



“Placing community in the driver’s seat”: Key strategies and critical enablers of an equitable place-based COVID-19 vaccination response

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ABSTRACT

Addressing health inequities requires both national and local-level action. In the case of COVID-19, locally-led place-based programs were instrumental in addressing vaccination inequities that resulted from implementation gaps in national and state-level universal COVID-19 vaccination programs. To prepare for future pandemics, understanding which local strategies are effective and the conditions that enable their effectiveness is crucial. We conducted a case study using qualitative interviews (n = 22) and document analysis to identify key strategies employed to increase vaccination uptake among priority populations in a regional community in Victoria, Australia, and the conditions perceived to enable or constrain the success of those strategies. Interviewees included Aboriginal and migrant community members (n = 12) and representatives from organisations that designed and implemented the COVID-19 vaccination program (n = 10). Strategies perceived to be effective by local migrant and Aboriginal communities included the location of outreach clinics (places considered physically, cultural and political accessible and safe), communication via trusted community leaders, practical supports such as translation services and transport, and empowering community in clinical interactions. Conditions perceived to influence program implementation and outcomes related to four themes: (i) shared vision and strong bonds of local partners, (ii) placing community in the driver’s seat, (iii) rebalancing power through leadership grit and guts, and (iv) equity-enabling service and funding models. Our study supports strengthening of national and state government investment and engagement with local partnerships to place equity and community at the centre of future pandemic and public health responses.

1. Introduction

The World Health Organization (WHO) declared the novel coronavirus (COVID-19) a worldwide pandemic on March 11, 2020 (Australian Government Department of Health, 2023). Some populations experienced higher rates of infection, hospitalization and mortality from COVID-19, and a higher burden of social impacts including loss of income, employment and exclusion, based on factors such as age, income, geographic location, education, race, ethnicity, and immigration status (Isasi et al., 2021; Australian Institute of Health and Welfare (AIHW), 2021; Mena et al., 2021; Drefahl et al., 2020).

Despite disproportionately affecting some populations, communicable diseases, such as COVID-19, are often addressed through a

“universal” public health paradigm (Semenza and Giesecke, 2008). Whilst public health responses during the COVID-19 pandemic differed across national and sub-national government jurisdictions, actions generally included travel restrictions and quarantine, physical distancing policies and practices, closure of non-essential services, and strong case detection and isolation practices (Australian Institute of Health and Welfare (AIHW), 2021). Vaccination programs were also largely universal in nature, being made *available* to the whole population that met the eligibility criteria. However, vaccination *uptake* was not equal across populations. Globally, vaccination rates were found to be lower for those more socioeconomically disadvantaged as well as ethnically and racially diverse groups, potentially exacerbating existing COVID-19-related health and social inequities (Public Health Ontario,

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2022; Williams et al., 2022; Siegel et al., 2021; Gaughan et al., 2023; Dolby et al., 2022). In Australia, across all indicators of socioeconomic position, those experiencing the most socioeconomic disadvantage were reported to have lower COVID-19 vaccination uptake compared to the least disadvantaged (July 2021–January 2022) (Biddle et al., 2022). A study that compared local government areas in a region of metropolitan Victoria, Australia, found a difference of approximately 25-percentage points in vaccination rates between an area with high socioeconomic disadvantage and high cultural diversity, and an area with low disadvantage and cultural diversity (32% and 57% of the eligible population, respectively) (Wong et al., 2023). Significant differences in vaccination rates were also observed between Aboriginal and Torres Strait Islander people compared with the non-Indigenous Australian population (73.2% and 92.3% in January 2022). Significant barriers to accessing and receiving vaccinations were reported in regional and rural areas of Australia (Australian Government, 2022; Testa, 2021).

Intersectionality is a theoretical framework that examines how social identities (such as gender, race, and ethnicity) and social factors (like socioeconomic status, geographic location, migration status, housing status) intersect and interact to create complex and interdependent forms of privilege and oppression (Kabir et al., 2022). Applying an intersectional lens to COVID-19 vaccination inequities suggests that First Nations peoples, migrants, and refugees from low socioeconomic backgrounds living in large households in regional and remote communities likely faced compounding forms of discrimination, further diminishing their power, resources, and opportunities related to COVID-19 vaccinations.

While there is an abundance of evidence highlighting disparities in COVID-19 vaccination uptake and the determinants of vaccine hesitancy, few studies have explored effective strategies to address COVID-19 vaccination inequities experienced by priority populations in non-metropolitan settings (Ochieng et al., 2021; Kafadar et al., 2023). Furthermore, where studies exist, they predominantly report strategies perceived to be effective from the perspectives of government and organisation stakeholders, or were focused on a single ethnic group (Wong et al., 2023; Barwon Health Public Affairs and Communications, 2022; Dada et al., 2022; Davis et al., 2023; Carter et al., 2022). Strategies to improve COVID-19 vaccination uptake in these prior studies included information sessions with interpreters for migrant and refugee groups, creating video and audio content in multiple languages, pop-up clinics in areas with low vaccination rates, assistance with group bookings and transport, and setting up a specialised clinics for those with a disability (Wong et al., 2023; Barwon Health Public Affairs and Communications, 2022; Dada et al., 2022).

