Public Health England

Protecting and improving the nation's health

PHE immunisation inequalities: local action plan template

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Contents

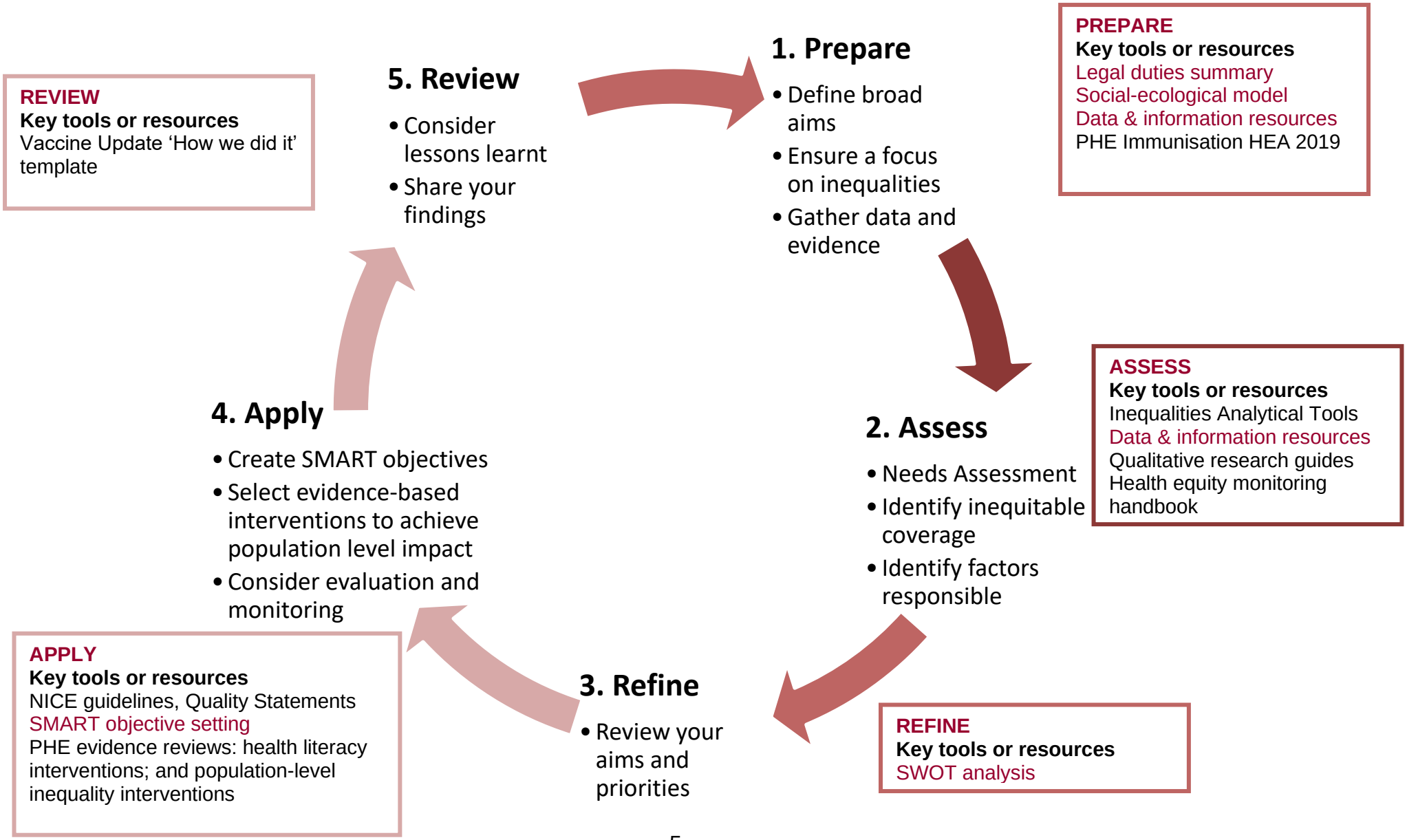
Local action plan template

The local action plan (LAP) consists of a series of steps designed to help you systematically assess health inequalities related to immunisation programmes and identify action that you can take to reduce health inequalities and promote equality and inclusion. This LAP was developed following stakeholder feedback at a PHE workshop on inequalities in immunisation held in March 2019. The LAP draws from the PHE 2016 Health Equity Assessment Tool [1], which was designed to help colleagues think through the implications of their work on health inequalities and equality and diversity. We also based this tool on the World Health Organization Guide to Tailoring Immunization Programmes [2], a guide designed to assist immunisation programmes design strategies to increase uptake of infant and childhood vaccinations. Using 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, in the context of the national immunisation programme. The LAP should be read alongside the PHE inequalities in immunisation 2019 strategy, and the PHE Health Equity Audit for the national immunisation programme 2019 ('PHE HEA 2019'). Other key resources are highlighted at each relevant step in the LAP.

Steps of the LAP

The LAP is intended to be completed in a step-wise manner. However, it is flexible and it is possible to jump to the relevant steps if you have already progressed local plans. The 5 steps of the local action plan (LAP) include: Prepare, Assess, Refine, Apply, and Review – these are summarised in the figure below. Each step is further explained in sections accessed by clicking on hyperlinks within the figure. In the penultimate section there is a template that you can fill in for each step. Finally, a collection of case studies provides examples of interventions elsewhere (page 29).

Figure 1. Summary of the Prepare > Assess > Refine > Apply > Review cycle for implementation of a local action plan



1. Prepare

Tools or resources for this section

- Social-ecological model
- Data and evidence sources

Further reading (see references section for links)

- PHE Health Equity Assessment Tool legal duties summary
- PHE Immunisation HEA 2019

Define your broad aims, and ensure a focus on inequalities

What are the main aims of your work? How do you expect your work to contribute to reducing health inequalities? Interventions should have a specific focus on reducing inequality in vaccination. Keep in mind your legal duties and obligations (see below).

