Public Health England

Protecting and improving the nation's health

PHE Immunisation Inequalities Strategy

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Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-leading science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health and Social Care, and a distinct delivery organisation with operational autonomy. We provide government, local government, the NHS, Parliament, industry and the public with evidence-based professional, scientific and delivery expertise and support.

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Executive summary

Background

Health inequalities are systematic differences in health status or in the distribution of health resources between different population groups that are unfair or avoidable. Health inequalities in England exist across a range of dimensions or characteristics, including some of the 9 protected characteristics of the Equality Act 2010, socioeconomic position and geography. Reducing inequalities should mean that everyone has the same opportunities to lead a healthy life, no matter where they live or who they are. Both NHS England and PHE have a remit in law to have a due regard to the need to reduce health inequalities, and to promote equality of opportunity.

Immunisation is one of the most cost-effective public health interventions. Childhood immunisation in particular helps to prevent disease and promote child health from infancy, creating opportunities for children to thrive and get the best start in life. Equality in immunisation is an important way to address health inequalities. Ensuring that coverage is not only high overall, but also within underserved communities is also essential for disease control and elimination strategies.

PHE recently published a Health Equity Audit (HEA) of the national immunisation programme. In the HEA, we concluded that the national immunisation programme has achieved high coverage overall in the population. However, we have demonstrated that avoidable inequalities in vaccination still exist within some population groups. There may be complex reasons behind the occurrence of inequalities in vaccination, these reasons may be specific to a particular programme, and are frequently influenced by local factors. We developed a social-ecological model which can be used to identify and address the factors which may lead to inequalities in immunisation. This demonstrated that community, institutional, and policy factors, as well as the health beliefs and knowledge of individuals and within families may lead to inequalities in vaccination. Finally, we identified limitations in terms of available data and evidence to describe and monitor the situation, and to explain why inequalities may have occurred.

Strategy development

The HEA made recommendations to narrow inequalities in immunisation uptake. This document takes forward the HEA recommendations by developing a national strategy with an emphasis on both national and local actions. This strategy was also informed by a stakeholder workshop on inequalities in immunisation attended by local, regional and national stakeholders.

Vision, aims, and objectives

Our **vision** is that all immunisations can be accessed easily and equitably by all those who are eligible, and that everyone makes an informed choice about immunisation based on reliable information.

Our **aim** is to ensure services are designed and delivered in ways that meet the needs of different groups in society, maximising the health benefits of the national immunisation programmes and reducing health inequalities

Our **objectives** are to:

- provide those responsible for the delivery and commissioning of immunisations with the evidence and tools that they need to reduce inequalities in immunisation
- provide system leadership to tackle inequalities in immunisation by communicating the need for action, providing evidence and guidance to inform commissioning and policy, and by working with partners to build the evidence base about what works

Our plan to meet these objectives

We have developed the following plan to meet our objectives

1. Develop locally relevant data and intelligence resources to support needs assessment.
2. Share new practice and evaluation findings between stakeholders to develop the evidence base.
3. Contribute to system leadership regarding inequalities in immunisation.
4. Use existing data sources to develop a routine report to monitor inequalities in routine vaccination coverage.

Template local action plan

Developed alongside the strategy, the local action plan (LAP) consists of a series of steps, which are designed to help local teams systematically assess health inequalities related to immunisation programmes and identify action that they can take is available here.

Background and rationale

Immunisation is one of the most successful public health interventions, allowing the prevention and mitigation of disease in millions of people every year. Immunisation reduces morbidity and mortality, and is highly cost-effective, even cost-saving. By preventing the transmission of communicable disease, immunisation not only benefits the vaccinated individual but also those who are unvaccinated by means of the herd effect. Immunisation has enabled the global eradication of smallpox, and the elimination of once-common childhood diseases like measles and rubella from some regions of the world.

The National Immunisation Programme

Programme content and structure

The National Immunisation Programme provides protection from 19 diseases to the population across the life course. Most vaccines in the programme are offered to everyone in a particular age group, while others, such as the tuberculosis vaccine Bacillus Calmette-Guérin (BCG), are targeted to high risk groups. As of Spring 2019, there were 14 universal and 5 selective vaccines; the most recent immunisation schedule can be found here https://www.gov.uk/government/publications/the-complete-routine-immunisation-schedule.