To build on this evidence, in preparation for future pandemics and other public health responses, it is essential that community voices are also included when seeking to understand what strategies were perceived to work and for whom. Importantly, we need to understand what conditions enable these types of equity-focused strategies to work in these settings. One such example is the Active Outreach COVID-19 Testing & Vaccination Response (AOCTVR) program implemented in the Mildura local government area, Australia, which demonstrated positive COVID-19 vaccination uptake for multiple communities that were experiencing vaccination inequities (Jongsma, 2022). Using AOCTVR as a case study, our study aimed to (i) identify strategies employed in a local-level COVID-19 vaccination program to improve equity in vaccination uptake as perceived by a regional community in Victoria, Australia, and (ii) understand the conditions perceived to enable or constrain the success of those strategies.

2. Materials and methods

2.1. Study design

Our study design is grounded in critical qualitative inquiry, a research paradigm whereby qualitative research goes beyond

investigating and interpreting phenomena, to critiquing inequalities, challenging injustices, and advocating for those who experience social disadvantage (Denzin, 2017). Critical inquiry is well-suited to our study as we aimed to critique how a health intervention challenged the institutions, public policies, structures and processes that may have contributed to observed inequities in COVID-19 vaccination uptake in a local regional community.

We conducted a retrospective qualitative explanatory case study, using in-depth semi-structured interviews to explain how a local COVID-19 outreach response improved equity in vaccination uptake for a local community in Australia. Explanatory case studies are appropriate when the study seeks to provide an in-depth explanation of how and why events happen within a real-world context (Yin, 2009). This is an appropriate study design to answer our research questions as it aims to go beyond describing *what* was done, to gaining a rich understanding of *how* it was done and *why* it worked.

2.2. Theoretical framework

Our study was guided by the Health Equity Implementation Framework. The HEIF is a determinants framework based on the Integrated-Promoting Action on Research Implementation in Health Services (i-PARIHS) framework and Health Care Disparities framework (Woodward et al., 2021). It describes determinants believed to predict successful and equitable implementation related to health services, across three domains: culturally relevant factors (e.g. demographics, knowledge, behaviours, and beliefs) interactions between recipients and provider (e.g. power imbalances, trust, implicit biases) and societal context (e.g. physical structures, economies, and social and political forces). It was considered an appropriate framework to explore the conditions that facilitated the implementation and perceived success of strategies to increase vaccination uptake as part of the AOCTVR.

2.3. The case: Mildura's active outreach COVID-19 Testing & Vaccination Response (AOCTVR)

The Mildura local government area (herein referred to as Mildura) lies on the traditional lands of the Latji Latji people, approximately 550 km north-west of Victoria's State capital city, Melbourne, Australia. Mildura is made up of a regional city and surrounding rural areas (herein referred to as a regional area or regional community). The region is home to approximately 56,000 residents, including a large Aboriginal and Torres Strait Islander community (4.6% compared to 0.8% for the rest of Victoria) and is a key settlement location for migrants and newly arrived refugees (who make up a critical part of the workforce that services Mildura's significant agricultural and horticultural industries). Complex social and economic challenges experienced in Mildura contribute to the community unfairly experiencing worse health and social outcomes compared with state averages (Jongsma, 2022).

Australia's COVID-19 vaccination program commenced in February 2021, with responsibility shared between Commonwealth and State/Territory governments (Australian Institute of Health and Welfare (AIHW), 2021). Vaccinations were universally available, including at State-run vaccination hubs, community health services, GP clinics and other approved healthcare sites, including pharmacies. By September 2021, when Victoria experienced the start of its third wave of COVID-19 transmission, overall population vaccination rates were lagging, clear inequities were becoming evident between and within local government areas and Mildura was reported as having the lowest percentage of COVID-19 vaccinated residents in regional Victoria (Wong et al., 2023; Testa, 2021). Local knowledge from Mildura's local government and community organisations identified that Mildura's lagging vaccination rates were partly due to structural and systemic barriers that disproportionately affected the accessibility and acceptability of the national and state-level universal COVID-19 vaccination response for some community groups. These groups included those living in low

socioeconomic areas, Aboriginal and Torres Strait Islander people and migrant and refugee communities, including undocumented migrants. This led to a locally-developed and implemented response to address gaps in the universal COVID-19 vaccination program called the Active Outreach COVID-19 Testing & Vaccination Response (AOCTVR) (Jongsma, 2022).

