Canadian Journal of Emergency Management

CJEM | RCGU

Revue canadienne de gestion des urgences

BRIDGING THE GAP ARTICLE

https://doi.org/10.25071/3nfqj138

Enhancing Health Equity in Emergencies: Implementing an Equity Officer in Public Health Emergency Responses

Jacob Rowsell[A], Danielle Vernooy[B], Denise Hébert[C]

***Correspondence to:**
Jacob Rowsell
Email: jacob.rowsell@ottawa.ca

Author affiliations
[ABC] Ottawa Public Health

Acknowledgements
We thank community members and local organizations for their ongoing advocacy and contributions in advancing health equity, Kora Upitis, Karim Mekki, Amira Ali, Dr. Monir Taha, Dr. Robin Taylor, and all the leadership and staff at Ottawa Public Health, and the South East Health Unit Librarians for their support.

Published: 7 April 2025

Cite this:
Rowsell, J., Vernooy, D., & Hébert, D. (2025). Enhancing health equity in emergencies: Implementing an Equity Officer in Public Health Emergency Responses. *Canadian Journal of Emergency Management*. https://doi.org/10.25071/3nfqj138

ABSTRACT

Emergencies, particularly those with public health impacts, disproportionately affect priority populations, thereby exacerbating existing health disparities. To address these challenges, emergency management practitioners across various sectors must explore actionable ways to enhance health equity throughout the emergency management cycle. Following the COVID-19 pandemic, Ottawa Public Health conducted an environmental scan and literature review that revealed limited research or resources on how to fully incorporate equity into an emergency response structure. This paper examines local initiatives in Ottawa, Ontario during emergency responses, and the need for a formal role to support those most negatively impacted. These findings led to the development of an Equity Officer position, along with a role-specific checklist. The authors recommend the implementation of this unique role, thus ensuring a core member of the incident command team is dedicated to providing support to priority populations and recommend tailored response actions during an emergency.

Keywords: Equity, Health Equity, Equity Officer, public health, emergency management, emergency response

Introduction

Emergencies with public health impacts, such as pandemics and extreme weather, pose significant challenges to communities worldwide. These events disproportionately affect priority populations. Priority populations, as defined by the Ontario Public Health Standards, refer to "those that are experiencing and/or at increased risk of poor health outcomes due to the burden of disease and/or factors for disease; the determinants of health, including the social determinants of health; and/or the intersection between them" (Ministry of Health, 2021, p. 20). Given these inequities, the integration of health equity into emergency management has become crucial. As emphasized in the Chief Public Health Officer of Canada's Report on the State of Public Health in Canada 2023, "to what degree an emergency impacts individuals and communities is influenced by how likely they are to be exposed to a hazard, the intersecting inequities, or vulnerabilities they experience, and their access to resources to respond and recover" (Public Health Agency of Canada, 2023, p. 16). The disparities observed in public health practice led us to explore how consolidating health equity within a designated role in an emergency response structure could help address inequities and improve population outcomes.

When responding to emergencies, public health units (PHUs) in Ontario, and many organizations across Canada, commonly use the Incident Command System (ICS) or the Incident Management System (IMS). Ottawa Public Health (OPH) previously used IMS but transitioned to ICS in 2024. Both emergency response systems are scalable and designed to enable effective and efficient incident management by deploying staff to operate within a set

organizational structure. However, in both IMS and ICS, there is no mandate to include health equity to guide decisions (Goralnick et al., 2021). This can pose challenges in providing equitable care to priority populations. Moyal-Smith et al. (2024) report that, in times of cognitive stress, individuals have greater implicit bias as well as an added reliance on stereotypes. Public health emergencies are constantly evolving and, at times, strain available resources, which may cause responders to overlook community partners and those most affected (Myint et al., 2022). Under these pressures, adding a defined equity role ensures that the needs of priority populations are considered, and potential gaps are addressed in all emergency response actions.

Emergency Response: A Call for Health Equity

During the COVID-19 pandemic, OPH activated an IMS emergency response structure. The Liaison, Communications, and Safety Officers were deployed as members of the Command Team, reporting directly to the Incident Manager. They, along with the General Staff (comprising Planning, Operations, Logistics, and Finance and Administration Chiefs), met routinely throughout the response with collective efforts aimed at implementing incident action plans.