Legal duties and obligations

Be clear about your duties and obligations. Our legal duties require that PHE's actions and advice pays due regard to the need to reduce health inequalities, and to the protected characteristics (see below). This is the responsibility of all PHE staff. A more detailed explanation of how PHE must meet the legal duties (on behalf of the Secretary of State for Health and Social Care) within the Health and Social Care Act 2012 and the Equality Act 2010 is taken from the PHE Health Equity Assessment Tool [1] guidance and can be found in the appendix. Briefly, the need to reduce health inequalities must be properly and seriously considered when making decisions, or exercising functions, including balancing this need against any countervailing factors. Using the LAP will enable transparent and informed decision making and provide a record of the process, demonstrating how you 'paid due regard to' the duties.

Dimensions of inequality and protected characteristics

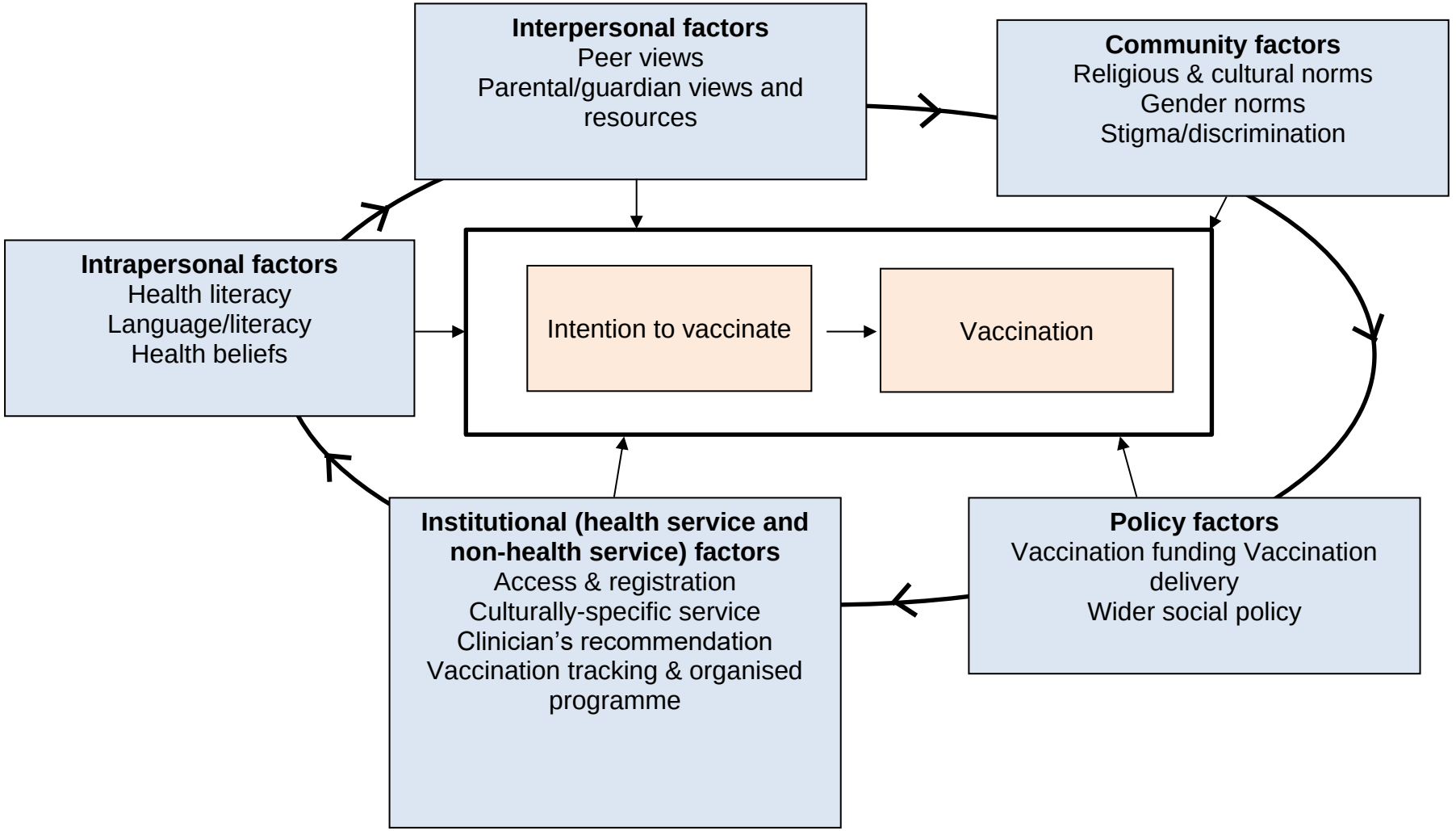
The dimensions of inequality and protected characteristics are:

- 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

Factors which may be responsible for inequitable immunisation coverage

It is vital to develop an understanding of the factors which may be responsible for inequitable immunisation coverage from an early stage in your plans. These factors are context specific and those factors to be prioritised will change from area to area according to the make-up of your population. This will help you to determine the data and indicators you will analyse, the stakeholders you will talk to and the interventions you plan. The PHE immunisation health equity audit includes an evidence-based model which describes the factors influencing inequality in vaccination uptake in high income settings (see model, figure 2, below). This model will help you consider the influences of personal, family/friends, community, institutions (health service and non-health service), and wider policy factors.

Figure 2. Social-ecological model of factors influencing inequality in vaccination uptake, or low vaccination uptake in specific populations in high income settings



Data and evidence sources required

What are the key sources of data and evidence that you need to identify health inequalities in your work? Table 1 below lists some key local- and national-level data and evidence sources to assist in quantifying inequalities in vaccination but is not intended to be a comprehensive list.