AOCTVR commenced in October 2021 and involved partnerships with a number of key organisations and community leaders. A small active outreach team was formed, made up of senior leaders from a local place-based collective impact initiative and the local government. The small active outreach team consulted with leaders from the local community health service, migrant and ethnic community service provider, local general practitioners and nurses, local representatives from Victoria Police, Aboriginal Elders, and migrant and refugee community leaders to develop and refine the AOCTVR over the course of its implementation. The team maintained constant communication with leaders to help address barriers to implementing AOCTVR and liaised with State and Federal government stakeholders to secure necessary resources and support. The AOCTVR involved a number of out-reach clinics held in local parks, community centres and the premises of the service provider for migrant and ethnic communities, all located within the regional city centre. The response was expanded to include clinics in rural town centres and farms. Park clinic locations were chosen as they were in walking distance of identified priority groups. An evaluation of AOCTVR found the program was effective in increasing community uptake of COVID-19 vaccinations, especially for community members that experienced additional barriers to accessing this service, such as Aboriginal and migrant and refugee communities (Jongsma, 2022). The evaluation reported that the AOCTVR facilitated 38 outreach clinics, delivered 1294 COVID-19 vaccinations and conducted 406 COVID-19 polymerase chain reaction (PCR) tests.

2.4. Sample and recruitment

A purposive sample was undertaken to recruit representatives involved in the design and/or implementation of AOCTVR ('AOCTVR partners'), and community leaders and members representing Aboriginal and ethnic communities who accessed the AOCTVR program. AOCTVR partners were identified through networks of the research team. Snowball sampling was then used to identify members of the community who accessed AOCTVR. Ethical approval was obtained from the Deakin University Human Ethics Research Committee (2023-286).

2.5. Data collection

In-person, semi-structured interviews were conducted by the first author (SS) between November 2023 and February 2024. To ensure participant autonomy and self-determination, participants were asked to choose their preferred setting for interviews, which were conducted at the offices of local organisations or via Zoom. Participants who were involved in developing and implementing the program were asked to describe their position and the role they played in AOCTVR and were asked a series of questions about the strategies that were implemented as part of AOCTVR and the conditions that enabled or constrained the program's success. Community members were interviewed face-to-face, either individually or in small groups, as preferred by participants. Migrant community members were interviewed as a group, with two interpreters from the local ethnic community organisation that were known to all participants. Aboriginal and Torres Strait Islander community members were interviewed one-on-one or in pairs. The interview guide was reviewed by local community leaders to ensure interview questions were culturally safe and appropriate. Community participants were reimbursed for their time with a \$100 grocery voucher. The average duration of interviews was 50 min. Interviews were either audio recorded or detailed notes were taken. Participants were given the opportunity to review a copy of their transcript/notes. After the interview,

participants were asked if they could direct the research team to publicly available documents related to AOCTVR. The 'Active Outreach COVID-19 Testing and Vaccination Response (AOCTVR) Mildura Local Government Area Evaluation and Learning Report' and the 'Murray PHN 2021 Report to Community' were identified (Jongsma, 2022; Murray Primary Health Network (PHN), 2021).

2.6. Data analysis and interpretation

Data (including interview transcripts, notes and documents) were uploaded and coded in NVIVO 14 (Lumivero. NVivo, 2023). Braun and Clarke's six step reflexive thematic analysis process (which acknowledges the researcher's active engagement in and influence on the research) guided the analysis of data (Braun and Clarke, 2013). Step one involved the first author (SS) becoming familiar with the data by reading and re-reading transcripts, noting ideas and thoughts on the strategies implemented in the AOCTVR that community members found most valuable, and the conditions that helped or hindered the success of the response. In step two, data was reviewed with explicit regard to concepts of power and social justice aligned with a critical qualitative approach. Inductive, semantic coding was used to identify strategies perceived by community members to encourage vaccination uptake. For codes related to the conditions perceived to enable successful implementation of these strategies, codes were initially deductively generated based on our theoretical framework (HEIF), with additional codes inductively developed for data that did not align with HEIF constructs (step three). Codes informed the drafting of initial themes (step four). Themes were reviewed and refined through meetings with the research team in step five, and finalized during the manuscript write-up (step six).

