NORTHUMBERLAND

Northumberland County Council

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HEALTH AND WELLBEING BOARD

DATE: 16 November 2017

HEALTH PROTECTION ASSURANCE REPORT 2016/2017

Report of: Interim Director of Public Health

Cabinet Member: Councillor Veronica Jones, Adult Wellbeing and Health

Purpose of report

To provide the Health and Wellbeing Board with information and assurance on the health protection arrangements for Northumberland. This year's report will provide a more detailed review of influenza as a health protection issue.

Recommendations

It is recommended that the Health and Wellbeing Board:

1) Note the contents of the report

2) Support the arrangements currently in place which provide the DPH with assurance of the health protection function

3) Note the high risk assessment with respect to influenza and support activities to increase flu vaccination uptake as part of the national seasonal flu immunisation programme.

Link to Corporate Plan

This report is relevant to the Health and Wellbeing and Developing the Organisation priorities included in the NCC Corporate Plan 2013 - 2017.

Key issues

The Director of Public Health (DPH) is responsible for the Council's contribution to health protection matters and exercises its functions in planning for, and responding to, emergencies that present a risk to public health. The DPH is also responsible for

providing information, advice, challenge and advocacy to promote health protection arrangements by relevant organisations operating in the County.

The Council does not commission the majority of services which contribute to protecting the health of the population, but the DPH should be absolutely assured that these arrangements are robust and that they are implemented in a way which meets the needs of the population for which they are responsible. This is a local leadership function which requires the DPH and wider public health team to identify issues and advise appropriately; and to work in close liaison and cooperation with other contributing organisations. Responding to the DPH's information and advice is the responsibility of these other contributing organisations, who will also be accountable should unheeded advice result in any adverse impact.

Close cooperation in the way LAs across the NE function results in some of the governance arrangements for health protection functions being shared across LA areas. It is essential therefore that the feedback mechanisms are robust.

A review of health protection functions over the period 2016/17 provides a reasonable level of assurance that appropriate arrangements are in place.

Influenza remains a high risk in terms morbidity, mortality, the annual impact on the delivery of health and social care services and is the highest national and local strategic risk. Flu vaccination remains a pillar of the national prevention programme and continued focus is required to maintain and improve uptake levels.

Implications

Policy:	There is no national policy on how the statutory health protection assurance function is to be achieved. A comparison with other areas indicates that a range of approaches has been taken which vary in complexity. The DPH has chosen not to pursue the introduction of a more formal Health Protection Board to review plans and processes in this area. Any concerns which require escalation will be addressed through normal working arrangements.
Finance and value for money:	Finance and value for money implications will only arise if health protection shortfalls are identified which require additional resources. None have been identified in this report.
Legal:	The assurance review confirms that NCC and its partners are meeting their legal responsibilities under the various acts governing their health protection responsibilities.
Procurement:	None identified.

Human Resources:	Staffing capacity has reduced in the majority of organisations involved in the health protection function. Although the general perception of system leaders is that this has not impacted upon the management of incidents and emergencies, there has been increased pressure on organisations' abilities to undertake preventative and strategic work, particularly non-statutory responsibilities.
Property:	No direct implications identified
Equalities: (Impact Assessment attached) **Yes** ☐ **No** ☐ **N/A** ☒	
Risk Assessment:	The assurance process is designed to ensure that system risks are identified and mitigated against through existing governance arrangements, planning and the exercise of health protection functions.
Crime & Disorder:	No direct implications identified
Customer Considerations:	No direct implications identified
Carbon Reduction:	No direct implications identified
Wards:	All

Appendices

1 Director of Public Health Annual Health Protection Assurance Report 2016/17
2 Health Protection Assurance Framework

Background papers

There are no background documents for this report within the meaning of the Local Government (Access to Information) Act 1985.

Report sign off

Finance Officer	N/A
Monitoring Officer/Legal	N/A
Human Resources	N/A
Procurement	N/A
I.T.	N/A

Executive Director	DL
Portfolio Holder(s)	VJ

Elizabeth Morgan - Interim Director of Public Health
Phone: (01670) 620111
Email: elizabeth.morgan@northumberland.gov.uk

APPENDIX 1

DIRECTOR OF PUBLIC HEALTH ANNUAL HEALTH PROTECTION ASSURANCE REPORT 2016/17

Background

Introduction

The DPH has a statutory responsibility[1] for the strategic leadership of health protection for the Council. The DPH, on behalf of the Council, should be assured that the arrangements to protect the health of local communities are robust and are implemented appropriately. Guidance suggests that, through their DPH, Health and Wellbeing Boards will wish to be assured that acute and longer term health protection arrangements properly meet the health needs of the local population.[2] Accordingly, this report is to inform the Health and Wellbeing Board about the arrangements for health protection in Northumberland. It also includes a specific focus on seasonal influenza as one of the highest risk areas.