Vaccination programme policy

The Joint Committee on Vaccination and Immunisation (JCVI) is the independent statutory Departmental Expert Committee that advises the Secretary of State for Health on the provision of vaccination and immunisation services. The JCVI considers the epidemiology of the disease, vaccine efficacy, safety, impact and cost-effectiveness, and makes recommendations regarding immunisation strategy to the Department of Health and Social Care (DHSC).

Programme delivery

Immunisation services are commissioned by NHS England, and provided mostly by general practices, local immunisation teams and pharmacists. Public Health England (PHE) Screening and Immunisation Teams (SITs) within NHS England support local implementation. PHE also provides national guidance and standards, based on JCVI recommendations, along with surveillance and analysis of coverage. Local Authority Directors of Public Health have a scrutiny function over the local delivery of the

immunisation programme, and have a responsibility to work to improve the health of their populations.

The immunisation programme is mainly delivered through primary care. Some programmes receive support from specialist services, for example maternity services supporting the delivery of prenatal immunisations. The adolescent immunisation programmes are school-based.

Health Equality and immunisations

Health inequalities

Health inequalities are systematic differences in health status or in the distribution of health resources between different population groups that are unfair or avoidable [1]. Health inequalities in England exist across a range of dimensions or characteristics, including some of the 9 protected characteristics of the Equality Act 2010, socioeconomic position and geography [2], see below.

Reducing inequalities should mean that everyone has the same opportunities to lead a healthy life, no matter where they live or who they are. Health inequalities are usually driven by multiple factors including: wider societal structures (sometimes referred to as ‘the causes of the causes’) for example, differences in educational attainment or income between groups; structural and other factors may influence or lead to unhealthy behaviours such as smoking, drinking and poor diet; unequal access to high quality services, or unequal experience of services.

The dimensions of inequality and protected characteristics are as follows:

- age
- sex
- gender reassignment
- geography including rural/urban split
- socio-economic status (SES) including deprivation, employment, income and occupational status, educational attainment
- ethnic origin
- religion
- disability and health status including learning and physical disabilities, mental and chronic physical illnesses
- underserved groups including travellers, migrants, prisoners, looked after children (LAC), homeless
- parental factors including lone parents, family size, parental age,parental illness;
- sexual orientation
- marriage and civil partnership

A key distinction is that inequalities are differences in health or distribution of health resources that are unfair or avoidable. It follows that though certain health services may not be offered to the entire population equally, for example the selective vaccination programmes described above, these would not necessarily be considered to be inequitable programmes, provided the differences in eligibility can be justified. With limited resources, it is not justifiable to vaccinate the entire population against each vaccine-preventable disease, and so the balance of risk and benefit is carefully considered when deciding which groups should receive vaccine.

Equality legal duties and immunisation

There is a requirement under the Public Sector Equality Duty section of the Equality Act 2010 for all public authorities to promote equality of opportunity; preventing discrimination, harassment and victimisation and fostering good relations between the different protected characteristics groups. Additionally, under the Health and Social Care Act 2012, both NHS England and PHE have a remit to reduce inequalities.

Specifically for immunisations, NHS England has a legal duty to offer immunisation to "hard to reach groups, for example gypsy traveller children or looked after children, who may require special and specific arrangements;" and people "moving into the country from abroad who have incomplete or unknown vaccination status." The core service specification for the National Immunisation Programme drawn up between NHS England and PHE has reduction in health inequalities as a key objective in delivery of the programme [3]. Exclusion of people with protected characteristics should be subject to scrutiny and justification. Providers should be able to show that services have no barriers to access for groups defined by the Equality Act 2010 and must optimise access for underserved populations. Local contracts are required to address reduction in variation across communities and population groups. SITs, local authorities and providers must identify and address inequalities at local level.

The importance of equitable immunisation

High immunisation rates are key to preventing the spread of infectious disease, complications and possible early death among individuals. Childhood immunisation in particular helps to prevent disease and promote child health from infancy, creating opportunities for children to thrive and get the best start in life. Giving every child the best start in life is recognised as a key intervention to narrow health inequalities [4].

Groups with a higher risk of disease, or more severe disease, benefit even more from vaccination; ensuring high coverage in these groups can narrow inequality in disease outcomes.

