

Protecting the Protectors: Keeping firefighters safe from forever chemicals

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Abstract

Background and Purpose: Per- and poly-fluoroalkyl substances (PFAS) are persistent chemicals that impact human health through environmental and occupational exposures. They are associated with significant health risks, particularly among firefighters, who face disproportionate exposure due to firefighting foam (AFFF) and protective gear. This policy analysis examines gaps in current federal, state, and Department of Defense (DoD) regulations concerning PFAS, focusing on occupational health outcomes for firefighting populations.

Methods: The CDC Policy Framework and the Eightfold Path to Policy Analysis were used to identify key challenges in the PFAS legislative landscape and propose policy solutions for this high-risk firefighter population. The policy analysis included a review of current and past remediation efforts at the federal and state levels of the firefighting occupation, and cost analysis research.

Results: The policy analysis found numerous legislative challenges including inconsistent regulatory definitions and enforcement for PFAS regulations, the absence of alternative firefighting materials and protective attire, and limited health monitoring and compensation programs. The findings of this analysis highlight the urgent need for stricter regulatory oversight, the phase-out of PFAS in firefighting equipment, and comprehensive health surveillance systems.

Key policy recommendations include 1) implementing national standards that eliminate PFAS in firefighting foams and gear; 2) increasing funding for remediation efforts in communities affected using aqueous film-forming foams (AFFF); 3) improving health monitoring programs; and 4) provision of compensation for associated harms.

Conclusion: These findings emphasize the critical need to implement policy measures to mitigate and prevent further harm from PFAS for firefighters and other populations.

Keywords: Firefighter(s), Fire persons, PFOA, PFAS, C8, AFFF, Per-/Polyfluoroalkyl substance, Cancer risk, Occupational exposure, Chemical exposure