Table 1. Selected data and information sources for inequalities in immunisation needs assessment

Name	Source	Geography	Description
PHE Immunisations Programme Health Equity Audit 2019	https://www.gov.uk/government/publications/phe-immunisation-inequalities-strategy	National, Regional	A high-level audit using routine data as well as a literature review to describe vaccine coverage by multiple dimensions of inequality/protected characteristics in England
PHE parental attitudes to vaccination in young children survey	https://www.gov.uk/government/collections/parental-attitudes-to-vaccination-in-young-children and summaries of the latest surveys in Vaccine Update	National	National surveys undertaken in England to understand parental knowledge, beliefs and attitudes towards the immunisation programme.
PHE Vaccine Update	https://www.gov.uk/government/collections/vaccine-update	NA	Vaccine update is a regular newsletter describing the latest developments in vaccines, and vaccination policies and procedures. It also features 'How we did it' case studies describing how local teams have improved vaccination coverage or services, particularly in under-served populations
PHE Immform data	www.immform.dh.gov.uk	GP practice, Clinical Commissioning Group (CCG), LA, Sustainability Transformation Programme (STP)	Annual vaccination data relating to routine vaccinations

NHS Childhood Vaccination Coverage Statistics	https://digital.nhs.uk/data-and-information/publications/statistical/nhs-immunisation-statistics	National, Government Office Region, UTLA	Information on childhood vaccination coverage at ages 1, 2 and 5 years, collected through the Cover of Vaccination Evaluated Rapidly (COVER) data collection
NHS Childhood Immunisation CCG/GP Practice level Coverage Statistics	https://digital.nhs.uk/data-and-information/publications/statistical/childhood-immunisation-ccg-gp-practice-level-coverage-statistics	GP practice, Clinical Commissioning Group (CCG), Sustainability Transformation Programme (STP)	Annual childhood vaccination data relating to routine vaccinations offered to all children up to the age of 5 years. The data are derived from information collected for NHS England through the NHS Digital Strategic Data Collection Service (SDCS), for the Childhood immunisation management information programme.
PHE Cover of vaccination evaluated rapidly (COVER) programme: latest quarterly data	https://www.gov.uk/government/statistics/cover-of-vaccination-evaluated-rapidly-cover-programme-2018-to-2019-quarterly-data	National, Government Office Region, UTLA	Information on childhood vaccination coverage at ages 1, 2 and 5 years, collected through the Cover of Vaccination Evaluated Rapidly (COVER) data collection, but timelier than above equivalent data source
PHE Health Protection Profile: Immunisation & childhood vaccine preventable diseases	https://fingertips.phe.org.uk/profile/health-protection/data#page/0/gid/1938132804/pat/6/par/E12000004/ati/102/are/E06000015	Some indicators have upper tier local authority (counties and unitary authorities), lower tier local authority (districts and unitary authorities) and PHE Centre level data	The Health Protection Profile covers a range of health protection issues, with information on the incidence of various infections, but also interventions to reduce infection such as immunisation. The inequalities tab displays available data segmented by population decile of Index of Multiple Deprivation (IMD) 2015 (where IMD is assigned by the local authority of residence).

PHE Regular reports on incidence of vaccine preventable diseases	https://www.gov.uk/health-and-social-care/health-protection-immunisation#research_and_statistics	National, Government Office Region	Timelier than the above data source
Local Health Equity Audits, evaluations of vaccine coverage, outbreak investigations with an equity focus	Local Authority, Health Protection Team, SITs	Region-specific	May contain bespoke data sources or analyses
Strategic Health Asset Planning and Evaluation (SHAPE)	https://shapeatlas.net	Flexible geographies: STP, CCG, LA, ward and LSOA, depending on the indicator viewed	SHAPE links national data sets clinical analysis, public health, primary care and demographic data with information on healthcare estates performance and facilities location. The application also includes a fully integrated Geographical Information System mapping tool and supports travel time analysis.
PHE National General Practice Profiles	https://fingertips.phe.org.uk/profile/general-practice	Individual practice profiles, summary profiles for CCGs, and each practice can be compared with the CCG and England	The tool presents a range of practice-level indicators drawn from the latest available data, including: local demography; Quality and Outcomes Framework domains; Cancer Services; Child health; Antibiotic prescribing; Patient satisfaction

NHS GP and GP practice related data	https://digital.nhs.uk/services/organisation-data-service/data-downloads/gp-and-gp-practice-related-data	Practice level	Data for General Medical Practices, General Medical Practitioners, Prescribing Cost Centres and Dispensaries. Supplied by the NHS Prescription Services (NHS PS).
National Insurance Number (NINo) Registrations to Adult Overseas Nationals Entering The UK	Via Stat-Xplore (Department for Work and Pensions sponsored website) https://stat-xplore.dwp.gov.uk/webapi/jsf/dataCatalogueExplorer.xhtml	MSOA - national	These statistics show the number of people registering for a NINo to work or to claim benefits / tax credits and are one of a number of supplementary measures produced by Government of in-migration to the UK. They are a measure of in-flow to the UK, primarily for employment, including both short-term and long-term migrants and include foreign nationals who have already been in the country but not previously required a NINo as well as migrants who may have subsequently returned abroad.
Office for National Statistics England and Wales Census 2011	https://www.ons.gov.uk/census/2011census/2011censusdata	LSOA - national	Local characteristics tables from the 2011 Census on the topics of rural/urban status, ethnicity, language and religion, amongst others

Department for Communities and Local Government Index of multiple deprivation 2015.	Description: https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015 LSOA level data files: http://opendatacommunities.org/resource?uri=http%3A%2F%2Fopendatacommunities.org%2Fdata%2Fsocietal-wellbeing%2Fimd%2Findices	LSOA - national	The English indices of deprivation measure relative deprivation in small areas in England called lower-layer super output areas. The index of multiple deprivation is the most widely used of these indices.
PHE Local Health Tool	http://www.localhealth.org.uk	MSOAs and electoral wards, clinical commissioning groups, local authorities, and England.	The Local Health tool allows users to map data and provides spine charts and reports for small areas. Users can also define their own geographies and add their own data.
Public health Outcomes Framework (PHOF)	https://fingertips.phe.org.uk/profile/public-health-outcomes-framework	Down to local authority (LA)	PHOF data enable local authorities to benchmark and compare their own outcomes with other local authorities. Population vaccination coverage indicators can be found in the 'Health Protection' overarching indicators section.