Herd immunity, the indirect protection of non-immune individuals from infection due to interruption of disease transmission by immune (vaccinated) members of their surrounding population, extends the benefits of the national immunisation programme to unvaccinated individuals. Therefore, herd protection intrinsically reduces disease inequalities arising from for example, unequal healthcare access or when individuals cannot receive vaccination for medical reasons. However this protective effect requires a threshold level of coverage. If unvaccinated individuals are clustered in specific groups this will lower coverage and decrease herd immunity, making outbreaks more likely in these groups, and threatening transmission to the wider non-immune population. Therefore ensuring that coverage is not only high overall, but also within underserved communities is essential for disease control and elimination strategies [5].

Health Equity Audit of the national immunisation programme

PHE recently published a Health Equity Audit (HEA) of the national immunisation programme.

Routine vaccination coverage is high, but avoidable inequalities in coverage remain

In the HEA, we concluded that the UK National Immunisation Programme works to identify and address inequalities, and that there are dedicated systems for data collection, and specific research into inequalities. However, the HEA also identified limitations in terms of available data and evidence to describe and monitor the situation, and to explain why inequalities may have occurred.

In general, coverage of routine vaccinations was high. However, we also demonstrated that avoidable inequalities in vaccination still exist within some population groups, and that likelihood of complete and timely vaccination may still be influenced by where people live, their socioeconomic status, and their ethnic group. Vaccination coverage could also be significantly lower in vulnerable and under-served populations such as people with chronic illness or disabilities, migrants, Travellers and Roma, and looked after children. Extra support may also be needed for children of lone parents, and for parents with large families. There may be complex reasons behind the occurrence of inequalities in vaccination, these reasons may be specific to a particular programme, and are frequently influenced by local factors.

What are the determinants of inequitable immunisation, and what are the opportunities for intervention?

We developed a social-ecological model which can be used to identify and address the factors which may lead to inequalities in immunisation (see figure below). This demonstrated that community, institutional, and policy factors, as well as the health beliefs and knowledge of individuals and within families may lead to inequalities in

vaccination. These findings correspond well with the evidence that locally designed, multi-component interventions which facilitate action and address barriers to uptake can effectively reduce inequalities in coverage.

Recommendations from the Health Equity Audit

Recommendation 1: develop a national vaccinations inequality strategy, and provide a template local action plan to enable best practice.

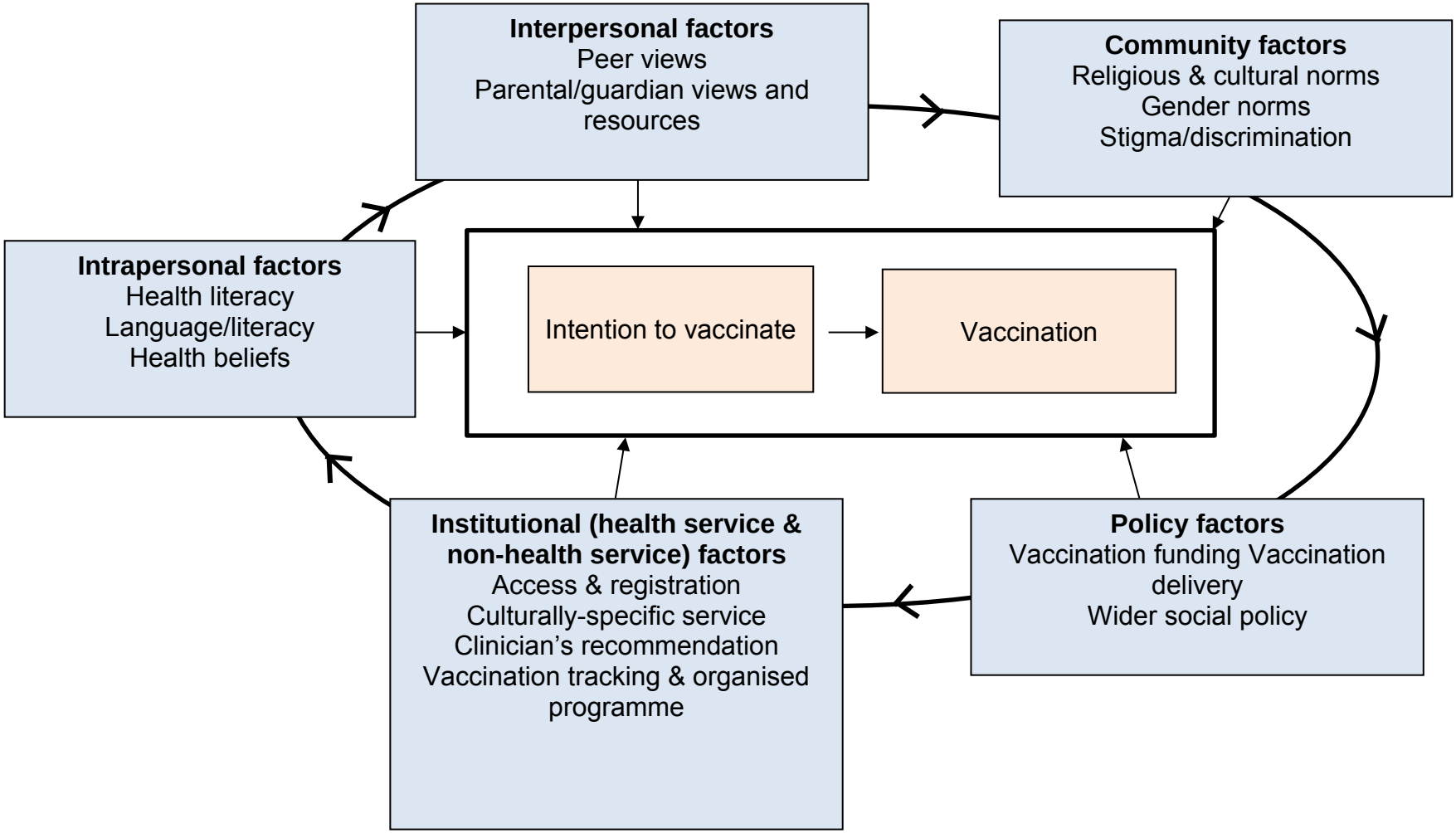
Recommendation 2: develop locally relevant data and intelligence resources to support needs assessment, for example by collaborating with other organisations to link data to better characterise inequalities.

