

Optimising Targeted Vaccination Activity in Greater Manchester

Phase 1 report

October 2023



Working in Collaboration with:



Authors:

Bradley F, Dumville J, Kletter M, Nelson PA, Norman G, Watkinson R.

NIHR Applied Research Collaboration Greater Manchester
The University of Manchester

October 2023

Cite as:

The Targeted Vaccination in GM Evaluation Team: Bradley F, Dumville J, Kletter M, Nelson PA, Norman G & Watkinson R. Organising Targeted Vaccination Activity in Greater Manchester. NIHR Applied Research Collaboration Greater Manchester. October 2023.

This project was funded by the National Insights Prioritisation Programme (NIPP), commissioned by NHS England's Accelerated Access Collaborative (AAC) and the National Institute for Health and Care Research (NIHR). The views expressed in this report are those of the author(s) and not those of the AAC, NIHR or the Department of Health and Social Care.

1. Background

The COVID-19 pandemic resulted in the largest single mass vaccination programme in the UK delivered at pace and across multiple age groups. The programme was, and continues to be, a vital part of the UK's response to the pandemic. In Greater Manchester (GM), as across the UK, the rapid delivery of COVID-19 vaccinations required multi-system working at pace across NHS organisations and Local Authorities.

The pandemic has had an unequal impact on groups in the UK. GM has seen high rates of infection, as well as disproportionately high virus-related morbidity and mortality. Whilst vaccination has had a huge impact, this has also not been equal for all, with varying uptake rates in different areas of the region.

Previous research undertaken by team members¹ highlighted ethnic inequalities in COVID-19 vaccination in GM, highlighting that these exceeded inequalities in flu vaccine coverage. Between December 2020 and April 2021, 84% of the adult GM population in priority vaccination groups had received at least one COVID-19 vaccination. Vaccination coverage was relatively lower in most ethnic minority groups compared with those classed as 'White British'. Inequity in coverage was particularly marked for 'Other Black background', 'Black African' and 'Black Caribbean' groups.

To address inequities in vaccination, during the pandemic there have been targeted local responses to vaccination need that have supplemented more *standard* delivery. These offers were often developed to improve local acceptability and vaccination coverage in vulnerable or underserved groups by considering:

- Communication of information about vaccination
- Location of vaccination delivery and
- Staff delivering vaccinations

The aim of this evaluation is to gain insights into recent targeted vaccination activities across GM, and to use this learning to shape on-going activity. Our aim is to produce actionable implementation guidance to support vaccination activities that may improve local vaccination coverage across GM and reduce coverage inequity.

¹ Watkinson RE, Williams R, Gillibrand S, Sanders C, Sutton M. Ethnic inequalities in COVID-19 vaccine uptake and comparison to seasonal influenza vaccine uptake in Greater Manchester, UK: A cohort study. *PLoS Med.* 2022 Mar 3;19(3):e1003932. doi: 10.1371/journal.pmed.1003932.

1.1 The Greater Manchester Context

GM is a city-region with a population of approximately 2.84 million people. The region is made up of 10 metropolitan boroughs (called localities in this report) with their own councils: Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Stockport, Tameside, Trafford and Wigan (Figure 1a). The largest locality in terms of population size is Manchester with approximately 555,700 residents and the smallest is Bury with approximately 191,000 residents. The region has a spectrum of areas of deprivation (Figure 1b) and is ethnically diverse (Figure 1c) (data as of April 2022).

Figure 1a: GM boroughs/localities and middle layer super output areas (sub-areas of localities)