LSOA – Lower Layer Super Output Area; MSOA – Middle Layer Super Output Area (small geographies in England which can be used as units of analysis); LA – Local Authority

Who needs to be involved?

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 and 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, NHS, third sector partners. You may want to have academic partners involved if you are considering implementing or evaluating a novel intervention.

2. Assess

Tools or resources for this section

- PHE Inequalities Analytical Tools (https://fingertips.phe.org.uk/profile/guidance)
- Medicins Sans Frontieres (MSF) qualitative research guide (https://fieldresearch.msf.org/handle/10144/84230)
- Data and resources table (see table 1 above)
- PHE National Conversation on Health Inequalities toolkit (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/322401/Designed_Toolkit_PHE__Health_Inequalities_ISSUED.pdf)

Further reading (see references section for links and citations)

- WHO Handbook on health inequality monitoring
- WHO The Guide to Tailoring Immunization Programmes
- PHE guidance on measurement of health inequality (in appendix 2 of Public Health Outcomes Framework: Health Equity Report, focus on ethnicity)

Needs assessment

Health needs assessment is a systematic method of identifying the unmet health and healthcare needs of a population, and making changes to meet those unmet needs [3].

Steps include:

Epidemiological needs assessment

This will help you to describe vaccination coverage in your population(s) of interest in terms of time, place, and person characteristics. You may also describe service provision in relation to need. You may also undertake analytical work to determine the association between potential risk factors and inequitable vaccination coverage. You will also need to consider the effectiveness and cost-effectiveness of interventions and services (covered by step 4 ‘apply’ from this plan).

Corporate and/or qualitative needs assessment

This is required to understand the views of stakeholders – for example professionals, patients and service-users, local policymakers – on why inequalities may arise and what services are needed. Approaches include review of policies in place, user engagement, service co-design, focus groups and interviews [4]. Two tools may be useful for local

teams wishing to undertake qualitative methods to inform priorities for action to reduce health inequalities, the PHE National Conversation on Health Inequalities toolkit [5], and the MSF qualitative research field guide [4].

Epidemiological needs assessment – measures of inequitable vaccination coverage

You will need to select metrics to quantify measures of vaccination coverage, but also the inequality within your selected measure of uptake for your population subgroups of interest.

Commonly used measures of vaccination uptake for a given programme include:

- fully and timely vaccinated
- partially vaccinated
- not vaccinated
- indirectly, the incidence of VPDs, or VPD outbreaks

Commonly used measures of inequality include 'simple' and 'complex' [6]:

- simple measures are pairwise comparisons. They are most useful when there are only 2 subgroups e.g. male and female; these include:
    - difference measures – show the absolute difference between 2 subgroups
    - ratio measures – show the relative difference between 2 subgroups
- when there are multiple subgroups pairwise comparisons may still be made by grouping relevant subgroups together e.g. most deprived compared to the least deprived quintile
- simple measures ignore other subgroups, and do not consider subgroup size
- complex measures use data from all subgroups to assess inequality, and produce a single number that is an expression of the amount of inequality existing across all subgroups of a population, but can be harder to interpret and communicate [6,7] – these include:
    - for subgroups with natural ordering, consider using Slope Index of Inequality or Concentration Index
    - for subgroups without natural ordering, consider using absolute mean difference or Theil index
- don't forget to use weighting to take account of different subgroup size
- PHE has published tools that can be used to calculate several measures of inequality: https://fingertips.phe.org.uk/profile/guidance

Epidemiological Needs Assessment – linking data to describe inequalities in vaccination coverage in your population(s) of interest

You will need to be able to describe inequities in vaccination coverage for your population(s) of interest. Coverage data specific to some populations of interest (defined by geography, gender, or ethnicity indicators) may be available from ImmForm (including unpublished data

available on the ImmForm website). It may also be worth having a conversation with your local Child Health Records department if a bespoke CHIS extract is needed. A literature search may also identify relevant evidence. The PHE HEA 2019 may include information on your population of interest at a national or regional level. Otherwise, unless you have bespoke locally relevant data, such as from a survey, you may need to consider how you can gather this information for your area.

You may be able to use data linkage – a process which temporarily brings together 2 or more sets of data to produce information which can be used for research and statistical purposes [8] – to link vaccination coverage data to data on population characteristics e.g. deprivation status. This can be done at the individual (record) level, but is more easily achieved at the area or practice (ecological) level. Sources of data at area level or some of the dimensions of inequality (see page 7) can be found in table 1 above. Geographic Information Systems (GIS) tools can be used to link area-level data. The Strategic Health Asset Planning and Evaluation (SHAPE) tool, which is available to PHE SITs, can be used to overlay datasets on the same map.

The PHE Local Health Tool (freely available) also allows users to map their own data for small areas, and includes datasets on deprivation, ethnicity, and language proficiency indicators, amongst others. Individual data would need to be pursued directly from other local stakeholders, for example the NHS and Local Authority, under bespoke local Data Sharing Agreements.

Epidemiological needs assessment – indicators of service provision

PHE immunisation teams are unaware of open data or indicators which directly quantify immunisation service provision within a given area/population. However, several indicators which may approximate to immunisation service provision, principally within Primary Care, are available (see data sources table above); these include:

- practice patient demographics
- practice list size
- patient satisfaction measures including experience of making appointments
- quality and Outcomes Framework achievement scores
- number of GPs per 1000 population (construct by linking data on GP numbers to practice profiles)
- distance from health facilities
- rural/urban status

You may be able to gather bespoke data on services that may improve equitable vaccination coverage, for example the use of remind and recall systems.

Corporate and/or qualitative needs assessment

You will need to understand stakeholder perspectives (including that of patients, parents and care givers) in your population(s) of interest as to the barriers and facilitators of vaccination. The PHE HEA 2019 includes a literature review of quantitative and qualitative research into factors which may influence inequality in vaccination uptake in high income settings. You may also wish to gather bespoke local data, using the social-ecological model to guide you, and the tools discussed above.