Through initial epidemiological data collection and analysis of sociodemographic indicators, OPH identified that between February to August 2020, COVID-19 infections disproportionately impacted racialized communities, particularly Black communities in Ottawa (Ottawa Public Health, 2020). Higher infection rates were attributed to factors such as high-density housing, which made physical distancing difficult, and employment in essential work that is often precarious (e.g., low-wage, temporary, unstable, and without pensions and benefits) (Ottawa Public Health, 2020). These findings align with public health's understanding that structural determinants, such as systemic racism, economic inequality, housing, and other social determinants of health, shape inequitable distributions of infections (Public Health Agency of Canada, 2022).

Throughout the COVID-19 pandemic, OPH also utilized pre-existing data from the Ottawa Neighbourhood Study, which categorized neighbourhoods into five quintiles based on various neighbourhood-level social and economic indicators, as well as other health determinants from the Canadian Census, with Q5 indicating neighbourhoods having the lowest socioeconomic advantage (Ottawa Neighbourhood Study, 2022). During the first year of the pandemic, COVID-19 hospitalization and death rates were nearly three times higher in Q5 neighbourhoods compared to Q1 neighbourhoods (Ottawa Public Health, 2023). OPH's report on the State of Ottawa's health also noted that Q1 neighbourhoods generally experienced higher levels of COVID-19 vaccination compared to Q5 neighbourhoods, particularly among younger populations (Ottawa Public Health, 2023).

During the response and recovery phases of the COVID-19 pandemic, the need for enhanced local public health and equity-driven initiatives became evident. However, determining strategies to best serve priority populations was challenging, as most interventions were geared towards the general public. These challenges prompted OPH to develop solutions focused on those most negatively impacted. Some examples of these initiatives include:

- Expanding OPH's human resources during the pandemic resulted in a more diverse workforce, fostering stronger outreach and improved service delivery. This led to the establishment of a Community Engagement Team (CET) that continues to work closely with residents and organizations, particularly those facing the greatest barriers, to gather valuable community insights. Serving as a conduit between local public health programs and services, the CET played a pivotal role.
- Prioritizing trust-building and partnerships with communities and groups who had not been effectively engaged in the past. This ensured that community voices were heard and meaningfully informed OPH response strategies.
- Collaborating with community leaders and organizations to deliver services at Neighbourhood Health & Wellness Hubs in Q5 neighbourhoods, such as vaccination and the dissemination of rapid antigen testing kits.
- Providing key public health resources through various communication channels and translating them into multiple languages. This was important for delivering evidence-based community messaging on respiratory illness prevention and management. Additionally, a public dashboard for COVID-19 and respiratory infections was created to share real-time local infection rates.
- Advocating for and providing in-home COVID-19 immunizations to homebound residents. The health unit acknowledged the essential role of caregivers in supporting homebound clients as well as the potential negative impacts if they tested positive for COVID-19. It also advocated to policy developers for changes to guidance to also immunize caregivers.
- Collaborating with local Indigenous healthcare organizations to support COVID-19 vaccine clinics for First Nations, Inuit, and Métis community members. These partnerships also helped identify and respond to specific needs, such as the development of a respiratory illness infographic in Inuktitut.

- Participating in a task force made up of City of Ottawa departments and key community partners to coordinate information, identify the needs of priority populations, and respond to emerging issues and barriers.

Findings from post-incident debriefings with OPH staff and community partners, as well as in the COVID-19 After-Action Report, identified the direct benefits of implementing health equity initiatives and their success in mitigating the impacts of COVID-19. These results prompted further exploration of ways to formally address disparities within an emergency response structure. The roles under initial consideration included adding either a designated officer or a unit lead. An environmental scan revealed that, to our knowledge, most PHUs, Emergency Operations Centres (EOC), and Emergency Coordination Centres (ECC) in Ontario and across Canada did not have such a designated position within their response structures. This identified gap led us to initiate a literature review. Our aim was to gain insights into the use of a defined equity role within an ICS or IMS structure by identifying existing resources and practices from other organizations and jurisdictions. This article shares findings and recommends an approach to enhancing health equity in responses.