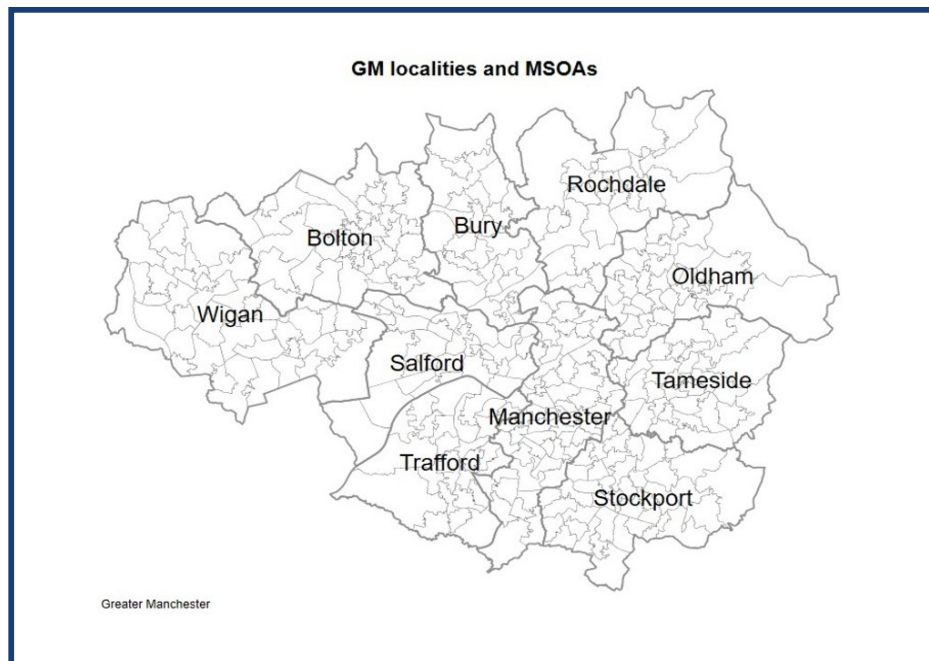


Figure 1b: Area level multiple deprivation index across GM

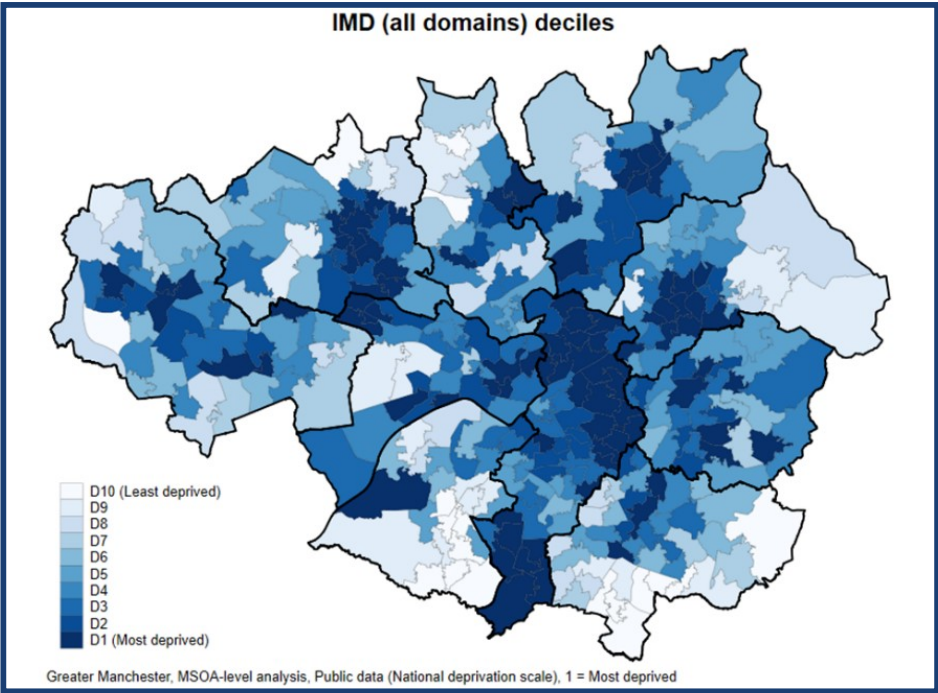
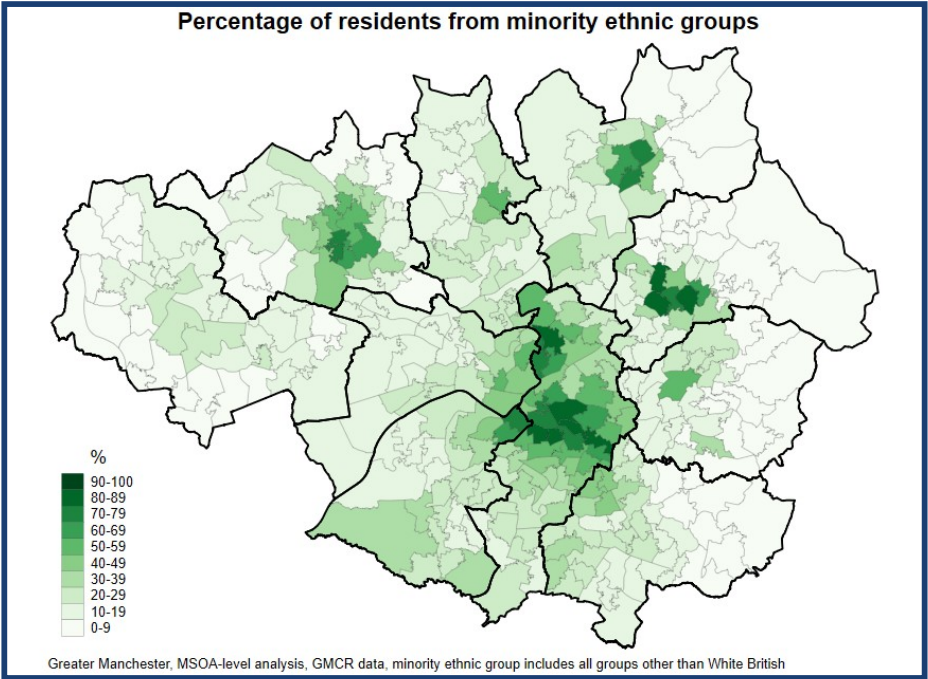


Figure 1c: Area level % of ethnic minority across GM (note varying amounts of missing ethnicity data for boroughs)



2. Project Structure

This report addresses the overarching question:

What can we learn from targeted, local vaccination innovations implemented in GM (and from wider evidence) and how can we ensure that insights from the pandemic are learnt forward and maintained?

The report presents findings from the following elements of data collection undertaken. These are summarised in Table 1, with further details in Appendix Table A1.

Table 1: Summary of evaluation methods for evaluation.

Rapid review of current activities to target vaccination to underserved communities	We rapidly reviewed the effectiveness of interventions to address vaccine coverage in underserved, minority or vulnerable groups. As this was a rapid review we adopted revised approaches such as a more limited search and single researcher screening, data extraction and critical assessment.
A survey of GM Districts to gain insights into bespoke vaccination activities	We asked people working in health and care settings and for local authorities to complete a pan-GM survey. This survey aimed to capture targeted approaches to vaccination uptake and delivery activity in GM that have targeted specific underserved populations/communities and geographical areas.
Qualitative semi-structured interviews with NHS and Local Authority staff from GM to gain deeper insights into vaccination activity	We conducted semi-structured interviews with key individuals involved in vaccine service activity across GM. NHS and Local Authority organisations were identified via regional contacts. In total 25 interviews with 27 respondents were completed (20 NHS; 7 LA), from nine of the 10 localities of GM. We were unable to recruit a respondent from the tenth locality. We then spoke in more depth to people in Oldham and Salford about specific activities linked to the insights generated.
Data analysis of vaccination coverage across GM presented by district and sub-areas within these.	<p>We used Covid-19 vaccination data downloaded with permission from the GM Health and Social Care Partnership Tableau site.</p> <p>Data are presented for three different population groups (1) total population (Age 12+), (2) at-risk population (age 50+ or with health conditions associated with moderate or high clinical risk, care home residents, and health and social care workers. i.e.: JCVI priority vaccination groups 1-9), and (3) high-risk population (age 70+ or with health conditions associated with high risk, care home residents, and health and social care workers).</p>

2.1 Report Structure

The NHS document, *Maximising vaccine uptake in underserved communities: a framework for systems, sites and local authorities leading vaccination delivery (published as part of the COVID-19 vaccine programme)*,² draws on the World Health Organisation's 'Three Cs', deemed as the core root causes in limiting vaccination coverage, when vaccine availability and delivery infrastructure are not rate-limiting issues. These root causes are described as:

- **Confidence:** where low confidence in vaccination can result from mistrust sometimes impacted by misinformation. Issues noted in the wider literature that may impact confidence around the COVID-19 vaccination include concerns about side effects and vaccine safety.
- **Complacency:** related to the perceived need for vaccination, or risks of not having it, and the motivation to be vaccinated.
- **Convenience:** relates to ease of access to vaccination, both geographically in terms of location of vaccination centres, opening hours and the booking systems used.

Addressing the root causes that limit vaccination coverage is mapped as a four-stage process (summarised in Figure 2). We base our findings around these key areas: **engagement and communication, using data, and wider contextual issues that impact on vaccination activities**. Finally we used insights to explore a more detailed case study and present this in the wider context of how leveraging the insights identified here can achieve change.