3. Refine

Tools or resources for this section
- SWOT analysis

Further reading (see references section for links and citation)
- WHO Guide to Tailoring Immunization Programmes [2] pp. 30-34, p. 54

In this section you review and summarise the information you have gathered to refine your aims. The WHO Guide to Tailoring Immunization Programmes provides useful further information and examples [2].

Review and summarise the information so far

Now that you have gathered information on the challenges to equitable vaccination in your area, write a problem statement to clarify problem areas and create a situation summary. Consider completing a SWOT analysis (see the appendix) of current strengths, weaknesses, or future opportunities and threats which may impact on immunisation within a particular population in your area. These activities will inform your aims and objectives.

Problem statement

What is happening (what are people doing or not doing) that is a problem?
Example: pockets of low coverage of MMR coverage amongst pockets of the population of X

Where and when does this usually take place?
Example: coverage has been low amongst Travellers for several years. In the last 1-2 years in deprived, predominantly white or black minority populations coverage has also declined below the herd immunity threshold. This has resulted in a measles outbreak in whom the index case was from a Traveller community, but which then continued in other parts of the local community

Whom does it affect?
Example: Un- or partially-vaccinated children and adults from these populations

What are the primary effects of the problem?
Example: The outbreak resulted in xx cases, which led to xx hospitalisations for complications/impact on schools/impact on employers/socio-economic impacts. Despite this, MMR coverage is continuing to fall, particularly amongst xx groups, making another outbreak more likely.

What are the possible causes?
Example: Relatively poor literacy and health literacy amongst Travellers, difficulties registering with primary care and travelling to appointments resulting in a lack of appropriate and accessible immunisation services, no outreach service from local authority or healthcare providers

Situation summary

Health problem
Example: low MMR coverage amongst pockets of the population

Potential primary beneficiaries (of intervention)
Example: Un- and partially-vaccinated children (and their caregivers)

Key challenges to equitable vaccination to focus on
Inter-/intra-personal:
Example: poor health literacy regarding VPDs.

Community:
Example: Travellers feel stigmatised when they attempt to register for Primary Care.

Institutional:
Example: Complex and inconsistent approaches to registration.

Health and wider policy:
Example: Transport routes no longer subsidised, leading to fewer buses to nearest GP surgery.

SWOT
Strengths:
Example: Care givers from the Traveller community have a high trust in health professionals' advice regarding immunisation

Weaknesses:
Example: A lack of accessible and culturally-specific services for this group, who suffer from longstanding inequities and poor literacy

Opportunities:
Example: Formation of Primary Care Network may encourage best practice or allow pooling of resources to improve vaccination services for Travellers

Threats:
Example: Concern that anti-vaccination messages may reach and influence the Traveller community

Review your aims

Narrowing the scope to prioritise populations and immunisation programmes

There is no ‘right’ answer as to which population or immunisation programme should be prioritised. However, the following principles may help guide your choice:

- which vaccine-preventable disease(s) (VPDs) may have the greatest adverse impact on under-vaccinated populations? Typically, highly infectious VPDs with larger outbreak potential (such as measles), or higher consequence infections (such as pertussis or meningococcus).
- which populations, defined by dimensions of inequality/protected characteristics (see page 7), potentially have the lowest vaccination coverage in your area? How large are they? Do they cluster together socially or geographically (increasing outbreak risk due to lower herd immunity)?
- are you able to accurately define and identify populations of interest to target them?
- which populations in your area are easier to reach and affect?
- are there any risks of unintended consequences due to prioritising a particular population?

Review your aims

Use your problem statement and situation summary to review and refine your aims, which should consider the specific population(s), and immunisation programme(s) of interest. Be certain that your aim aligns with decreasing inequality in immunisation coverage, and with meeting the needs of specific groups who share protected characteristics, not just increasing or maintaining coverage in general, for example ‘To improve understanding of the need for immunisations, and increase primary childhood MMR coverage amongst the Traveller community in XX’. You will define more detailed objectives to meet your aim(s) in the next step of your plan.

4. Apply

Tools or resources for this section

- Setting SMART objectives

Further reading (see references section for links and citations)

- PHE Reducing health inequalities: system, scale and sustainability
- NICE Guidelines and Quality Statements
- The Guide to Tailoring Immunization Programmes p.54, p.60
- PHE Improving health literacy to reduce health inequalities

Create SMART objectives

Use the problem statement and refined aims to formulate specific objectives for your intervention. These objectives should be 'SMART':

- Specific
- Measurable
- Appropriate
- Realistic
- Time-bound

See the appendix for more information on setting SMART objectives.

Guidance from WHO Guide to Tailoring Immunization Programmes [2] recommends that the objectives should clearly identify

- the target population, for example 'Traveller community in X town'
- the behaviour desired and its frequency, for example 'Over the next 2 years, to increase the proportion of children aged less than 5 years old from families in the Traveller community in X whose MMR immunisation is up to date for age from 60% to 80% – this will require immunisation of an extra xx children per year'
- the difference in inequalities expected due to this intervention, for example 'This will reduce absolute inequality in MMR immunisation (compared to the regional average population) from 20% to 5%'

Selecting evidence-based interventions that will achieve population level impact

Principles for achieving population level impact on inequalities

PHE Reducing health inequalities: system, scale and sustainability [9] provides guidance on population-level interventions. Interventions should have a specific focus on reducing inequality in vaccination, and not simply aim to increase vaccination globally across a population. To make an impact at the population level, interventions need to be:

- evidence-based
- outcomes orientated
- systematically applied
- scaled up appropriately
- appropriately resourced
- sustainable

When designing interventions, also consider how they may impact

- at different 'levels' within a population, for example as demonstrated in the social-ecological model which has individual, family, institutional, community, and policy levels – interventions acting at multiple levels are likely to be more effective and more sustainable
- over time, from shorter-term to longer-term impacts
- at different points in the life course, beginning from peri-conception to old age

Evidence-based interventions to reduce inequality in vaccination uptake

The National Institute for Health and Care Excellence (NICE) 2017 updated guidelines provide recommendations for evidence-based interventions to reduce inequality in immunisation uptake in under 19s [10]. Its recommendations are summarised in the table in the appendix. Key principles include:

- the use multi-faceted, coordinated programmes to increase timely uptake
- ensuring suitability of services for target users
- accurate recording of immunisation status
- use of remind and recall systems
- taking every opportunity (in health, social care and educational settings) to check immunisation status is up to date

NICE have also published 5 Quality Standard statements [11] to support this guidance, which identify high-priority areas for quality improvement (see below). They can be used to improve the quality of services commissioned. Though directed towards children and young people, the recommendations are also widely applicable to adults.

