ABSTRACT: The implementation of Tactical Combat Casualty Care (TCCC) guidelines for the Operation Enduring Freedom and Operation Iraqi Freedom contingency operations has dramatically reduced preventable combat deaths. A study of these principles and their application to medical treatment in the chemical, biological, radiological, nuclear, and high-yield explosives (CBRNE), weapons of mass destruction (WMD) environment is presented as a potential readiness and force multiplier for units engaged in this area of operations. Preparing medical operators for support of WMD sampling and mitigation missions requires extensive preventive medicine and post-exposure and downrange trauma threat preparedness. Training and equipping CBRN operators with treatment skills and appropriate interventional material requires pre-implementation planning specific to WMD threats (e.g., anthrax, radiation, organophosphates, and contaminated trauma). A scenario-based study reveals the tactics, techniques, and procedures for training, resourcing, and fielding the CBRN operator of the future.