2.7. Reflexivity

In conducting this study, it was essential to engage critically with our own positionality and how inherent power imbalances stemming from our own privilege and outsider perspective could influence the study. Our research team are from various cultural backgrounds, with one member having lived experience as a migrant to Australia, none identify as Aboriginal or Torres Strait Islander and one lived within the Mildura community. Continuous reflexivity was practiced by the first author (SS) a white researcher who lived outside of Mildura, discussing reflections and insights with the research team, including those who could provide an insider-perspective and experience conducting lived experience research with marginalised communities (JM, CZ). SS sought guidance on recruitment, interview schedule and culturally safe-practices from local migrant and Aboriginal community leaders. These reflexive practices aimed to ensure cultural safety and community empowerment was embedded in data collection, analysis and dissemination, and led to decisions such as interviewing migrant community leaders in a group setting, at a community organisation they considered a "safe haven", with staff from the community organisation present for support and translation assistance. Participants in group interviews were familiar with one another, and their collective representation was key to addressing power imbalances between researchers and participants. While group interviews required facilitation of group dynamics, community leaders recommended this approach as it provided a more comfortable setting for community members who might have been hesitant in participating in one-on-one interviews. Where participants opted for one-on-one interviews ($n = 1$), it allowed for the opportunity to gather more in-depth stories and nuanced context. Nonetheless, the flexible approach to individual and group interviews allowed the researchers to build trust in ways that were self-determined by community members. Spending time in Mildura before and during data collection to build trust and develop a better understanding of the community was critical to fostering a more equitable research process that respected the lived experiences of all participants.

In this study, Indigenous Data Sovereignty and Governance

principles were reflected through our ongoing engagement with a local Aboriginal Elder and others who have deep relationships and knowledge of the local Aboriginal community throughout the research process to ensure data protocols were culturally appropriate and aligned with community preferences, as well as by obtaining informed consent about the use and sharing of data.

3. Results

Interviews were conducted with 22 participants. Ten participants were AOCTVR partners (those who were involved in developing or implementing the AOCTVR) and 12 were local community members. Of the 12 community members interviewed, seven identified as Aboriginal and Torres Strait Islander people and five were from migrant communities. Participants from migrant backgrounds were not asked about their refugee or asylum seeker status. First we describe strategies identified by local Aboriginal and Torres Strait Islander and migrant community members perceived to promote vaccination uptake within their communities, and why. Then we describe results from thematic analysis exploring the conditions that enabled or constrained the success of those strategies.

3.1. Implementation strategies identified by community that promoted vaccination uptake

3.1.1. Targeted communication from trusted sources

While the AOCTVR engaged in a range of dissemination strategies including translation of mainstream promotional materials into various languages, letterbox drops and geographically-targeted text messaging, community members noted specific strategies they deemed most effective. For migrant community members, it was the targeted distribution of information and ongoing communication by their community leaders, including both face-to-face interactions and via their private social media networks (WhatsApp, Facebook Messenger groups). Aboriginal community members noted the personal text messages, phone calls and door knocking by known Aboriginal Elders and other respected community leaders was the most powerful.

“The state government can’t put it on their Facebook page, to reach community you have to go through the social media networks that they trust. (Name of community organisation) has the leader’s directory and we relay it onto the community at large.”

- Ethnic community leader

3.1.2. Accessible and trusted outreach clinic locations

Aboriginal community members discussed how vaccination clinics located in parks that were within walking distance was critical, especially for large family households who did not have access to suitable transport (e.g. no car or cars with insufficient number of child-restraints) or child-minding options. However, it wasn’t just the physical accessibility that was important. These community members also noted the value of outreach clinics being run in open spaces (e.g. parks) and over consecutive days, giving them time and space to build trust and spread the word through their community.

“There might be people who would be standing at their house and they’re kind of just looking out the window. And then maybe the next day they might come a little bit closer and maybe just engage in a bit of conversation. And then the next day, they might bring some of their family back with them and again, have a bit more of a conversation before they’d get the vaccine. Maybe just one of the family would get it, and then the rest would come. So it was so slow. It was that trust building.”

- AOCTVR partner

Ethnic community members discussed the importance of running clinics at the local ethnic community service, which is widely respected

as a “safe-haven” for local ethnic communities, and how their trust in this service and its staff helped to foster trust in the vaccination clinic. This was particularly important for migrants without documents or a Medicare card, who knew they were safe to be vaccinated without immigration authorities being notified. Other actions such as providing food, drinks and playing different types of cultural music were discussed as helping to create a welcoming environment.

3.1.3. Non-discriminatory access to clinics

Community members reported a number of practical supports as key reasons for being vaccinated at AOCTVR clinics. All participants noted that the fact that online bookings were not required was particularly important for those without internet access or low digital literacy. The provision of forms and information in different languages and support for completing forms, was especially helpful for those with low or no English-literacy, while providing hardcopy proof of vaccination certificates at the time of vaccination was identified as important for migrant community members, especially undocumented workers and those with no internet access, who required immediate proof of vaccination for their continued employment.

3.1.4. Fostering trust and self-determination in clinical interactions

Community members discussed how the presence of culturally-diverse doctors and clinic staff, with long histories working with migrant and refugees and Aboriginal and Torres Strait Islander people, helped them build trust in the vaccination process. Participants also spoke about the way doctors and clinic staff spoke in plain language and/or in their native language (for migrant community members) and slowed down the vaccination process to allow community to engage at their own pace and promote self-determination. For example, a local Aboriginal woman originally attended a park clinic with her family, but was extremely hesitant about having the COVID-19 vaccine due to her medical conditions. Clinic staff listened to her concerns and encouraged her to visit the clinic at the ethnic community centre where local GPs were available to discuss her situation.