Reviewing how other areas have addressed similar problems may also help. 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

NICE Quality Standard statements

NICE has promulgated the following Quality Standard statements for increasing vaccine uptake among under 19s [11] in groups and settings that have low immunisation coverage:

- Statement 1 – children and young people who do not attend their immunisation appointment are followed up with a written recall invitation and a phone call or text message
- Statement 2 – children and young people identified as having missed a childhood vaccination are offered the outstanding vaccination
- Statement 3 – children and young people receiving a vaccination have it recorded in their GP record, the child health information system (CHIS) and in their personal child health record
- Statement 4 – children and young people have their immunisation status checked at specific educational stages
- Statement 5 – young offenders have their immunisation status checked on entry into a secure setting and are offered any outstanding vaccinations

Health literacy

Health literacy refers to the skills, knowledge, understanding and confidence needed to use health and social care information and services. PHE has published ‘Improving health literacy to reduce health inequalities’, a practice resource on how local providers can improve health literacy in order to reduce health inequalities [12]. Strategies include communication skills interventions for health and social care services (the teach-back method) to check service user understanding; early intervention approaches which ensure that health literacy promotion is fully integrated into early years and school curriculums; and community-based, peer-support approaches which may also help to distribute health literacy among social networks.

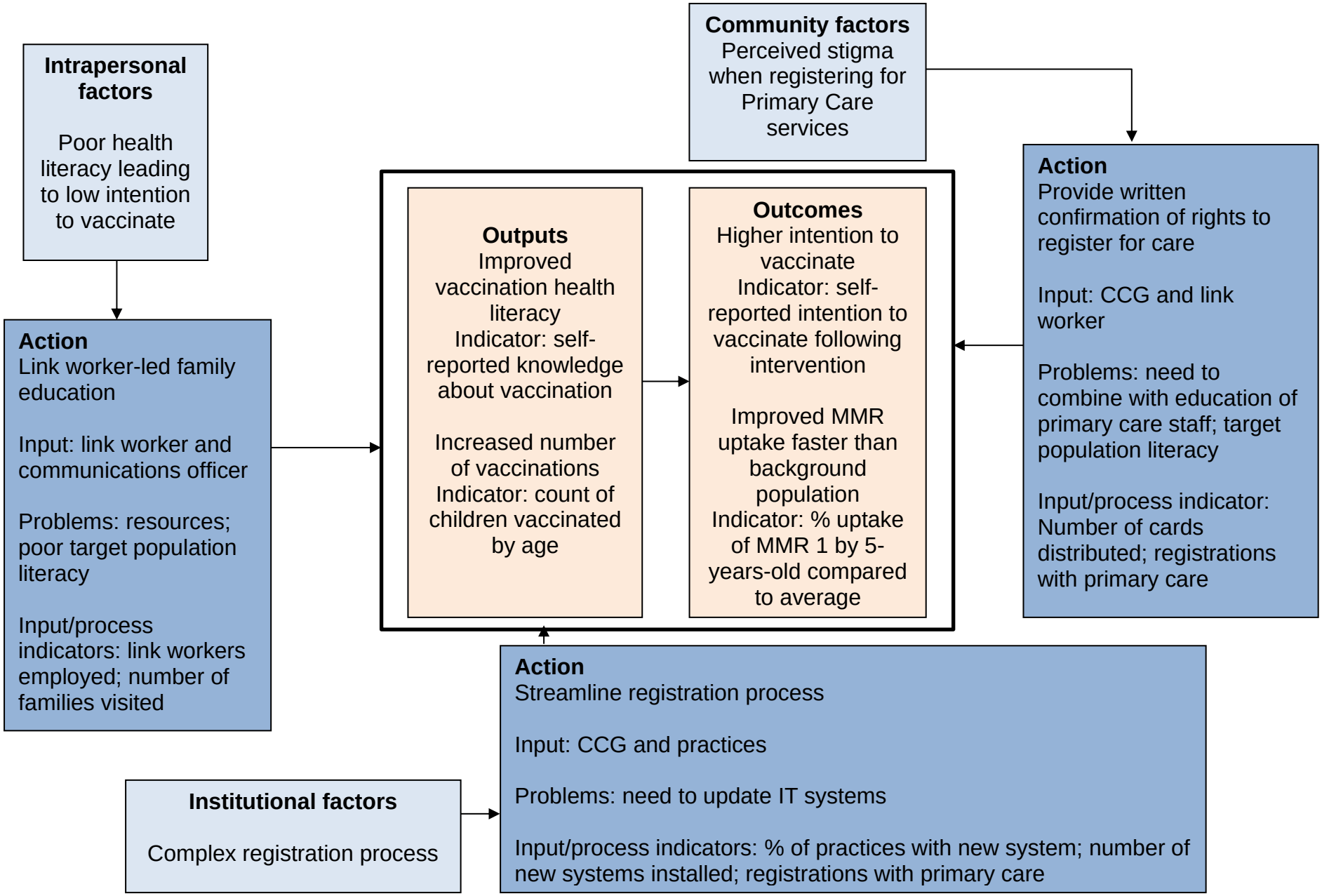
Consider how to monitor and evaluate your plan

Create a logic model

Create a logic model summarising

- what the outcomes your plan will achieve (align to your aim and objectives)
- the activities that will be carried out to achieve these, and resources required in terms of inputs (for example vaccination clinics, human resources such as new staff roles), processes (for example number of staff trained, leaflets distributed) outputs (vaccinations administered)
- possible problems that need to be overcome to initiate the intervention, and indicators of how the progress (inputs, processes, outputs) and success (outcomes) will be monitored and evaluated

This will help ensure any interventions are matched to the problems identified, and that your project is proceeding as desired. It will also help you communicate more easily with stakeholders. An example using some of the social-ecological model headings (i.e. intra-personal, institutional, community, for example) is below, the TIPS document provides an alternative tabular method.


