Strengthening Ethiopia's Health Workforce to Address Air Pollution in Health Care Settings

ENABLE Project Policy Brief

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Key Messages

- Exposure to air pollution remains a largely unaddressed public health issues within Ethiopia's primary health care system.
- There is limited counseling on air pollution by health professionals. The integration of role-specific risk communication strategies for air pollution into routine health service documents is not clearly defined.
- Health professionals have limited knowledge to provide air pollution-related counseling or education.
- Job training manuals have limited/no air pollution-specific information, therefore, integrating air pollution education into health curricula and on-the-job training is urgently needed.

We recommend establishing clear policies and regulatory frameworks to support the health workforce address the increasing impacts of air pollution on health, especially for effectively tackling exposure to household air pollution.

Problem Statement

Ethiopia's health care system has made notable strides in expanding primary health services, particularly through the Health Extension Program [1]. This program, staffed primarily by female health extension workers (HEWs), focuses on essential services such as disease prevention, health promotion, and maternal and child health [2]. However, a critical public health issue remains inadequately addressed within this framework: air pollution. Despite the urgency of this concern, primary care health professionals, particularly those involved in maternal and child health (MCH) services and outpatient services, often lack the necessary knowledge and skills to counsel patients about air pollution and its health impacts [3-5]. Similarly, counseling on air pollution is not typically considered a required duty, and there are either no on-the-job training manuals or only limited resources specifically focused on air pollution.

Therefore, incorporating health promotion, community engagement and behavior change support specifically for reducing the health risks of air pollution, into routine health service documents, on-the-job training for health professionals, and undergraduate and post

graduate's education of health workforce are important to strengthen their capacity to protect communities from the health risks of poor air quality. The absence of focused regulatory frameworks and focused action plans on household air pollution further exacerbates the problem [6-8]. Without targeted training and resources, health professionals cannot effectively contribute to reducing the health burden caused by air pollution, which has a significant impact on universal health care [9-11].

Thus, it is imperative to develop policy interventions that not only raise awareness among health professionals but also integrate air pollution topics into their education and training programs. This approach will empower health workers to address environmental health hazards, ultimately strengthening community resilience against air pollution and its associated health risks.

Policy Options and Considerations for Implementation

In order to solve the issues related to addressing air pollution in health care settings and minimize the health impacts, curriculum integration and preparing documents such as on-job-training manuals for health professionals is crucial. Proposed policy options to achieve this include:

- Integrate air pollution content into on-the-job-training manuals for health professionals, and
- Integrate air pollution content/chapters into existing health programs' curricula.

(1) Integrate air pollution content into on-job-training manuals for health professionals

Establishing standardized training materials to include air pollution in on-the-job training is essential for health professionals to improve their knowledge and easily communicate with people in the community about air pollution sources, health impacts and behaviors to reduce exposure. The development and institutionalization of such on-the-job training materials not only improve service quality but also help mitigate the long-term public health consequences of exposure to air pollution.

Most health professionals in Ethiopia do not receive regular or specialized in-service training on air pollution and its health impacts. Although the Health Extension Program

includes a Healthy Home Environment package that addresses household conditions such as indoor air quality and ventilation, many Health Extension Workers (HEWs) receive limited or no training on broader environmental determinants of health beyond water, sanitation and hygiene. In addition, other health cadres such as nurses, midwives, health officers, etc., don't learn about air pollution sources, health impacts, and mitigation strategies during college or university. Therefore, the support to HEWs is minimal.

The Water, Sanitation and Hygiene (WASH) and Environmental Health Desk and Community Engagement and Health Extension Service Desk are recommended to take the lead and work with the Continuous Professional Development department at the Ministry of Health.

(2) Integrate air pollution content/chapters into existing health programs' curricula

Integrating air pollution content into the curricula of health professional training programs is essential to improve their understanding of environmental health risk factors and strengthen community engagement efforts. As noted above, many health professionals, including HEWs, nurses, midwives, and health officers, do not receive formal education about air pollution.

HEWs, for example, often focus on sanitation and water safety, with limited or no exposure to broader environmental health topics such as indoor and ambient air pollution, particularly the need for clean fuels. The WASH and Environmental Health Desk at MOH is recommended to work closely with the Human Resources for Health Development Lead Executive at MOH and Ministry of Labor and Skills to revise the Hygiene and Environmental Health Module for HEW training. Furthermore, the WASH and Environmental Health Desk and Human Resources for Health Development Lead Executive at MOH should work closely with the Ministry of Education to incorporate comprehensive content on air pollution and prevention strategies in health professionals training curricula in universities.

Including standardized air pollution modules in higher education curricula can equip all future health professionals with knowledge and communication skills needed to effectively counsel individuals and communities. This training will empower them to

educate people on how to reduce exposure to air pollutants, recognize health symptoms linked to poor air quality, and adopt preventive behaviors. As air pollution contributes significantly to the global burden of disease, including respiratory and cardiovascular conditions, addressing this knowledge gap and sustained efforts to minimize the impact on health is a public health priority [12].

Recommendations

Government leaders and decision-makers should be well-informed about the health impacts of air pollution and actively support community engagement and empowerment initiatives. Given the significant health burden caused by air pollution, strong and sustained attention of the health workforce is essential to minimize the impact of air pollution on the health of the communities they serve as well as their own health. All levels of government leadership, along with health professionals, should take coordinated action through community-based strategies to raise awareness, reduce exposure and promote a healthier environment.

This policy brief is part of the Enabling Environments for Noncommunicable Disease (NCD) Risk Reduction in Ethiopia (ENABLE) Project. It aims to reduce the burden of NCDs in Ethiopia by reducing the lifelong prevalence of major NCD risk factors among pregnant women in low- and middle-income countries through multi-level actions to promote healthy diets, physical activity and reduce air pollution in a clean and supportive urban environment.

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