Literature Review

In the summer of 2022, a literature review was conducted to gain insights into the use of an Equity Officer in an IMS or ICS structure during emergencies. The literature search was carried out in collaboration with a regional public health librarian. The search was conducted across several health-related databases and used the "snowball" method, in which the citations within the utmost relevant papers were included for review. The search concept map included the terms '(in)equity officer' (portfolio, position, staff, response), combined with IMS/ICS and emergencies. There were no date restrictions for the search for articles in both English and French. The query yielded a total of 13 grey literature and 26 published articles for in-depth review.

Results identified were predominantly from the United States and focused only on general strategies for incorporating equity principles throughout the emergency response. However, some U.S. jurisdictions recognized the need for a defined health equity role within formal response structures. One key report from San Francisco highlighted that embedding an Equity Officer into their COVID-19 EOC led to improved identification of and action on, urgent community needs, especially for disproportionately impacted groups (The Bay Area Regional Health Inequities Initiative & The Public Health Alliance of Southern California, 2020). Goralnick et al. (2021) noted that institutional racism and the absence of equity disproportionately impacted morbidity and mortality in marginalized communities during the COVID-19 pandemic. These researchers recommended a structural change to include an Equity Officer role as a core member of their Hospital Incident Command System (HICS), with the authority to obtain the resources needed to ensure equitable response actions going forward for priority populations (Goralnick et al., 2021).

After reviewing findings from the literature search and considering how equity-driven initiatives were implemented during the COVID-19 response within our local context, the decision was made to pilot the Equity Officer role into our response structure. The process was driven by several factors. Firstly, the role needed to be distinct; it was important to avoid overloading the Liaison, Communications, or Safety Officer with responsibilities that solely focused on health equity. Secondly, the Equity Officer, as a member of our Command staff, required a direct line of sight on issues related to priority populations. Lastly, the officer would need to have the knowledge and credibility to influence decision-making.

Creating an Equity Officer Role in Emergency Responses

Reflecting on Prior Public Health Responses

To begin the process of implementing an Equity Officer role, reviewing prior after-action reports to evaluate performance and identify areas for improvement was crucial. In the wake of the COVID-19 pandemic, rigorous analysis provided strong insights and concrete recommendations. Subsequently, the opportunity to strengthen our response structure by integrating health equity became evident. We then proceeded to identify staff within the organization to be trained and deployed as Equity Officers. The selection criteria for this role were stringent, including personnel who could be deployed from their regular duties for longer than 72 hours, had knowledge of equity issues and practices, and had previous emergency response experience. The identified staff underwent comprehensive training, including the IMS 100 - Introduction to Incident Management System course and an OPH-internal orientation.

Revisiting the Response Structure

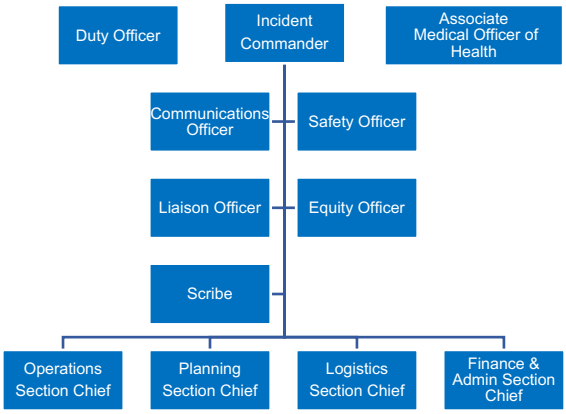
A strong structure is a cornerstone of an effective and efficient emergency response. As such, much time and effort go into reviewing every response. Experiences during the COVID-19 pandemic reinforced the need to revisit our structure. Shortcomings were identified in the way priority populations were assessed and engaged, as well as in how response actions corresponded to their needs from an inclusivity and accessibility perspective. This provided the underpinnings for the creation of an Equity Officer role within our structure.

To strengthen clarity amongst all responders, role-specific checklists were also created. These included

an Equity Officer checklist (Appendix A) which outlined responsibilities that was further supported by internal training materials and resources intended for use in preparedness exercises, as well as responses.

Figure 1 provides a visual representation of the typical ICS structure used at OPH, including the integration of an Equity Officer.