Intrapersonal factors
Poor health literacy leading to low intention to vaccinate
Community factors
Perceived stigma when registering for Primary Care services
Action
Link worker-led family education
Input: link worker and communications officer
Problems: resources; poor target population literacy
Input/process indicators: link workers employed; number of families visited
Outputs
Improved vaccination health literacy
Indicator: self-reported knowledge about vaccination
Increased number of vaccinations
Indicator: count of children vaccinated by age
Outcomes
Higher intention to vaccinate
Indicator: self-reported intention to vaccinate following intervention
Improved MMR uptake faster than background population
Indicator: % uptake of MMR 1 by 5-years-old compared to average
Action
Provide written confirmation of rights to register for care
Input: CCG and link worker
Problems: need to combine with education of primary care staff; target population literacy
Input/process indicator: Number of cards distributed; registrations with primary care
Action
Streamline registration process
Input: CCG and practices
Problems: need to update IT systems
Input/process indicators: % of practices with new system; number of new systems installed; registrations with primary care
Institutional factors
Complex registration process

Monitoring

Measure the progress of your intervention, and that it is being implemented as planned using the structure, process and output indicators included in your logic model. These data can be taken from routine sources e.g. registration records, workplans, and their collection, analysis, and reporting should be integrated into the routine work schedules of your plan.

Evaluation

Vaccination outcome evaluation quantifies the difference attributable to the intervention by measuring changes in outcomes such as attitude towards immunisation, and reduced inequalities in immunisation coverage. The evaluation should demonstrate that the interventions were responsible for the successes attributed to it. Routine or bespoke surveys and coverage data, conducted at baseline, mid-point, and intervention end, then compared to a control population, are a typical evaluation strategy.

Vaccination health impact evaluation quantifies longer-term effects of the intervention over time on a population’s health and wellbeing, and may not be in the scope of a local programme.

4. Review

Tools or resources for this section

- Vaccine Update Template
- Case studies

Further reading

- Vaccine Update Index

PHE produces a monthly immunisation newsletter called Vaccine Update, distributed to over 40,000 subscribers. Vaccine Update includes a section called '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. Please use the template below to help structure your article.

Item	Answer/notes
Name and email	
Team/region	
Relevant immunisation programme(s)	
What was the problem? Were you targeting a particular under-served group?	
What changes did you make, and with whom?	
What was the result? How has this changed practice?	
What were the key learning points?	
Have you published or shared your findings elsewhere?	
Note: These articles are intended to provide a brief overview of your work, please limit articles to fewer than 400 words. Please include quotes, and a picture or graphics to help illustrate your work.	

Case study examples

The following case studies illustrate how approaches similar to that recommended in this action plan have been applied to increase immunisation coverage in specific groups or areas.

Case study 1 – A whole-system approach to an outbreak of measles in Leeds

Based on work presented at the stakeholder workshop by Kevin McGready, Leeds City Council.

A measles outbreak occurred in Leeds in 2017. The outbreak control team (OCT) included membership from PHE, a secondary care acute trust, local authority, clinical commissioning groups and NHS England. The OCT sought to increase measles, mumps and rubella (MMR) vaccine coverage to control the outbreak. OCT members used the SHAPE tool to map general practices with either known low MMR (2 dose) uptake (<92%), or with practice populations likely to have a high proportion of recent migrants, or with both characteristics. Practice populations with a high proportion of recent migrants were identified using National Insurance Number application data, and ImmForm data were used to quantify MMR uptake. These data were used to prioritise the delivery of community and school vaccination sessions, and the outbreak was successfully controlled.

Case study 2 – Identifying barriers and enablers to childhood immunisations in a Jewish community in London

Based on reports by Letley et al. Vaccine (2018) [13] and Public Health England (2018) [14].

In 2014, due to regular vaccine preventable disease outbreaks and relatively low vaccination uptake in the London Borough of Hackney, which has a large Charedi Orthodox Jewish community, the teams responsible for immunisation services decided to implement the WHO Tailoring Immunisation Programmes (TIP) approach. TIP provides a framework based on qualitative and quantitative research to identify populations susceptible to vaccine preventable diseases, identify barriers and enablers to vaccination and recommend evidence-informed responses to improve vaccination coverage.

Data analysis confirmed that recurring outbreaks of vaccine preventable disease occur in the Charedi community in North East London. Access to and convenience of immunisation services were highlighted by the community as important issues, challenging prior assumptions that cultural or religious anti-vaccination beliefs were responsible for low vaccination coverage in the community. There was no evidence of religious objection to vaccination, and religious leader support was highlighted as crucial to promoting immunisation. Following the investigation, more targeted interventions could be developed to address the barriers identified by the community and project team.

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Appendices

Appendix for PREPARE

The following section is an excerpt from the PHE Health Equity Tool 2016 appendix on Health Inequalities and the Equality Act 2010

Legal duties – health inequalities and the Equality Act 2010, and the Health and Social Care Act 2012

Reducing health inequalities and promoting equality and diversity sit at the heart of Public Health England's work. The Health and Social Care Act 2012 establishes specific legal duties on health inequalities which PHE must meet.

Health inequalities occur across society and throughout the population. Action can be taken to reduce these inequalities across the 'social gradient' – so while the most deprived in society experience the greatest health inequalities, anyone can experience some health inequality wherever they are on a scale between most and least deprived. Advancing equality is complementary to work on health inequalities.