Scope of health protection assurance

Health protection is the domain of public health that seeks to prevent or reduce the harm caused by communicable diseases, and to minimise the health impact of environmental hazards such as chemicals and radiation, and extreme weather events.

This broad definition includes the following functions within its scope, together with the timely provision of information and advice to relevant parties, and ongoing surveillance, alerting and tracking of existing and emerging threats:

- National programmes for immunisation which may be routine[3] or targeted[4]

- Management of environmental hazards including those relating to air pollution and food

- Health Emergency Preparedness Resilience and Response (EPRR), the management of individual cases and incidents relating to communicable disease

[1] Regulation 8 of the Local Authorities (Public Health Functions and Entry to Premises by Local Healthwatch Representatives) Regulations 2013, made under section 6C of the National Health Service Act 2006.

[2] DH, PHE, LGA (2013). Protecting the health of the local population: the new health protection duty of local authorities under the Local Authorities (Public Health Functions and Entry to Premises by Local Healthwatch Representatives) Regulations 2013. DH, PHE, LGA. May 2013. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/199773/Health_Protection_in_Local_Authorities_Final.pdf.

[3] Diphtheria, tetanus and polio; pertussis; haemophilus influenzae type b; Hepatitis B; rotavirus; meningitis B/C/ACWY; pneumococcal disease; measles, mumps & rubella (MMR); human papillomavirus (HPV); seasonal flu including for children; shingles.

[4] For example: Pregnant women: Pertussis, Seasonal flu; Newborns: BCG, Hepatitis B.

(e.g. meningococcal disease, tuberculosis (TB), pandemic flu) and chemical, biological, radiological and nuclear hazards

- Infection prevention and control (IPC) in health and social care community settings and in particular Health Care Associated Infections (HCAIs)

- Other measures for the prevention, treatment and control of the management of communicable disease (e.g. TB, blood-borne viruses, seasonal flu)

Whilst not meeting the strict definition of health protection above, the guidance on LA health protection duties[2] suggests that this should include the national screening programmes:

- Antenatal (foetal anomaly, infectious diseases in pregnancy, sickle cell and thalassaemia) and newborn (nine life-limiting diseases, hearing, and newborn physical examination)

- Cancer (bowel, breast and cervical)

- Diabetic retinopathy

- Abdominal aortic aneurism.

Responsibilities

The responsibility for the health protection function is spread across the following organisations:

- The Council, through the leadership role of the DPH, has a delegated health protection duty from the Secretary of State to provide information and advice to relevant organisations so as to ensure all parties discharge their roles effectively for the protection of the local population.[1] This leadership role relates mainly to functions for which the responsibility for commissioning or coordination lies elsewhere. As a unitary authority, the Council also provides local support for the prevention and investigation of local health protection issues through the Public Protection Environmental Health (EH) function.

- Public Health England (PHE) brings together a wide range of public health functions and is responsible for delivering the specialist health protection response to cases, incidents and outbreaks; and provides expert advice to NHS England (NHSE) to commission immunisation and screening programmes, as well as a number of other responsibilities relating to surveillance and planning.

- NHSE is responsible for the commissioning of national screening and immunisation programmes in Northumberland; and for ensuring, with local DsPH, that Clinical Commissioning Groups (CCGs) and NHS providers have adequate health protection plans in place. NHSE also chairs the Local Health Resilience Partnership.

● NHS Northumberland CCG commissions treatment services (e.g. inpatient infectious disease services, community TB services) that comprise an important component of strategies to control communicable disease.

In addition to this, other organisations with significant responsibilities for aspects of the overall health protection system include primary and secondary healthcare within the NHS (delivery of national programmes and incident response, statutory reporting of notifiable diseases, occupational health); major utilities and other agencies such as the Food Standards Agency and Defra.

Current arrangements

The main components of the current arrangements for obtaining assurance around the breadth of services which contribute to the health protection functions are summarised at Appendix 1; routine assurance is largely passive rather than proactive. Rather than providing more detail on performance of all of the screening and immunisation programmes, this report will focus on influenza.

Follow up from the 2015/16 report

The 2015/16 assurance report identified two areas for which further assurance was sought:

1) The identification of any inequalities i.e. differences in screening and immunisation uptake between populations within Northumberland, and plans to address these

2) Confirmation that robust systems and processes are in place to prevent Healthcare Associated Infections (HCAIs) across health and social care;

With respect to the identification of inequalities within screening and immunisation programmes, each screening programme is required to develop an inequalities action plan. This is undertaken by each screening programme provider operational group and in Northumberland, addressing inequalities in screening uptake will also be a feature of the local cancer strategy action plan. Nationally, screening and immunisation uptake is generally lower in more deprived communities and this is reflected locally. Inequalities between immunisation programmes across the region are identified through both the 0-19 Immunisation Board and the Flu and Adult Immunisation Board; action plans are in place for each Board. In 2015/16, the NHSE Screening and Immunisation Team contacted the 20% of GP practices with the lowest flu and childhood vaccination uptake rates to discuss how these could be increased; this will be repeated in 2017/18.