“And then a few days later, she rocked up at (clinic) and Dr (name of local GP) came and spoke to that older Auntie out under the tree. He was there for about half an hour. He decided it was safe to vaccinate and brought her in. What that family needed could not be provided in a standard clinic environment, where you’d line up and you’d get a number and fill out a form.”

- AOCTVR partner

3.2. Conditions that influenced the implementation and perceived success of AOCTVR strategies

Four inter-related themes describing factors that influenced the implementation and perceived success of AOCTVR strategies were identified (Fig. 1).

3.2.1. Theme 1: local partnerships with a shared vision and strong bonds

Mildura’s relative geographic isolation and a perceived lack of State and Federal government prioritisation for the region and for marginalised groups in the national COVID-19 vaccination response, meant leaders from local organisations were highly motivated to develop and implement a targeted vaccination strategy to protect their community. While AOCTVR partners noted that some geographic-level data was made available to help identify vaccination inequities across the country, there was a general absence of granular data to understand how these inequities were being experienced by their community. AOCTVR partners reported drawing on their deep community knowledge to identify the intersection of identity factors including race and cultural background, with social factors including migrant status, socioeconomic disadvantage, geographic area and family/household constructs, to understand who, how and why some communities were more likely to

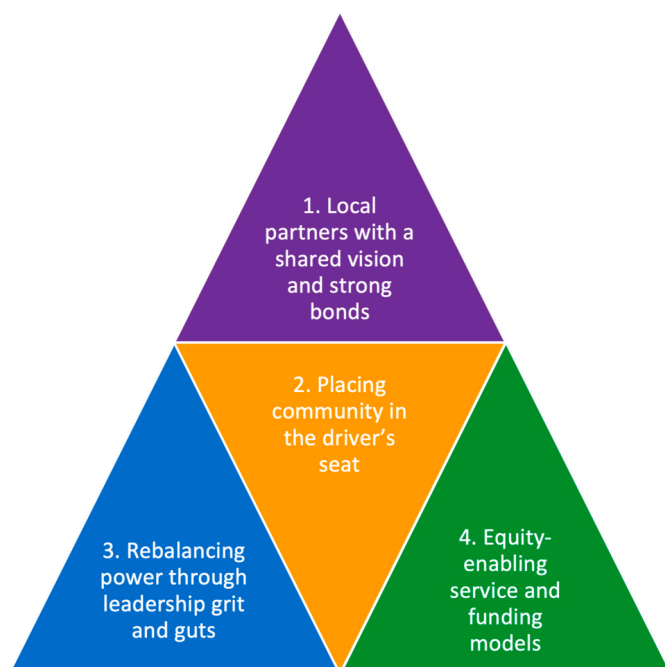


Fig. 1. Factors that influenced the success of an equitable COVID-19 vaccination response.

be under-vaccinated. AOCTVR partners identified that low vaccination rates in these sub-groups were largely due to structural barriers related to vaccine access and hesitancy, rather than only individual-level factors (such as knowledge and beliefs). This insight guided AOCTVR's strategies to address structural barriers related to transport, internet access, trust and power dynamics, rather than focusing solely on information and education.

The importance of strong bonds was also evident when a local GP clinic stepped in to order and distribute vaccines after the anticipated State-based vaccine supply was unexpectedly withdrawn, and provided clinical staff before formal funding was in place. Participants highlighted that agility and risk-taking in such situations relied on a strong, shared commitment to health equity.

"I said look, this is time critical. If we wait for the funding to come, I know it may take forever. I had a chat with our staff and we said, oh, what is the worst case scenario? There's no funding? So we'll volunteer our time. But let's get things moving."

- AOCTVR partner

AOCTVR partners were unanimous in their perception that no single organisation could have implemented the AOCTVR alone. These partners emphasised that the long history of collaborating on initiatives to address complex community challenges, with a shared focus on equity and community, was key to the success of the AOCTVR. Participants reported that this history fostered deep, trusted relationships, and strong collaboration and partnership skills, that provided a "blueprint" for developing and implementing an effective partnership-driven response.

"You know what it felt like for me, was kind of like we landed in this place where we didn't realise we'd been preparing for ... like what is it that we can offer? We can offer a way of working, we can offer relationships, we can offer this kind of push the boundaries position ... I mean that's what this initiative is about changing and challenging systems that hold things in place".