The Equality Act 2010
The Equality Act 2010 includes a public sector equality duty replacing the previous race, disability and gender equality duties. The Act includes a public sector equality duty, which means that public authorities such as PHE must have due regard to:

- eliminate unlawful discrimination, harassment and victimisation and other conduct prohibited by the Act
- advance equality of opportunity between people who share a protected characteristic and people who do not
- foster good relations between people who share a protected characteristic and those who do not

The protected characteristics are:

- age
- disability
- gender reassignment
- pregnancy and maternity
- race
- religion or belief
- sex
- sexual orientation
- marriage and civil partnership

The Secretary of State's health inequalities duties

The Health and Social Care Act 2012 established specific legal duties with regard to health inequalities. This means that the Secretary of State for health has an overarching duty to have regard to the need to reduce inequalities between the people of England with respect to the benefits they may obtain from the health service.

This duty covers all Secretary of State's NHS and public health functions, and relates to the whole population of England including those not registered with general practice, or who are not patients. The duty encompasses all health inequalities dimensions, not just income or socioeconomic inequalities.

The Secretary of State also has duties to:

- include in his annual report on the performance of the health service in England an assessment of how effectively he has discharged his duty to have regard to the need to reduce inequalities
- set out in a letter to NHS England, which is published and laid before Parliament, his assessment of how it has discharged its duty to have regard to the need to reduce health inequalities, based on NHS England's annual report

Public Health England must therefore consider how to reduce health inequalities through all its work programmes and report annually to the Department of Health and Social Care about how it has met this duty. The Secretary of State's letter sets out the criteria by which the duty on health inequalities must be met. Increasingly, the DHSC is looking to see outcomes and impact on health inequalities and not simply the process by which health inequalities are considered.

What does "... have regard to ..." mean in the duties?

The duty is not an absolute one to ensure that reductions in inequalities happen. We know from a similar duty in the Equality Act 2010 that the wording means that the need to reduce health inequalities must be properly and seriously considered when making decisions, or exercising functions, including balancing this need against any countervailing factors. The duty must be exercised in substance, with rigour and an open mind and from the beginning of the work taking place.

PHE must be able to demonstrate that staff leading programmes and projects:

- are fully aware of the duties
- the duties are considered during all appropriate stages of work
- the appropriate amount of weight has been given to factors which would reduce health inequalities in the decision-making process
- the ultimate decision-maker is aware of the consideration which has been given to the duty

Keeping an accurate record to show how you took health inequalities into account throughout your decision-making process is an important part of 'having regard to...' This tool will help you demonstrate your decision making and provide a record of the process.

Appendix for REFINE

Strengths, Weaknesses, Threats and Opportunities (SWOT) analysis

You will need to compile a list of opportunities and threats (factors external to the programme), and of programme strengths and weaknesses. These are then inserted into a SWOT table; you should consider:

- for opportunities and threats, consider changes in political, economic, social/lifestyle, technological, and legal/reputational factors.
- for strengths consider what does your programme do well? What do stakeholders consider its key strengths? How has the programme been able to adapt to changes?
- for weaknesses consider where the programme performs poorly or could improve, or what challenges it may not be able to meet

An example SWOT table is below

	Helpful	**Harmful**
Internal attributes	**Strengths** Offers appointments in extended hours/at weekends	**Weaknesses** Does not record data on ethnic group consistently on vaccinated in information systems
External attributes	**Opportunities** Practices are considering forming a primary care network, which may be able to dedicate resources to increasing immunisation uptake	**Threats** Funding for existing domiciliary or outreach immunisation appointments is being reviewed and may be scaled back

Appendix for APPLY

SMART objectives (adapted from WHO guidance [2])

- Specific – does the objectives state precisely what is desired in terms of change in behaviour?
- Measurable – are measurement criteria specified in terms of quality, quantity, timeliness, and/or cost?
- Appropriate – are objectives culturally and locally acceptable?
- Realistic – are objectives achievable by the target group, yet still ambitious?
- Time-bound – is the time and/or milestones by when the objective is to be achieved stated?

Recommendations to reduce differences in immunisation uptake in under 19s (NICE 2017) [10]

Recommendation domain	Recommendation
Immunisation programmes: provision	• Ensure DH guidance and updates are implemented • Adopt a multifaceted, coordinated programme to increase timely uptake • Monitor vaccination status as part of a wider assessment of children and young people's health • Ensure an identified healthcare professional in the PCT and all GP practices is responsible for childhood immunisation
Immunisation programmes: improving access	• Ensure clinics are child and family 'friendly' • Ensure children and young people are seen promptly • Consider extending clinic times • Ensure there are enough appointments available • Send out tailored invitations and reminders • Consider home visits to families who have not responded

Immunisation programmes: support	• Provide tailored information, advice and support • Offer the opportunity to discuss any concerns • Whenever possible, check children and young people's immunisation status and offer them any outstanding vaccinations • Ensure young people understand what immunisation involves so they can give their consent
Information systems	• Ensure patient records, personal child health records and the child health information system are regularly updated, reconciled and consistent • Use this data when reporting vaccinations for child health systems, GP and practice payments • Encourage and enable private providers to give details of vaccinations administered • Record any factors that make it less likely that a child or young person's vaccinations will be up-to-date • Use immunisation and infection data to inform needs assessments and equity audits • Monitor practice populations to ensure there is capacity for timely immunisations – waiting lists are unacceptable
Training	Ensure all staff involved in immunisation services are appropriately trained. Training should: • comply with the Health Protection Agency 'National minimum standard for immunisation training' • ensure staff who give advice on the benefits and risks of immunisation have the necessary knowledge and skills • be regularly updated

Nurseries, schools, colleges	• The Healthy Child team should check each child's immunisation record and status when they join a playgroup or nursery or start school • School nursing teams should check vaccination status when children and young people transfer to a new school or college • Health visitors and school nursing teams should provide information, offer vaccinations or refer children who are not up-to-date
Targeting groups at risk of not being fully immunised	• Improve access to immunisation services • Provide accurate information on the benefits of immunisation in a variety of formats • Consider using local venues to promote childhood immunisation • Whenever possible, check the immunisation history of 'at-risk' groups and offer to vaccinate them

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