Figure 1: OPH ICS Structure including an Equity Officer



Pilot Testing

The pilot process involved deploying an Equity Officer for the first time as part of OPH's monitoring-level ICS structure related to a measles outbreak in Québec and Ontario in spring 2024, as well as during an enhanced-level ICS related to extreme heat in June 2024. While there were no confirmed cases of measles in Ottawa during the ICS response, the Equity Officer was instrumental in identifying priority populations and existing community supports, distributing key resources in multiple languages and addressing potential barriers to care and vaccination. In collaboration with the Epidemiology Unit Lead within the Planning Section, the Equity Officer identified that areas with the highest rates of unvaccinated individuals for measles were in Q5 neighbourhoods. This prompted OPH Public Health Nurses at the Neighbourhood Health & Wellness Hubs to engage with community members about potential barriers related to measles vaccinations, address concerns and misinformation, and provide on-site immunization. The Equity Officer also raised the issue of vaccine hesitancy at family shelters and places of worship. This led to a collaboration between the Incident Command and General Staff and CET, who were deployed within the Operations Section, to provide outreach to local organizations and attend public events in high priority communities to discuss routine childhood immunizations and promote nearby OPH vaccine clinics.

During an extreme heat event, the Equity Officer supported the response by helping to identify priority buildings in Q5 neighbourhoods (e.g. high-rise buildings without air conditioning, subsidized housing, and areas with a high concentration of older adults living alone) and promoting nearby accessible cooling locations. Their role focused on guiding community engagement, proactively raising awareness, and supporting the Communications Officer to ensure effective public information distribution. This included reviewing heat preparedness materials for culturally inclusive and accessible language and incorporating feedback received previously from priority populations, sending letters and resources to school boards for families concerned about hot school environments. The Equity Officer also prioritized newcomers, Indigenous communities, and older adults by supporting the dissemination of targeted information through both informal and formal communication networks. Efforts included advocating for multilingual and multicultural resources as well as providing paper resources to address challenges with accessing electronic materials and online cooling location maps. Collaborating with the Liaison Officer, they conducted routine check-ins with community partners during the heatwave and provided updates to the incident command and general staff to help address emerging issues and gaps.

The successful actions of this role were clearly reflected in the response debriefings and after-action reporting. OPH employees deployed to the response highlighted the Officer's effectiveness in advocating for priority populations, identifying and addressing barriers, and contributing to inclusive multilingual communications. The presence of an Equity Officer brought a diversity perspective to the table. Their purview, based on their distinct knowledge and experience ensured response actions were more comprehensive, effective, and tailored to priority populations.

Areas of improvement included maintaining role clarity between the Equity and Liaison Officers, particularly in articulating responsibilities when collaborating with external partners. Community organizations were supportive of the new initiative; however, additional information was needed on the Equity Officer's scope, as well as who would be OPH's primary contact if partners had specific equity-related concerns. Additional coaching support was also provided to those deployed within the ICS structure to adapt to collaborating with this new role for the first time. This helped all members utilize the Equity Officer's unique perspective and skillset to inform decision-making. Finally, as this was the initial stage of implementation, the limited pool of trained Equity Officers would have posed a challenge in deploying them during 7-day operations and/or an anticipated prolonged emergency response. To prepare for future deployments, recommendations included training additional staff for this role, planning future emergency exercises with OPH and external partners, and establishing clear evaluation metrics for continuous quality improvement.

Conclusions

Emergencies disproportionately impact priority populations, underscoring the need for practitioners to embed health equity into all phases of emergency management. While these findings make it clear that integrating health equity into the response and recovery phases is imperative, they also highlight the need to proactively integrate equity considerations into all other phases of emergency management. By embedding equity principles throughout the entire emergency management cycle, the needs of priority populations can be better anticipated and addressed, ensuring a more comprehensive and inclusive approach to public health emergencies. Lessons from the COVID-19 pandemic, the literature review, and OPH's pilot process demonstrate that equity-driven interventions lead to more positive outcomes. The work accomplished alongside community members and partners amplified the voices of communities more negatively impacted. Establishing an Equity Officer within a response structure ensured that the needs of priority populations were at the core of interventions. The addition of an equity role in IMS or ICS is not only a recommendation for other public health organizations, but a call to action for all emergency management practitioners to make health equity foundational to emergency management.