- AOCTVR partner

3.2.2. Theme 2: placing community in the driver's seat

This theme describes the leading role community played in the

AOCTVR, and is linked to theme 1, in that AOCTVR partners shared a vision that community must be central to their response. AOCTVR partners discussed how collaborating with organisations representing priority groups and involving community stakeholders who "wouldn't normally be at the table", including Aboriginal Elders and other trusted champions in the Aboriginal and multicultural communities, was instrumental. Valuing these stakeholders' expertise and following their advice on non-clinical aspects of the AOCTVR led to improved implementation outcomes. For example, the first outreach clinic in a specific park location was initially planned to run for one day, however an Aboriginal Elder advised that they needed to allow more time for community awareness and trust-building. This led to the decision to extend the clinic's presence in the neighbourhood, resulting in a significant increase in vaccinations among priority communities. Although AOCTVR partners described being initially hesitant to deviate from their plan, previous experience gave them confidence to trust that community is always the expert on what community needs.

"When you truly know what community is doing and saying, that's your best bet. And I have never, ever made a bad decision where it's been informed by community. It's never gone badly. So when we can say hand on heart, we truly know this is what community is saying, we're on the money, we make the decision, push ahead and advocate hard."

- AOCTVR partner

Community leaders were also in the driver's seat both literally (as they physically drove community members to clinics) and metaphorically by leveraging their strong, trusted relationships and communication channels to address mistrust and misinformation about COVID-19.

3.2.3. Theme 3: rebalancing power takes grit and guts

AOCTVR partners perceived that usual hierarchies and power dynamics within and between organisations were absent in the AOCTVR, with leaders and other stakeholders "stepping into and out of power" in unique ways. This relates to theme 2, where leaders from AOCTVR partner organisations were seen to step back to let community leaders make non-clinical decisions and stepped in to back community-led decisions and remove obstacles. When participants spoke about challenging bureaucratic structures and resistance, it was inextricably linked to their willingness to take risks (guts) and demonstrate resilience (grit). Several leaders described experiences where they felt like they were putting themselves and/or their organisations "on the line", and the personal and emotional toll related to this. Examples included addressing staff resistance to changes in clinical guidelines and processes for park vaccinations, backing community decisions on outreach clinic locations and timings, and supporting community leaders to promote vaccinations amid fear and resistance. Resilience was also discussed in terms justifying AOCTVR investments and outcomes to some government and healthcare system stakeholders.

"When you went back to those bigger network meetings it felt like we were trying to prove that this was still an important place to put our resources, because again, I felt like there was just this emphasis on mass vax clinics (large vaccination clinics). Like (they would say) "the one at the Army Drill Hall, it's not far from that park where you're setting up". It was actually only maybe 4 km away, but just worlds apart in how it was being delivered and who would be comfortable."

3.2.4. Theme 4: equity-enabling service and funding models

AOCTVR partners identified an opportunity to strengthen equity-orientation in service and funding models. This theme strongly relates to the themes 1 and 3 where a key success factor, and vulnerability, of the AOCTVR was its reliance on the shared equity-centric values of local leaders and their willingness to rebalance power and take risks. Two AOCTVR leaders discussed introducing explicit equity-centric measures (e.g. KPIs) to health service delivery models as a means to support a systems-level approach to equitable service delivery, promote equity-

centric accountability and reduce the burden on individuals to advance health equity.

“When it comes down to it, service providers are funded to make their KPIs in a particular way in a particular funding stream. Now, if that funding comes down in a way that does not meet the needs of community, the service provider doesn’t care unless they’ve got a leader who is very invested in community ... We were just lucky. It wasn’t a systems response, but we were lucky we had leaders in those roles that were willing to put themselves and their organisations on the line to meet the needs of community, not just to meet the needs of funders.”

Strengthening accountability mechanisms to include community as a meaningful stakeholder was also discussed as a way to embed equity and the communities’ voice in future health programs and service delivery.

“And I don’t mean like an annual report. People will go “Oh, there’s accountability back to the board, and they’re members of the community”. That’s actually not correct. The board’s responsibility is to the longevity of the service. They’re representatives from the community, but their responsibility is the financial sustainability of an organisation. That is not a good setup and I think one of the things that funders could do is have better mechanisms for accountability back to community.”

4. Discussion

Our study identified strategies implemented in a locally-led COVID-19 vaccination response to increase vaccination uptake for groups experiencing vaccination inequities in a regional community, in Victoria, Australia. We also describe the conditions that enabled or constrained the perceived success of the AOCTVR. Importantly, our study included voices from under-served community members, including Aboriginal and Torres Strait Islanders peoples and those migrant, refugee and undocumented migrant communities, who are often overlooked in the literature in favour of perspectives from powerful government and health-system stakeholders. The program strategies perceived to be effective by local migrant and Aboriginal communities related to the location of outreach clinics (places considered physically, cultural and political accessible and safe), communication via trusted community leaders, practical supports such as translation services and transport, and fostering trust and self-determination in clinical interactions. Conditions perceived to influence AOCTVR implementation and outcomes related to four themes: (i) shared vision and strong bonds of local partners, (ii) placing community in the driver’s seat, (iii) rebalancing power through leadership grit and guts, and (iv) equity-enabling service and funding models.