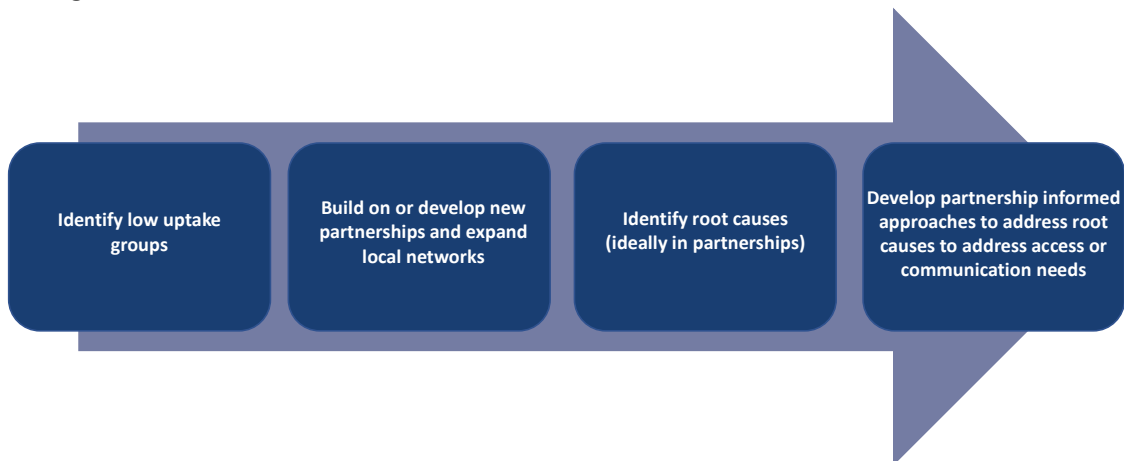


Figure 2: Four stages of exploring and addressing vaccination coverage in underserved groups

² NHS England. Maximising vaccine uptake in underserved communities: a framework for systems, sites and local authorities leading vaccination delivery.

3. Main Findings

3.1 Engagement and Communication

Key insight 1: Use of evidence-informed targeted vaccination activities should be maximised in Greater Manchester.

Key insight 2: Community engagement should be used to co-design targeted vaccination activities.

Key insight 3: Targeted vaccination delivery must dovetail with coordinated community engagement activities.

Key insight 4: Targeting underserved groups for vaccination delivery should be supported by adequate resourcing.

There is evidence from the rapid review and GM specific insights that underlines the value of community engagement and outreach activities as part of multicomponent approaches to increase vaccination coverage in underserved communities. In line with this, engagement and communication have been a major focus of the COVID-19 vaccination programme in GM, aiming to improve vaccination confidence and compliance and to tailor communications to targeted communities and populations. It is vital that successes that have been formed around relationship building and growing networks between different stakeholders are supported and sustained to ensure local communities are at the heart of public health innovation and activities.

3.1.1 Understanding of local perspective

Across most localities, it was deemed important to understand how different communities were making sense of COVID-19/vaccination risks and to explore barriers including access issues or concerns including: eligibility; compatibility with religious beliefs; worries about immigration status and concerns about vaccine side-effects. Engagement with target communities and groups and communication activities took several formats with several evidence-informed approaches used in GM that should be encouraged going forward (Table 2). Engagement often built on existing relationships with community residents through established groups or creating new forums to listen and respond to people's vaccination concerns. Use of community connectors or community champions who acted as important links between care delivery staff and target communities was flagged a key approach – that

also takes a longer term approach to developing relationships between parties and growing trust.

Across localities, increasing access was focused on a range of communities and populations including Black ethnic groups, (extremely) clinically vulnerable, East and South East Asian, East European, homeless people, Hindu, Jewish, migrants and refugees, Muslim, NHS Health workers, Pentecostal or Orthodox Christian, people with learning or physical disabilities, pregnant women, those in particular areas of high deprivation, social care staff, sex workers, Sikh, young adults (18 to 35 years). A key deliverable from engagement was often to shape a vaccination offer in response to feedback including development of tailored information and the creation of culturally appropriate delivery. Examples of further, targeted activities that were shaped by community engagement in GM included:

- One locality collaborated with a Jewish ambulance service to deliver vaccinations to the Orthodox Jewish community. Delivering this service under the ambulance service's banner rather than the NHS was said to have promoted confidence in the vaccination amongst this community. Another locality also adopted this model but with greater emphasis on community engagement via the ambulance service rather than vaccination delivery because of local concerns about delegation of clinical risk to a third-party provider.
- Introducing female-only clinics for Muslim women was a direct response to community feedback in one locality.
- Availability of appropriate interpreters at clinics as well as staff including those from relevant ethnic minority group backgrounds and British Sign Language Interpreters.

Table 2. Summary of community and engagement-related approaches with some evidence for impact on vaccine coverage alongside examples of activity in GM.

Innovations identified to potentially improve vaccination-related engagement and communication in underserved groups (rapid evidence review)	Examples of linked activities in GM identified through surveys and interviews
<ul style="list-style-type: none"> • Telephone calls to remind about vaccination appointments; book appointments; provide information on vaccination • Text message or postal reminders to book or attend vaccination appointments 	<p>Use of telephone calls with targeted individuals to discuss vaccination and arrange appointments were adopted by some localities to engage with individuals from targeted communities.</p> <p><i>“We put a phone line in...that they could book through, that was [this area] only...we said if you can’t work all these text and all these letters just phone up and we’ll book you in....we knew that was what we needed that was bespoke....we’ve got interpreters as well, we got funded interpretation for every bit of the service in case you need it.”</i></p> <p><i>“We used women to phone women. There was a local Bhangra group...so we used them, in the native language because we had that recorded, to phone women, explain to them, because we’d trained them to be able to answer those questions to speak to those families and say ‘look you can come to the mosque on Friday, it’s not difficult, just come down.”</i></p> <p>Text message reminders: The importance of communication to groups via direct messenger services such as WhatsApp was noted (although not clear these were reminders specifically).</p> <p><i>“...through the community champion side of the work, there was very much how you reach people through those more informal networks – WhatsApp or Facebook groups or organisations that are active in their communities to spread the word and we saw a real increase in uptake of the vaccine at that point, once it was on offer in communities without appointment and the word was being spread through those informal networks.”</i></p>