Recommendation 3: share new practice and evaluation findings between stakeholders to develop the evidence base.

Recommendation 4: use existing data sources to develop a routine report to monitor inequalities in routine vaccination coverage for key indicators, at national and regional level.

Recommendation 5: continue national level leadership and support to address inequalities.

Social-ecological model of factors influencing inequality in vaccination uptake, or low vaccination uptake in specific populations in high income settings



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Our plan to meet our objectives

This document takes forward the HEA recommendations, particularly HEA recommendation one, by developing a national strategy with an emphasis on both national and local actions. The strategy was also informed by a stakeholder workshop on inequalities in immunisation attended by local, regional and national stakeholders (see acknowledgements for more information).

The strategy recognises the findings in the HEA that there may be complex reasons behind the occurrence of inequalities in vaccination, that these may be specific to a particular programme, and are frequently influenced by local factors. Therefore, the following strategy recommendations are proposed to provide teams with the tools required to assess local needs and develop evidence-based interventions to achieve change (see the template local action plan outline below, and recommendation one), and then share their results to develop the evidence base (see recommendation 2). Nationally, the strategy ensures continued leadership and advocacy for action (see recommendation 3), and that progress is monitored (see recommendation 4).

1. Develop locally relevant data and intelligence resources to support needs assessment

At the national level, the PHE immunisations team will develop a resource setting out datasets that can be used to better characterise inequalities in vaccination, for example by data linkage, particularly in groups where there is currently an evidence gap. The content will be informed through discussion within the national team, and by contributions from stakeholders at our workshop. Further suggestions are welcome, please email immunisation@phe.gov.uk.

Local teams addressing inequalities in their area should consider gathering local intelligence and bespoke data when setting priorities and planning interventions. The template local action plan (see below) sets out an approach for this, based on the World Health Organisation's *Tailoring Immunization Programmes (TIP)* [6] model. The action plan will also prompt teams to consider wider community, institutional, and policy barriers and facilitators to vaccination, as well as the health beliefs and knowledge of individuals, as outlined in the social-ecological model in the introduction to this strategy.

2. Share new practice and evaluation findings between stakeholders to develop the evidence base

The PHE immunisations team will create a new section in Vaccine Update titled “How we did it”. Here, stakeholders can share success stories on how they improved vaccine coverage. Examples are being logged in the Vaccine Update Index, by the national team that is accessible and searchable by local teams. Please address any queries and send your examples to immunisation@phe.gov.uk. Formatting suggestions are given in to the local action plan.

