation, water safety, and air quality are foundational determinants of population health [2]. In Danjuma, unregulated dumping and open burning created ecological conditions favourable to mosquito breeding, faecal contamination, and air pollution, thereby reinforcing pathways for malaria, enteric infections, and respiratory disease [10]. Similar associations have been documented across urban Nigeria and other LMICs [3], [*Kanhai,* 2021].

However, focusing solely on environmental exposure obscures the structural drivers of unsafe disposal of solid wastes. Low income, limited education, and irregular municipal services constrain households' capacity to engage in formal waste collection, compelling reliance on informal dumping and burning [1], [*Omodehin, et al.*]. These factors position waste management within the broader framework of social determinants of health, where poverty, governance, and urban planning failures translate into avoidable disease risks.

Limitations of Current Waste Governance Models

Nigeria's waste management systems remain largely centralised, enforcement-oriented, and weakly integrated with health sector planning. Evidence from Danjuma indicates that most residents perceive government response as inadequate, citing irregular collection, lack of bins, and poor regulation enforcement [10]. Similar critiques have been raised nationally, highlighting corruption, under-financing, and fragmented institutional mandates [5,6].

Moreover, current approaches rarely incorporate behavioural change communication or community ownership, despite strong willingness among residents to participate in clean-up initiatives and local sanitation activities [10]. International evidence suggests that purely technocratic waste solutions, such as contractor-based collection without social mobilization, fail to achieve sustained environmental hygiene in low-resource settings [9], [*Thomas, et al.,* 2021].

Towards Community–State Co-Production of Sanitation

A more sustainable paradigm is co-production, in which communities and public institutions jointly design, implement, and monitor waste services. Community-based sanitation committees, supported by local governments and primary health care systems, can facilitate routine clean-ups, risk communication, and reporting of illegal dumping, thereby strengthening social accountability [7].

Integrating Environmental Health Officers (EHOs) and Community Health Practitioners (CHPs) into waste surveillance could further enhance early detection of sanitation-related disease outbreaks, aligning with WHO recommendations on intersectoral action for health [14]. Subsidised household collection schemes and decentralised transfer stations would address affordability barriers, while investment in recycling and composting could generate local employment and reduce landfill dependence [9].

Policy and Practice Implications

Reframing poor waste disposal as a public health emergency demands action across four domains:

1. Environmental sanitation indicators should be incorporated into routine PHC surveillance and community outreach.
2. Municipal waste agencies require regular, adequate, and stable funding, transparent contracting, and performance monitoring.
3. Participatory sanitation structures should be institutionalised, not treated as ad-hoc volunteering efforts.
4. Continuous education on disease pathways, not just legal compliance, is essential to sustain safe practices.

Conclusion

The evidence from Danjuma Community, supported by broader Nigerian and global literature, underscores that poor waste disposal is not merely an aesthetic or environmental concern but a driver of preventable morbidity, social inequity, and urban vulnerability. Addressing this challenge requires a paradigm shift from fragmented waste control to integrated, community-centred public health governance. Without such reform, Nigeria's urban health gains will remain undermined by sanitation-related disease burdens that are both predictable and preventable.

Acknowledgement

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Conflict of Interest

None.

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