<ul style="list-style-type: none"> • Lay communication (including door-to-door engagement) • Home visits to advocate vaccination by volunteers or students • Community volunteers advocating for vaccination 	<p>Home visits. Door knocking, often by volunteers, was highlighted as important by several localities and was undertaken widely, both for raising awareness of local clinics/‘pop-up’ sites and for engaging with people from lower coverage areas and listening to their concerns.</p> <p>Information gathered from doorstep conversations was used to guide the set-up of bespoke clinics in mosques, community centres and churches. Community venues and mobile clinics (e.g., vaccination bus) combined with door knocking by staff and volunteers to promote and engage with communities was seen as important. However, it was noted that engagement activities involved appropriate methods and personnel.</p> <p><i>“Door-to-door knocking by culturally skilled people – who were from that background, were able to speak the language.... and were able to understand people’s concerns....”</i></p>
<ul style="list-style-type: none"> • Home visits to advocate vaccination by health professionals • Pharmacists advocating for vaccination 	<p>Some outreach for socially deprived communities and ethnic minorities carried out via community pharmacy.</p>
<ul style="list-style-type: none"> • Combined written educational information on vaccination with brief verbal interventions • Sending information letters in community appropriate language • Pamphlets of information (with or without short verbal interventions) • Community involvement in developing vaccination reminders • Use of local radio 	<p>Production of written material such as leaflets/pamphlets with verbal support and translation of written material was reported. There was often community involvement in the development of this material.</p> <p>In some cases, there was a focus on directing local written material to focus on areas of misinformation gathered via community engagement.</p> <p>One locality was particularly active in this area link this to community engagement:</p> <p><i>“The three M’s. So making sure that the message is both right from a public health perspective but also in terms of what people want and need to know and what matters to them. The messenger, so who are</i></p>

the people that people trust and will listen to and how we can use those people to share the information so that people know it's from a trusted source and more likely to engage with it. And then the media in the broadest sense of the word, because it starts with 'm', but the way in which we're going to get that message out there, whether it's by social media, broadcast media - TV or radio - or a webinar or community meeting."

"I'm from an ethnic background..... and I took it upon myself to visit the local mosques, in collaboration with the CCG. The council actually funded a leaflet drop and we designed it in collaboration with each other...by me going out into the community it also meant that I was able to be put onto some Whatsapp groups for the mosque, so we had these extra leaflets made for social media, so we could share them on Whatsapp and Twitter...so it meant that I could get in touch with the Imam and say 'here's our latest offer'....and I think by having a face that they could relate to and somebody who could explain in their language why the vaccine was good and because the government and the local and national media has started to make bespoke media messages in different languages that all started to help and filter through."

Local radio, sometimes delivered in specific languages spoken by target communities, was used in several areas to target specific populations.

3.1.2 The voluntary, community and social enterprise sector in community engagement and communication

The crucial role of the *voluntary, community and social enterprise* (VCSE) sector was recognised in facilitating community engagement and it was suggested that further resource may be required to equip and empower these organisations to carry out engagement work and co-design interventions to address low coverage going forward.

"You have to give power and resources for delivering these things to people who know communities best and de-centralise the process to be more responsive to marginalised groups. That's been the big lesson for me."

“Conversations... were bringing intelligence back to us, and we were saying ‘ok, right, this is not working, this is what the communities are telling us and we need to do X,Y and Z’. So that’s how we used that platform...the purpose... is not to just be passively giving out information but about building trust... it is about engaging communities, not directing and telling them what to do.”

Others noted the importance of now maintaining partnerships for on-going public health work.

“The relationship with our mosque council now is wholly different going forward and the level of trust.... and it’s holding on to that, because over time there’s personnel changes and some of the relationships change, so how do you hold onto that and [in particular] when there’s not a crisis to galvanise around?”

Those we gathered insights from commonly reported that, although risk perception among populations may be different outside the pandemic situation, the new and/or improved understanding of community issues and relationships/trust built through these engagement activities could be further utilised for other vaccination programmes (e.g., flu and childhood immunisations) and even non-vaccine related public health issues.

3.1.3 Using community engagement to support access to vaccination

Minimising practical issues in accessing vaccination is recognised as a key facilitator to improving coverage. As the COVID-19 vaccination programme evolved and inequities in coverage became more apparent, approaches to increasing access were considered to maximise convenience.

A range of approaches to increasing access are deemed successful in GM and are evidence-based for the underserved groups (Table 3).

Increasing the number of vaccination clinics, through bespoke clinics and mobile vaccination, were central to the GM targeted response during COVID-19, with the approach having been developed rapidly during the pandemic rather than used previously.

Where data suggested low coverage, bespoke clinics were often set up, focused on specific groups including ethnic minority populations and areas of social deprivation. Clinics were often situated in small community venues and, later in the pandemic, mobile clinics (vaccination buses) were used. In some localities, homeless populations, who had been given accommodation during the pandemic, were offered vaccinations in these venues.

The size and scope of bespoke vaccine activity varied between localities, with more diverse areas generally offering a wider range/larger number of bespoke clinics. Targeted clinics could also allow the environment to be tailored: an example noted was the use of primary

care sites with side rooms used as 'quiet clinics' or 'calm clinics' for people with learning disabilities and the use of one vaccinator only, to reduce crowding. Most pop-ups and mobile options offered a walk-in policy without appointments.

In localities with more diverse populations (e.g., with wide ranging age differences, higher levels of social deprivation or digital exclusion), where language barriers and/or lack of trust in public authorities could be prevalent, a substantive level of community engagement was needed to plan more flexible offerings and address unequal coverage. Many pop-up clinics were increasingly implemented in conjunction with community groups or community/religious leaders, to help promote clinics and address community concerns. The siting of mobile or 'pop-up' clinics was reported to be enhanced when planned alongside meaningful engagement/communication and said to be at risk of failing without appropriate communications.

It is important to consider who is undertaking local engagement activities. For example, in one locality a market research agency was employed to door knock in a particular community to increase vaccine coverage. In hindsight, it was felt that this approach failed to engage unvaccinated residents on the doorstep, many of whom reported that they had already been vaccinated. It was suggested that residents were providing 'socially desirable' answers to avoid conversations with untrusted personnel, and they may have felt more comfortable expressing themselves had the door knocking been led by individuals recognisably from their own community. In other areas, the deployment of other types of staff/volunteers, such as military personnel for engagement purposes were judged as culturally inappropriate in some communities.

3.1.4 Booking systems

A range of booking systems were utilised to increase access, including:

- Flexible booking systems, for example not requiring an NHS number
- Out-of-hours or other flexible appointment systems
- Targeted invitation or booking systems
- Follow-up of did not attends

In one locality, a bespoke, local vaccination booking service was designed for all residents, based on knowledge of the population gleaned from previous public health interventions, and a perception that residents preferred local services with recognisably local characteristics. We have noted that the rapid review supported tracking and triage of vaccination status as a component of an intervention for underserved groups. The review also identified some evidence that more centralised vaccination booking, and reminder systems may be more effective than ones based on individual primary care practices for routine vaccinations.