3. Contribute to system leadership regarding inequalities in immunisation

Reduction in health inequalities is a key objective in delivery of the vaccination programme. For this reason the inequalities technical sub-group of the tri-partite (PHE, NHS, DHSC) Immunisation Programme Implementation Group was formed to focus on this issue. The group also has vaccination provider, local authority, and academic representation. The group brings relevant stakeholders together to:

- coordinate and support existing inequalities work streams;
- identify the key priority areas for action in terms of programmes, geographical areas and or specific protected characteristics and communicate this to commissioners and providers;
- identify gaps in the understanding of inequalities which would benefit from further research.

The aim of the group is to:

- provide national level guidance and evidence for commissioners and providers discharging their duties;
- inform commissioning decisions by the appropriate governance bodies such as Public Health Oversight Group (PHOG) who are responsible for assurance for the national immunisation programme; inform relevant policy decisions by the Department of Health.

4. Use existing data sources to develop a routine report to monitor inequalities in routine vaccination coverage

Public Health England’s national immunisation team, in discussion with stakeholders, will consider how to use existing data sources to develop a routine report to monitor trends in routine vaccination coverage inequalities at national and regional level, for key indicators such as by area level deprivation, and by geography.

Local action plan template

The local action plan (LAP) consists of a series of steps, which are designed to help you systematically assess health inequalities related to immunisation programmes and identify action that you can take. This tool will help you to comply with The Health and Social Care Act 2012 legal duties on health inequalities, and will also help you to consider the requirements of the Equality Act 2010. Work to quantify and address inequalities in immunisation coverage is already ongoing; the LAP will help to harmonise how inequalities are quantified and addressed, and facilitate greater sharing of SITs' transferable intelligence, expertise and experience.

The LAP is intended to be completed in a step-wise manner. However, it is flexible and can be used if you have already progressed local plans or integrated into other work to provide a focus on inequalities.

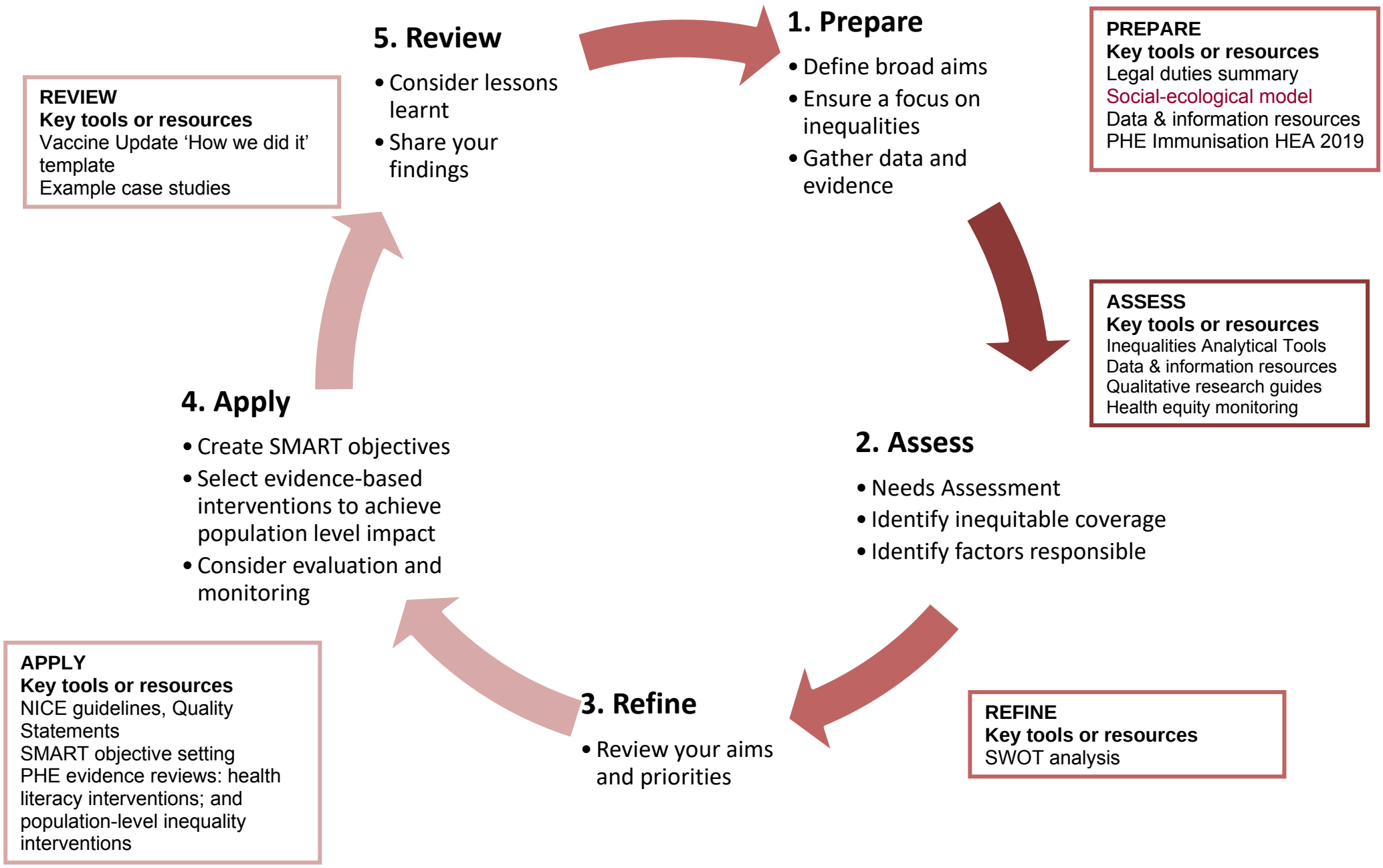
To make an impact at the population level, interventions need to be evidence-based, outcomes orientated, systematically applied, scaled up appropriately, appropriately resourced, and sustainable. It is important that a senior leader from the Screening and Immunisation Team endorses the assessment and is involved at the preparation and the evaluation stage. This will facilitate buy-in for your project, adequate resourcing, and dissemination of results.