Several strategies used in the AOCTVR program to increase COVID-19 vaccination uptake have been reported in the international literature, including use of outreach clinics located in areas with low vaccination rates and trusted venues for under-vaccinated populations, providing transport services to clinics and offering practical on-site support such as language translation (Wong et al., 2023; Dada et al., 2022; Davis et al., 2023; Carter et al., 2022; Alberti et al., 2020; Vanden et al., 2023). Like the AOCTVR, an eight-country (Belgium, Canada, Germany, Italy, Japan, the Netherlands, Norway, and Spain) study, involving a document review of COVID-19 pandemic responses by public health and primary health care collaborations to address health inequities, found targeted outreach initiatives were primarily developed and implemented at the local level to address failings of universal COVID-19 vaccination programs for some population groups. This has led health equity advocates to call for a shift away from a universal approaches to equity-based approaches, based on principles of proportionate universalism (Vanden Bossche et al., 2023; Lam et al., 2023). Proportionate universalism posits that to reduce health inequities, actions should be universal but “with a scale and intensity that is proportionate to the level of disadvantage” (Marmot, 2020). As shown in our study and supported in the literature, different priority groups can

value different strategies, and local actors are well-positioned to inform and implement proportionate responses, informed by an intersectional lens (Marmot, 2020). To minimise vaccination inequities in future pandemics, our study suggests that higher levels of governments should collaborate with local governments and equity-focused community organisations and leaders from the outset to develop, fund, and implement targeted outreach efforts alongside universal vaccination programs.

During the COVID-19 pandemic, framing vaccination inequities as vaccine hesitancy was common, with some local responses focusing on individual-level factors, such as providing resources and education sessions (Wong et al., 2023; Davis et al., 2023). Dominant framings of an issue shape how it is understood, and ultimately influence the solutions proposed to address it (Hawe, 2009). The AOCTVR explicitly framed the problem in terms of both individual and structural barriers to vaccine access and acceptability that contributed to vaccine hesitancy.

Our finding that the AOCTVR placed community in the driver’s seat by leveraging trusted relationships within community aligns with place-based approaches to health promotion. Place-based approaches acknowledge the unique circumstances of a location, involve local communities as active participants in the development and implementation of initiatives, and require governments to share decision-making authority (Trickett and Beehler, 2013). An important finding of our study was how AOCTVR partners shared decision-making by inviting trusted community leaders who have not traditionally been “invited to the table” and giving weight to their voices, especially when their recommendations challenged government and organisational expertise and standard practice. Involving these community leaders, with their lived experiences and deep community connections, gave AOCTVR partners a nuanced understanding of the complex, intersecting factors contributing to vaccination inequities, that their own data and knowledge could not provide.

This form of community participation requires a shift in power dynamics from ‘power-over’ to ‘power-with’, ‘power-to’ and ‘power-within’ community, a shift that underpins equitable community participation (Hendriks, 2009). Scholars have noted that to make this shift, it is essential to recognise and address visible, hidden and invisible forms of power that providers have over community (Clark, 2022). Visible power includes who decides what issues and solutions are prioritised, who is invited to the decision-making table, and who sets the rules for participation, including what is discussed and how disagreements are handled; hidden power relates to agenda-setting, issue framing and social status of participants; and invisible power acknowledges the challenge of equitable participation within a society influenced by deep-seated structural inequities and historical injustices (Clark, 2022; Lukes, 2012). This study provides a real-world example of rebalancing power dynamics in community-led, place-based health programs.

We found that existing local partnerships between local government, health services, local organisations and leaders were critical to the success of AOCTVR. Participants articulated how these partnerships and relationships did not develop overnight. AOCTVR partners had a long history of working together on community and equity-focused initiatives, developing trust, partnership skills and a blueprint for addressing complex local challenges. Trust, transparency, collaborative skills and a shared vision have also been identified as key functional aspects of effective primary health care, public health and local government partnerships addressing health equity during the COVID 19 pandemic, and in health initiatives, more generally (Vanden Bossche et al., 2023; Yashadhana et al., 2024; Alderwick et al., 2021; Bromley et al., 2018). Preparedness of local partnerships will be key for future local pandemic and public health responses. The Community Transformation Map is one tool that can help self-assess capacities and motivations required for transformative community partnerships, facilitating dialogue, and a shared understanding on complex, systemic problems and solutions (Domlyn et al., 2021). However, our study and others highlight the critical importance of sustained funding for (i) local organisations that

make up these partnerships and form the backbone of equitable local responses, and (ii) initiatives that enable local partners to build partnership skills and trust to address complex social problems, to build capacity to address equity in future local public health responses (Dada et al., 2022; Hoffman et al., 2022; Wong et al., 2022; Demeke et al., 2022).