Table 3. Summary of vaccination access approaches with some evidence for impact on vaccine coverage alongside examples of activity in GM.

Approaches to improve vaccination access in underserved groups (based on rapid review)	Examples of linked activities in GM identified through surveys and interviews
<ul style="list-style-type: none"> • Vaccination during home visits (by HCP or community health workers) • Pharmacist-initiated vaccination programmes • Additional vaccination clinics (part of multicomponent intervention) 	<p>Home visits: Vaccine access was facilitated across localities during COVID-19 by home visits to housebound individuals and people with learning or physical disabilities. In some areas, care home workers were targeted in a similar way after concerns of low coverage in this group.</p> <p>Pharmacist initiated visits: Vaccine access was facilitated across localities via pharmacist-initiated vaccination programmes. This community pharmacy-delivered outreach for socially deprived communities and ethnic minorities was considered successful across areas using this approach, and this strategy is also evidence-based.</p> <p>In one locality, three community pharmacy clinics offered bookable appointments, and another locality provided additional coverage by a community pharmacy in conjunction with a bordering locality.</p> <p>Increased clinics (often in the form of pop-up clinics with additional community engagement). These clinics were recorded as targeting a number of groups including:</p> <ul style="list-style-type: none"> ○ Ethnic minority and faith-based groups ○ Homeless populations ○ Migrant populations ○ Sixth formers ○ Care home workers ○ Communities living in areas of high deprivation ○ People with learning disabilities

3.1.5 Engagement and communication can be impacted by national activities, and this may require specific local focus

Government messaging was reported to have influenced public perceptions on the need to be vaccinated. A lack of consistent central messaging was identified as problematic by

respondents and was felt to have contributed to lower vaccine coverage amongst certain groups. This is also an area where community engagement was deemed to be important in some cases to clarify and shape communication to make it fit for local purpose. When guidance and messaging changed, respondents reported difficulties persuading groups of the validity of these changes. For example, pregnant women were initially advised not to have the COVID-19 vaccination and even though guidance has since changed, respondents reported that these initial messages were now entrenched in the public perception and difficult to alter.

3.1.6 Issues with vaccine coverage are linked to wider public health issues and achieving change in the short term is challenging

Some localities, whilst having undertaken extensive engagement activities around vaccination, have lower coverage, relative to other areas in GM. These figures do not reflect inactivity but rather highlight the complex barriers to engagement in local populations and groups that are the result of longstanding and interwoven social issues. Dealing with these complex issues required on-going, system level support, investment and incentivisation.

3.1.7 Community engagement activities are resource intensive

While community engagement and feedback were seen as essential for shaping vaccination offers for diverse populations, it was described as resource-intensive and costly. Working to balance inequalities in coverage was said to generally require more resource for less return, echoing the need for ‘proportionate universality’ in services, as noted in the recent **Build Back Fairer in Greater Manchester: Health Equity and Dignified Lives** report. This means funding needs to be proportionate to the scale of a problem and universal in reach: meaning more funding is likely to be required in areas of high deprivation.³

3.1.8 On-going vaccination coverage needs and areas for potential activities in GM

One locality noted an unmet need regarding vaccination-related engagement activities in Muslim and Jewish communities. Other locality noted wider groups including people with learning disabilities, Muslim, Black African, young adults (18 to 35), Pakistani, Bangladeshi, Pentecostal or Orthodox Christian, pregnant women, migrants and refugees, homeless people, those in particular areas of low deprivation, Gypsy & Traveller communities, and social care staff.

We asked respondents about groups in their locality that have unmet vaccination access needs, for further exploration. Responses included people learning disabilities, young adults (18 to 35), Eastern European communities, sex workers, those areas of low deprivation and Gypsy & Traveller communities.

³ Institute of Health Equity. Build Back Fairer in Greater Manchester: Health Equity and Dignified Lives. Accessed 8th July 2022.

At the time of data collection, responses suggested that there is scope for further engagement activities around vaccination in several locality.

3.2 Using Data

Key insight 5: Targeted vaccination activities should be guided by appropriate quantitative and qualitative data.

Across locality in GM, the availability of good quality data was noted as a major facilitator in identifying areas with lower vaccination coverage.

Respondents emphasised however, that data need to be sufficiently sensitive and at the right level e.g., data on nationality, language and religion in addition to ethnicity, may better describe communities and populations, in order to detect and monitor changing patterns in vaccination coverage and identify areas for potential targeted activity.

Respondents also noted that numerical data alone offers a partial information to inform further vaccination coverage work. A corresponding understanding of context is required to undertaken barriers to vaccination. Combining quantitative insights with more contextual 'qualitative' data may enhance understanding of local need and better shape targeted vaccination delivery.

It was recognised that, ideally, the success of targeted activity could also be tracked using routine data, but there was generally a view that it was often difficult to map changes in vaccine coverage data to targeted strategies/activities, because time and resources for such evaluation were scarce within the system.

Successful approaches supporting targeted vaccination activity in GM: Use of area data on vaccination coverage

Data were a vital part of shaping the targeted response to COVID-19 vaccination coverage in GM.

“Data has been very important...the level of granularity we had, meant we had a good understanding of vaccine coverage across different communities and that really helped in directing our engagement work... that data was really valuable.”

The need for very granular information, sometimes down to street level, to explore the need for 'hyper' local activities was also noted and was undertaken in some areas.

“There are some barriers around data – we don’t get individual data and have to infer from the data we get what’s going on. It captures ethnicity reasonably well, but it doesn’t capture faith, so it wouldn’t pick up Polish nationality for example. So that means we struggle with visibility on uptake in some communities.”

The need for community engagement and partnership working was recognised as being an important route to more ‘qualitative insights’ to allow more meaningful interpretation and response to the data being produced for teams.

“You’ve got to have a mixed methods type approach. You have to start with the data to say where the problems are and then go and speak to people to figure out what the problems are and what you should do about it. Having the data is really important to make sure we are responding to where the need is rather than where the perceived need is. You have to iterate between the qualitative engagement and back to the data as well.”

3.3 Wider contextual issues that impact on vaccination activities

Key insight 6: Continued partnership working should be supported in Greater Manchester

3.3.1 Building and developing organisational partnerships

The pandemic and urgency of the vaccine programme was considered a catalyst to developing existing relationships between organisations. Across all participating locality we collected data from, there were many examples of new relationships forming, for example: within primary care (groupings of primary care networks (PCNs) or GP federations working together); between primary and secondary care; between NHS and local authority teams; and with VSCE organisations.