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APPENDIX A: Ottawa Public Health Equity Officer Checklist

Core Responsibilities

- ☐ Provide internal consultation to ensure ICS decisions are based on health equity, diversity, and inclusion to ensure the needs of impacted communities and individuals are considered in response and recovery efforts.
- ☐ Identify populations and groups at-risk and outline specific risks.
- ☐ Support the Liaison Officer in engaging community collaborators, and the Communications Officer in ensuring all communications are culturally and linguistically appropriate.

Upon Activation

- ☐ Receive appointment from Incident Commander (IC).
- ☐ Arrange workstation (if applicable), review position responsibilities, and acquire any necessary work materials.
- ☐ Review position checklist and ICS organization chart.
- ☐ Initiate activity log (ICS 214.Record date/time of your activation as Equity Officer and document activities during shifts.
- ☐ Obtain briefing from IC (and outgoing Equity Officer, if applicable).
- ☐ Inform your direct supervisor about your deployment and discuss activation of program specific Continuity of Operations Plan to cover your responsibilities within your home program.
- ☐ Attend initial ICS meeting.
- ☐ Provide input into the development of the Incident Action Plan (IAP).
- ☐ Identify specific community groups at-risk of inequitable access to information or resources, including linguistic and cultural needs.
- ☐ Advise on potential initial strategies.
- ☐ Assist the Liaison Officer to identify community support contact information:
    a) Contact person(s)
    b) Email/Phone numbers
    c) Address

Intermediate Actions

- ☐ Attend ICS meetings (with Command and General Staff) and provide briefings on equity strengths and concerns of the response, including emerging issues.
- ☐ Support Planning and Operations to identify barriers to the well-being of priority populations and recommend actions.
- ☐ Support Incident Command in implementing evidence-based and community-engaged interventions to address issues that may affect timely and appropriate responses for the impacted communities.
- ☐ Inform the Liaison Officer's work in consultation with organizations and leaders representing diverse groups to determine needs.
- ☐ Collaborate with Planning Chief to identify available client-facing resources.
- ☐ Meet with Planning Chief to determine deployed staff information or time sensitive training needs based on the populations affected.
- ☐ Support Epi in reviewing the inclusive collection of sociodemographic data.
- ☐ Maintain ongoing assessments to identify emerging issues and patterns impacting various communities, including both unintended positive and negative impacts.
- ☐ Ensure ongoing communication with the Health Equity, Diversity & Inclusion program.
- ☐ Ensure that a deputy has been identified to fill the Equity Officer role for the next shift (if applicable).
- ☐ When shift assignment is complete, or when handover is required in the event of extended deployment, brief the incoming Equity Officer using your activity log (ICS 214), and any incident reports that have been generated.

Extended Actions

- ☐ Work with Planning Section Chief, Communication and Liaison Officers to determine strategies and interventions to address issues raised by the community.
- ☐ Propose equity-based recovery and mitigation solutions or interventions.

Documentation

- ☐ Ensure all forms are dated and saved using the YYYY/MM/DD format.
- ☐ Use clear text and ICS terminology in all

communications.
- ☐ Document all actions and decision points using an Activity Log (ICS 214).
- ☐ By the end of each shift:
    - ☐ Complete the required forms and reports and send them to the Documentation Unit.
    - ☐ Confirm that documentation with personal information or personal health information is secured in clinical program files.
    - ☐ Provide a detailed handover briefing to your relief officer. Ensure that all in-progress activities, outstanding issues, and follow-up requirements are identified and documented.

Demobilization Actions

- ☐ Respond to demobilization orders.
- ☐ Ensure that all in-progress activities and outstanding issues requiring follow-up are either completed or delegated to a core unit for completion.
- ☐ Ensure all documentation is completed and submitted to Documentation Unit Lead as appropriate.
- ☐ If deactivating email accounts or telephones, set required notifications (e.g., automatic reply e-mail or voicemail notification)
- ☐ Debrief with IC and provide input for the after-action report and participate in the OPH cold debrief and/or evaluation survey.
- ☐ Participate in the City of Ottawa ECC hot and cold debrief as appropriate.