Our study and others also highlight important upstream actions to support equity-driven leaders within the health system (Alberti et al., 2020; Poduval et al., 2023). While health systems typically monitor and evaluate various functions, explicit key performance indicators (KPIs) for addressing health inequities are less common (Cohen et al., 2018). Previous research has shown that process-level targets (e.g. collecting equity-centric data), activity-level targets (e.g. ensuring equal access to a particular service) and outcome-level targets (e.g. closing the gap in hospitalisation for chronic conditions by level of socioeconomic position) linked to performance management incentives and funding streams, can play a critical role in promoting equity in healthcare (Barsanti and Nuti, 2014). Queensland's Aboriginal and Torres Strait Islander Health Equity Toolkit and the American Hospital Association's Health Equity, Diversity & Inclusion Measures for Hospitals and Health System are examples of such approaches (Queensland Health, 2021; Institute for Diversity and Health Equity (IFDHE), 2024). Furthermore, strengthening connections between local-level partners and state and national government decision-makers is required to cut through the red tape that inhibits fast and effective public health responses, particularly in times of crisis.

Box 1 summarises four key policy recommendations based on lessons learned from a local-level COVID-19 vaccination program designed to reduce vaccination inequities. These recommendations may be applicable to pandemic responses and public health programs implemented in other regional communities in Australia, as well as metropolitan areas and other jurisdictions.

4.1. Strengths and limitations

A key strength of this study was the inclusion of community voices to understand which local strategies were perceived to impact on improved vaccination uptake for their community and why. Additionally, all AOCTVR partners and community groups involved in the AOCTVR were represented. The case-study approach, grounded in critical qualitative inquiry, provided in-depth, contextually-rich insights into equitable COVID-19 strategies and the conditions that influenced their implementation, with illustrative examples to enhance theoretical understanding. We acknowledge that this study focused on a specific regional community in Australia with unique contextual factors. Future research could explore similarities and differences in the conditions that enable equitable COVID-19 vaccination responses between urban and regional

areas, and explore whether these findings apply to public health programs more generally, in regional settings. Notwithstanding, this evidence can help inform future pandemic preparedness across different jurisdictions and broader public health responses.

5. Conclusion

Inequities in COVID-19 vaccinations, and in health more broadly, are unjust and avoidable. The targeted, place-based vaccination response implemented in an Australian regional area helped address equity gaps in the universal vaccination approach, resulting in reduced vaccination inequities for Aboriginal and migrant communities. A local intersectoral partnership, grounded in trust and a shared vision for equity, developed and implemented the program, which placed "community in the driver's seat" for key decisions about the program's implementation. This approach resulted in a range of implementation strategies that were considered accessible and culturally safe for different groups that faced marginalisation and vaccination inequities in the community. National and state governments can play a crucial role in supporting such efforts by investing in local organisations and partnerships to build local capacity and expertise, and collaborating with local governments and local partnerships to centre equity and community voices in future pandemic and public health responses.

CRediT authorship contribution statement

Sally Schultz: Writing – review & editing, Writing – original draft, Visualization, Project administration, Methodology, Investigation, Formal analysis, Conceptualization. **Jane McCracken:** Writing – review & editing, Resources, Formal analysis. **Christina Zorbas:** Writing – review & editing, Supervision, Methodology, Formal analysis. **Serene Yoong:** Writing – review & editing, Methodology. **Anna Peeters:** Writing – review & editing, Supervision, Methodology. **Kathryn Backholer:** Writing – review & editing, Supervision, Methodology, Formal analysis, Conceptualization.

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Box 1

Four key policy recommendations

1. Ensure there is sustained funding for local services that have deep, trusted connections to communities who experience marginalisation, and invest in building local partnerships with these organisations to ensure the necessary resources, relationships, and expertise are readily available for future pandemic and public health responses.
2. Explore proportionate universalism as an approach to pandemic and public health responses that engage with local governments and local community partnerships from the outset, to ensure the development, funding, and implementation of programs or services are guided by a locally-informed intersectional lens.
3. Shift power in decision-making processes for pandemic and public health interventions that place local community members at the centre. For example, engage with community leaders and community members that have lived experience of marginalisation and strong community connections (including people not usually included invited to the decision-making table) to decide how to best implement programs for their community.
4. Introduce equity-centric KPIs in health service funding and delivery models to promote health equity in service delivery. This could include targets related to processes (for example, utilising equity-centric data to inform decision-making), activities (such as implementing culturally-informed practices in health services) and outcomes (for example, increase access to health services for priority groups).

collection, analysis or writing of the manuscript.

Declaration of interest statement

The authors declare that they have no competing interests.

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Data availability

Data will be made available on request.

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