Despite reports of an overall ‘spirit of collaboration’ between professional organisations such as PCNs and local authorities during the COVID-19 vaccination programme, some challenges were highlighted. Respondents with public health equity roles, generally located within Local Authorities noted that as the vaccination programme was PCN-led it was often difficult to influence more targeted vaccination activity. It was felt that different parts of the health and care system had different priorities, with PCNs focused on footfall and numbers of vaccinations and public health focused on achieving vaccine equity.

Across GM, whilst mass vaccination centres and primary care-based activity formed the bulk of vaccination delivery, the need for activities targeted at specific communities and

populations was quickly recognised. In general, local insights suggest that building or enhancing partnerships with community organisations and groups was crucial to improving vaccination coverage in underserved groups.

It is important that the relationships that have been developed or strengthened during the past three years, catalysed by the pandemic, are not lost. These are a valuable asset to Greater Manchester and part of increasing community resilience.

Successful approaches to targeted vaccination coverage: Partnership working between professional organisations in Greater Manchester

More integrated ways of working have been prompted by the pandemic and vaccination programme and it was felt that these opportunities could be capitalised on for the future. The engagement catalysed by the pandemic was felt to require ongoing effort to ensure gains were not 'lost'.

"That goodwill and relationship and unblocking barriers, why can't we use that going forward for more of the other challenges we have? The goodwill and support and doing the right thing and people did put down their organisational barriers, working for a neighbourhood or [...] that mind-set really, really helps and you can do things more efficiently and quickly because people don't do 'computer says no.'"

3.3. Wider contextual issues that impact on vaccination activities

Key insight 6: Continued partnership working should be supported in Greater Manchester

3.3.1 Building and developing organisational partnerships

The pandemic and urgency of the vaccine programme was considered a catalyst to developing existing relationships between organisations. Across all participating locality we collected data from, there were many examples of new relationships forming, for example: within primary care (groupings of PCNs or GP federations working together); between primary and secondary care; between NHS and local authority teams; and with VSCE organisations.

Despite reports of an overall 'spirit of collaboration' between professional organisations such as PCNs and local authorities during the COVID-19 vaccination programme, some challenges were highlighted. Respondents with public health equity roles, generally located

within Local Authorities noted that as the vaccination programme was PCN-led it was often difficult to influence more targeted vaccination activity. It was felt that different parts of the health and care system had different priorities, with PCNs focused on footfall and numbers of vaccinations and public health focused on achieving vaccine equity.

Across GM, whilst mass vaccination centres and primary care-based activity formed the bulk of vaccination delivery, the need for activities targeted at specific communities and populations was quickly recognised. In general, local insights suggest that building or enhancing partnerships with community organisations and groups was crucial to improving vaccination coverage in underserved groups.

It is important that the relationships that have been developed or strengthened during the past three years, catalysed by the pandemic, are not lost. These are a valuable asset to Greater Manchester and part of increasing community resilience

Successful approaches to targeted vaccination coverage: Partnership working between professional organisations in Greater Manchester

More integrated ways of working have been prompted by the pandemic and vaccination programme and it was felt that these opportunities could be capitalised on for the future. The engagement catalysed by the pandemic was felt to require ongoing effort to ensure gains were not 'lost'.

"That goodwill and relationship and unblocking barriers, why can't we use that going forward for more of the other challenges we have? The goodwill and support and doing the right thing and people did put down their organisational barriers, working for a neighbourhood or [...] that mind-set really, really helps and you can do things more efficiently and quickly because people don't do 'computer says no.'"

3.3.2 Supporting your health workforce

An adequate workforce to deliver vaccinations was crucial; this varied between localities and was often dependent on existing structures and systems. Most areas experienced some difficulty due to pre-existing workforce shortages that were exacerbated during vaccine roll-out. Flexibility in the system was important in overcoming workforce challenges and localities found a range of solutions, e.g., sharing/re-deploying staff across sites, organisations or geographical boundaries, bringing in volunteers and retired staff, using part-time staff to cover extra sessions, training new vaccinators in pre-existing training hubs. Community pharmacy staff were particularly mentioned as crucial in easing the pressure on general practice.

Across localities, respondents emphasised the exceptional levels of good will and dedication of staff who had worked extraordinarily hard to deliver vaccine programmes in the pandemic crisis. While some areas had sufficient flexibility to deliver the vaccination offer without over-burdening staff, more commonly it was stressed that this level of effort was unsustainable because staff could not work in exceptional circumstances indefinitely. Neither could vaccination services rely on volunteers/retirees and respondents emphasised that systemic change was needed to future-proof the workforce.

3.3.2 Resources and infrastructure

Availability of resources and existing local infrastructure were key factors influencing the models and approaches to vaccination activity adopted by different localities. Many NHS respondents stated that local councils were supportive through the provision of vaccination sites (e.g., by opening previously closed sports and leisure facilities), but that placement of sites was often dictated by availability and suitability (in relation to logistics such as storage and waiting area space). In one PCN area, no suitable indoor facilities could be identified, which led to the need to adopt a drive-through model.

As sites and clinics were being set up from scratch, respondents could not draw on existing IT infrastructure. In many areas, the health system had supported infrastructure costs (i.e., broadband, phones, IT equipment), but there were reports of equipment either not working, arriving late or IT systems crashing as more vaccination sites came online. Low or no interoperability between systems was also an issue and repeated problems experienced with the national vaccination booking system (e.g., local sites not always visible on the national system). In some cases, this led to the creation of local booking systems as an alternative.

3.3.3 External policies and procedures

NHS England set policy and directives for the vaccination programme centrally, but the speed with which localities needed to adopt these sometimes meant that decisions were based on convenience rather than evidence. Initial guidance suggested that vaccine delivery should take place via a PCN footprint, which led to concerns about workforce and resource pressures. Instead, many localities used larger vaccination groupings (e.g., multiple PCNs, GP Federations) in order to limit the effect on PCNs and GP practices.

Across several localities, respondents reported that the planning and delivery of vaccination clinics was impeded by rapid national policy announcements from central government through media briefings, meaning services were often inundated with calls and queries. Often vaccination centres had no warning of these announcements and found themselves without any underpinning guidance/plans to meet the additional demand that had been triggered. Guidance would usually follow several days after an announcement.

All localities reported some logistical barriers to effective vaccine roll-out including vaccine supply (e.g., short notice or inconsistent supply/delivery, or over supply leading to wastage),

shelf-life restrictions, concerns about vaccine stability/fragility and transporting restrictions (e.g. difficulties taking Pfizer to the housebound, care home residents and homeless). These issues became less of a challenge later in the vaccination programme, when vaccine shelf-life increased and staff became more confident in their roles.