Across all areas of activity, the meaningful engagement and involvement of your public health and commissioning organisations as well as targeted population community representatives, patients, and clinical staff is central to securing resources, understanding needs, and producing appropriate and effective local action on health inequalities. This may require involvement of other organisations like the Local Authority, Clinical Commissioning Groups, the NHS, and third sector partners.

A copy of the tool is available on phe.gov.uk at the following link:
https://www.gov.uk/government/publications/phe-immunisation-inequalities-strategy

Steps of the LAP

The 5 steps of the local action plan (LAP) include Prepare, Assess, Refine, Apply, and Review, and are summarised in the figure below.


1. Prepare
• Define broad aims
• Ensure a focus on inequalities
• Gather data and evidence
PREPARE
Key tools or resources
Legal duties summary
Social-ecological model
Data & information resources
PHE Immunisation HEA 2019
2. Assess
• Needs Assessment
• Identify inequitable coverage
• Identify factors responsible
ASSESS
Key tools or resources
Inequalities Analytical Tools
Data & information resources
Qualitative research guides
Health equity monitoring
3. Refine
• Review your aims and priorities
REFINE
Key tools or resources
SWOT analysis
4. Apply
• Create SMART objectives
• Select evidence-based interventions to achieve population level impact
• Consider evaluation and monitoring
APPLY
Key tools or resources
NICE guidelines, Quality Statements
SMART objective setting
PHE evidence reviews: health literacy interventions; and population-level inequality interventions
5. Review
• Consider lessons learnt
• Share your findings
REVIEW
Key tools or resources
Vaccine Update 'How we did it' template
Example case studies

Governance

This strategy has been agreed by the PHE national immunisation team following brief consultation with local team stakeholders, and was informed by an immunisation inequalities workshop which involved local stakeholders

The strategy was also reviewed at a meeting of the inequalities technical sub-group of the tri-partite (PHE, NHS, DHSC) Immunisation Programme Implementation Group.

Monitoring progress

Progress against the strategy's recommendations will be tracked at meetings of the inequalities technical sub-group of the tri-partite (PHE, NHS, DHSC) Immunisation Programme Implementation Group.

The development of routine reports and indicators will also help us to monitor trends in routine vaccination coverage inequalities at national and regional level

We will engage formally and informally with local teams to communicate about the strategy, and to help evaluate its usefulness, during National Immunisation Network events, team visits, and through Vaccine Update.

References

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5. Zimmerman LA, Muscat M, Singh S, et al (2019). Progress toward measles elimination - European Region, 2009–2018. *MMWR Morb Mortal Wkly Rep* **68**: 396-401.
6. World Health Organization (2013). The Guide to Tailoring Immunization Programmes. http://www.euro.who.int/__data/assets/pdf_file/0003/187347/The-Guide-to-Tailoring-Immunization-Programmes-TIP.pdf.

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