There was also concern that the central focus on vaccine volume and rapidity (e.g., the winter booster programme) made addressing vaccine inequity more difficult at locality level, with resources needing to be directed elsewhere. Payment structures for the vaccination programme were also said to privilege vaccination roll-out at scale and pace, with equitable vaccine coverage as a secondary issue.

3.4 Implementing community engagement: an implementation framework and case study

3.4.1 Context

Oldham is one of 10 localities that form of Greater Manchester (GM). In 2017, Oldham had a population of 233,759 people, with on average a higher proportion of non-White ethnic minority residents (22.5%) compared with GM as a whole (16.3%), and England (14.6%). The largest ethnic minority groups recorded in Oldham are those with Pakistani (10.1%) and Bangladeshi (7.3%) heritage. Oldham's population is relatively young with 22.5% of residents aged under 16 while 15.7% are aged 65 or over. Oldham is an area with levels of deprivation that are ranked among the highest in England. In 2019 four areas within Oldham were in the top 1% of most deprived areas in England.

Early on in the COVID-19 vaccination programme, Oldham was recognised nationally as an area that had low vaccination rates and was concomitantly experiencing high levels of morbidity and mortality. In response a range of targeted vaccination activities were implemented. We conducted a case study to further explore insights generated in earlier project work. We aimed to link learning to wider theories of change via the adaption of a relevant logic model that could be used to inform future service planning.

To gather these data we interviewed individuals involved in community engagement activities in the Oldham locality during the COVID-19 pandemic. People were identified via key contacts based at the Local Authority and a third sector organisation and invited to take part in semi-structured interviews. Data collection was informed by a topic guide based on the Consolidated Framework for Implementation Research (CFIR)⁴ and insights generated from the previous work around targeted vaccination activities across Greater Manchester. An rapid analyses guided by the implementation was undertaken. Data was then triangulated with data collected across the project.

⁴ Damschroder, L. J., Reardon, C. M., Widerquist, M. A. O., & Lowery, J. (2022). The updated Consolidated Framework for Implementation Research based on user feedback. *Implementation Science*, 17(1), 1-16.

Proportionate ethics approval from the University of Manchester was obtained for this work.

3.4.2 Findings

An overview of community engagement activities in Oldham and links to project insights:

Using community champions and was perceived to help align targeted vaccination services to better meet the needs of community members (key insight 2). In terms of key insight 3, vaccination activities in settings that community members were familiar with and delivered by people they trusted, were reported to improve vaccination uptake. Additionally, we found that funding for community engagement activities was vital as it allowed for training for community champions, and involvement of a wide variety of actors, which aligns with key insight 4. Various interview participants mentioned the importance of data, as this allowed them to prioritise their activities and funding to help those who needed it most. Finally, the importance of partnerships between community leaders, the council, VCSE organisations and organisations within the health system were identified.

Key activities to consider when supporting community-informed targeted vaccination activities: An implementation framework.

We mapped project data to an existing, relevant framework developed around community health worker programmes (Figure 1)⁵. In developing this implementation framework, we aimed to make explicit the different factors, outcomes and impacts our data flagged for consideration when supporting a programme of community-informed targeted vaccination activities. The framework can subsequently aid programme designers and implementers. Below we linked this framework to our Oldham case study to illustrate key model elements.

Contextual factors:

Contextual factors describe the situation in which a change, in this case to how targeted vaccination activity is designed and implemented, needs to happen. Only by acknowledging, understanding and responding to specific contextual issues can programmes be appropriately shaped. Examples of contextual factors relevant to targeted vaccination noted in Oldham were existing lack of faith in healthcare provided, existing misconceptions around COVID-19 vaccination, diverse communities, over-crowded housing, deprivation, cultural contextual factors including religious beliefs, tight-knit communities, presence/absence of community leaders and distance from vaccination centres.

⁵ Naimoli JF, Frymus DE, Wuliji T, Franco LM, Newsome MH. A community health worker "logic model": Towards a theory of enhanced performance in low- and middle income countries. *Hum Resour Health*. 2014;12:56.

System factors:

System factors relate to both the wider local health system and community system in which this sits. When planning feasible targeted community-informed vaccination activities – clarity on available resources in health systems and the targeted communities is important. These resources include people but also wider community assets, such as buildings and other infrastructure that are required for vaccination delivery. Recognition is also required of relevant, existing governance structures, relationships and networks - including knowledge of where development is required as well as leveraging on existing structures.

In Oldham, we identified important governance factors at both health system and community system levels that played an important role in a community-informed targeted vaccination response. Examples of governance factors included relationships and data sharing between health system actors, like public health professionals, general practitioners, healthcare providers, pharmacies, and the council. Additionally, good networks between the council and the district team already existed prior to COVID-19 which allowed for smooth running of the programmes.

Another health system factor was information, as provided by health system actors, which informed those on the ground about the latest COVID-19 data and guidance. Furthermore, we identified the importance of sustained funding for community engagement activities.

At the community system level, the importance of social belonging and established buildings and places where community members know the staff members was identified.

Programme level factors:

Programme level factors describe the components that form the programme of community-informed activities to support targeted vaccination activity.

In Oldham, various factors were identified at a programme level, both technical support factors, including the presence of a key figure in the council's community engagement team which helped with design of activities. Developing partnerships supported collaboration – particularly through communication with community champions. A particular gap in services was identified for those working full-time, which led to the implementation of vaccination clinics out of hours. Furthermore, messages were translated into different languages to accommodate those who did not speak or read English and additionally, community champions helped to identify various ways of communicating with community members, including music and video messaging. Another design factor that shaped the programme was that appointments didn't always seem to work due to too much time to consider vaccination or due to life circumstance, so being able to walk in, and go with neighbours, was found to be helpful.

Monitoring and evaluation was an important factor as communities were prioritised based on routinely collected data. Additionally, data about the door-knocking activities was fed back to those higher up, with the help of tablets, forms and debriefs.

In terms of social support, the building of relationships between various actors, including the council, VCSE organisations and community champions played a very important role in achieving the community engagement required to shape targeted vaccination activity and subsequent vaccination outcomes.

Outputs:

Outputs are the proximate measures of performance of the innovation, that is the anticipated changes to process and activities that in turn lead to changes in outcome and subsequent impacts. In Oldham, service delivery was perceived as a target output with the aims of delivery being better tailored to local need. Furthermore, the programme was deemed successful in increasing community responsiveness to services, as well as increased their knowledge about both vaccinations.

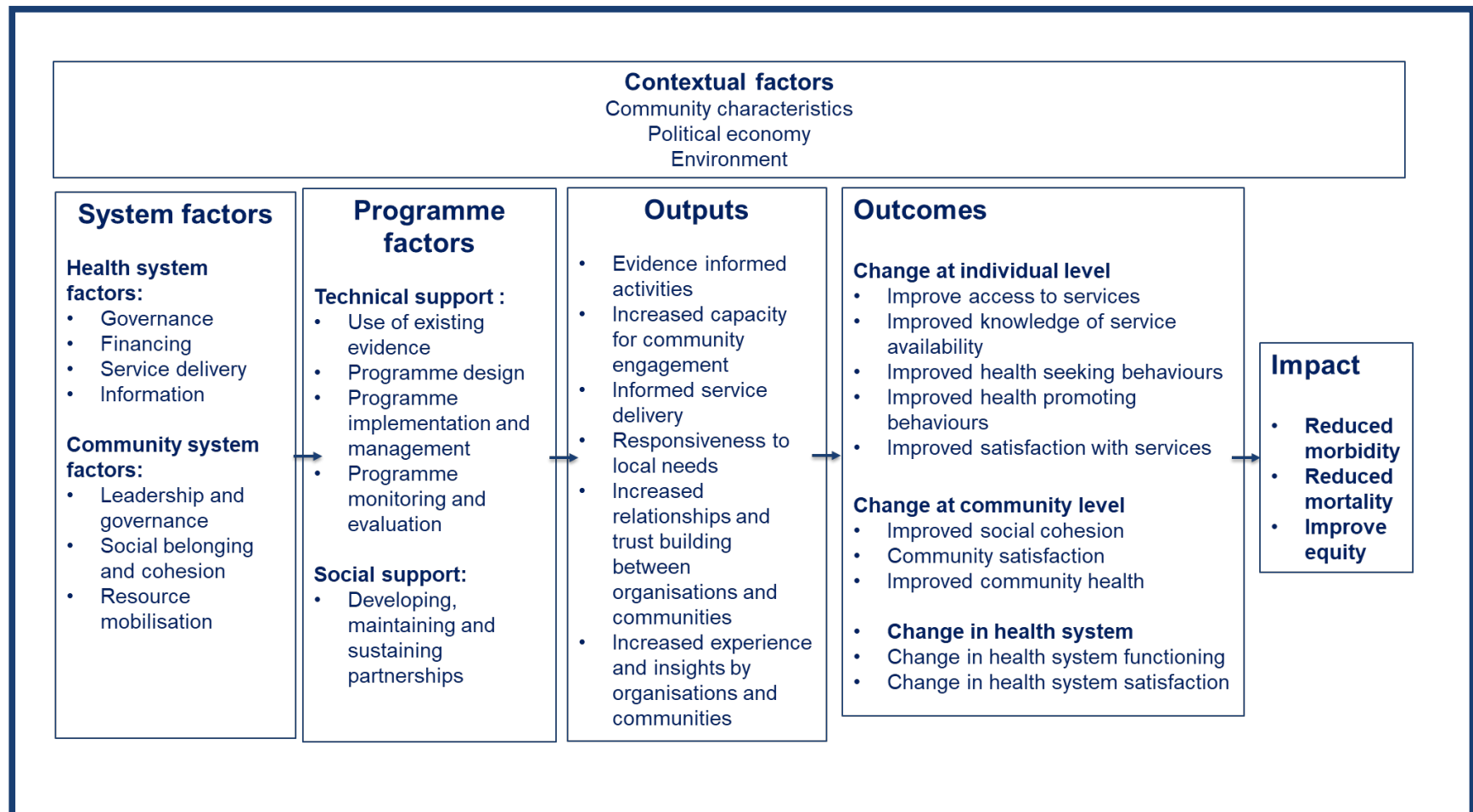
Outcomes and impact:

Outcomes are the intermediate measures attributable to the programme of community-informed targeted vaccination activities: separated into change at individual level, community level and health system level.

In Oldham, individual target outcomes included improved knowledge of service availability and improved access, facilitated by services being available in well-known places and provided by trusted people. Health seeking behaviours and satisfaction with services were also a target outcomes and perceived to have improved. These improvements were considered to have been mediated by community members feeling listened to and taken seriously. At the community level health was considered to have improved with a decline in COVID-19 rates in targeted communities. There was also a strong sense from those interviewed that health system functioning improved at health system level due to better knowledge of what was happening on the ground. This led to increased engagement with communities and the development of several new programmes, including 'Don't Trash Oldham, Holiday Activities with Food and an anti-social behaviour operation, amongst others. This expansion of public health activities that were leveraged from partnerships and knowledge developed during the pandemic are an important legacy of community engagement leadership and activities in Oldham.

In terms of impact, the community-informed targeted vaccination activity was perceived to have been important in engagement programmes led to reduced morbidity and reduced mortality, as well as to improved equity due to better access and more targeted availability of services.

Figure 1: Implementation Framework to support a programme of community-informed targeted vaccination activities (Adapted from Naimoli JF et al⁶)



4. References

1. Watkinson RE, Williams R, Gillibrand S, Sanders C, Sutton M. Ethnic inequalities in COVID-19 vaccine uptake and comparison to seasonal influenza vaccine uptake in Greater Manchester, UK: A cohort study. *PLoS Med*. 2022 Mar 3;19(3):e1003932. doi: 10.1371/journal.pmed.1003932
2. NHS England. Maximising vaccine uptake in underserved communities: a framework for systems, sites and local authorities leading vaccination delivery. Accessed 8th July 2022. <https://www.england.nhs.uk/coronavirus/publication/maximising-vaccine-uptake-in-underserved-communities-a-framework/>
3. Institute of Health Equity. Build Back Fairer in Greater Manchester: Health Equity and Dignified Lives. Accessed 8th July 2022. <https://www.instituteofhealthequity.org/resources-reports/build-back-fairer-in-greater-manchester-health-equity-and-dignified-lives/build-back-fairer-in-greater-manchester-main-report.pdf>
4. Damschroder, L. J., Reardon, C. M., Widerquist, M. A. O., & Lowery, J. (2022). The updated Consolidated Framework for Implementation Research based on user feedback. *Implementation Science*, 17(1), 1-16.
5. Naimoli JF, Frymus DE, Wuliji T, Franco LM, Newsome MH. A community health worker "logic model": Towards a theory of enhanced performance in low- and middle income countries. *Hum Resour Health*. 2014;12:56. <https://doi.org/10.1186/1478-4491-12-56>

For more information, please contact:

Dr Ross Atkinson
ross.atkinson@manchester.ac.uk

Produced by NIHR Applied Research Collaboration Greater Manchester,
October 2023.

The information in this report is correct at the time of printing.