HCAIs are those resulting from medical care or treatment in hospital (in or outpatient), residential/nursing care settings, or the patient's own home. With treatment most patients recover from a HCAI without any problems. However, these infections may result in the closure of wards, can extend a patient's stay in hospital,

and in severe cases can cause prolonged illness, disability or death; they are largely preventable through the appropriate use of antibiotics and the consistent use of good infection prevention and control techniques. A range of committees and partnerships are in place covering Northumberland to ensure that HCAIs are monitored, benchmarked and best practice shared. A review process for each individual HCAI ensures that lessons are identified and learned. The CCG commissions an annual HCAI report which explores performance of both the CCG and relevant Trusts. Within social care settings the NHFT community IPC team offer training and support across a range of IPC activity areas including quarterly meetings with care homes. Contractual mechanisms also ensure that care homes are engaged in the IPC agenda.

Level of assurance

Screening and immunisation programmes. There are differences in uptake across the County for both screening and immunisation programmes but overall the uptake is higher than most LAs in the NE and higher than the England average. There is room for improvement but no major cause for concern. The Northern Region QA team undertook a routine assurance visit to the Antenatal and Newborn Screening Programme delivered by Northumbria Trust during 2016/17; areas for improvement and good practice were highlighted and there were no significant concerns. One serious incident was declared relating to one of the screening programmes but the risk of harm to patients was considered to be low. There were no serious incidents relating to any of the immunisation programmes.

EPRR. The 2016/17 assurance of the Local Health Resilience Partnership undertaken by NHSE highlighted three main risks: business continuity planning; the implications of Brexit for the health system, particularly staffing; and the need to review mass casualty planning and capability. These all feature in the 2017/18 action plan. In common with every other Local Resilience Forum (LRF), pandemic flu remains one of the Northumbria LRF's key risks. To ensure that current plans are fit for purpose Exercise Swan, a multi-agency pandemic flu exercise, was undertaken on 13th October 2016. The post exercise report made a number of recommendations which have resulted in a revised NE Pandemic Flu Plan and a number of strategic and more local actions, one of which is to develop a specific County Council pandemic flu plan.

Health Protection. There are excellent working relationships in place between PHE health protection staff and the public health and public protection teams within the Council, CCG and Trust staff. Outbreaks and incidents of significance included a flu outbreak in HMP Northumberland; an avian flu outbreak; a TB incident in a school; and a gastrointestinal illness outbreak in a retreat centre. Communication is key to ensuring an effective response and this is facilitated through Council involvement in outbreak control team meetings, Northumberland specific weekly updates on infectious disease incidents and regular meetings.

FOCUS ON INFLUENZA

Background

Influenza virus or 'flu' is a highly infectious cause of acute respiratory illness. There is a wide spectrum of severity of illness ranging from minor symptoms through to pneumonia and death. Influenza is a public health issue because it is highly infectious; may be life-threatening in the elderly and chronically unwell; and because of its ability to change causing major pandemics with severe illness in all ages. Whilst pandemic influenza remains the highest civil emergency risk both nationally[5] and locally, seasonal flu presents a more immediate operational risk in terms of ill health and deaths and its impact on the delivery of health and social care. Local authorities, through their DsPH, have responsibility for:

- Providing appropriate advocacy with key stakeholders and challenge to local arrangements to ensure access to flu vaccination and to improve its uptake by eligible populations
- Providing leadership, together with local resilience partners to respond appropriately to local incidents and outbreaks of flu infection.

For this reason, this section focuses on seasonal flu.

Seasonal flu refers to the increase in influenza which tends to strike from late autumn through to spring. A possible explanation for the high influenza virus activity in the wintertime is that people congregating indoors during winter facilitate the transmission of the virus or that more humid air indoors may help the viruses survive longer.

Pandemic flu is an epidemic occurring over a very wide area, usually affecting a large portion of the population. Pandemics are triggered by spontaneous and unpredictable changes in the influenza virus particle. These occur irregularly and lead to the development of new subtypes of the virus to which a large proportion of the population will not have developed immunity leading to widespread infection. The 2009 pandemic was the first in the 21st century; in the 20th century, pandemics occurred in 1918 ('Spanish Flu'), 1957 ('Asian Flu'), 1968 ('Hong Kong Flu').

Animal flu viruses are detectable in many different animals. The influenza infections that are naturally transmissible between animals and humans and that are most likely to threaten human health are those in wild fowl and poultry (avian influenza) and pigs (swine influenza).

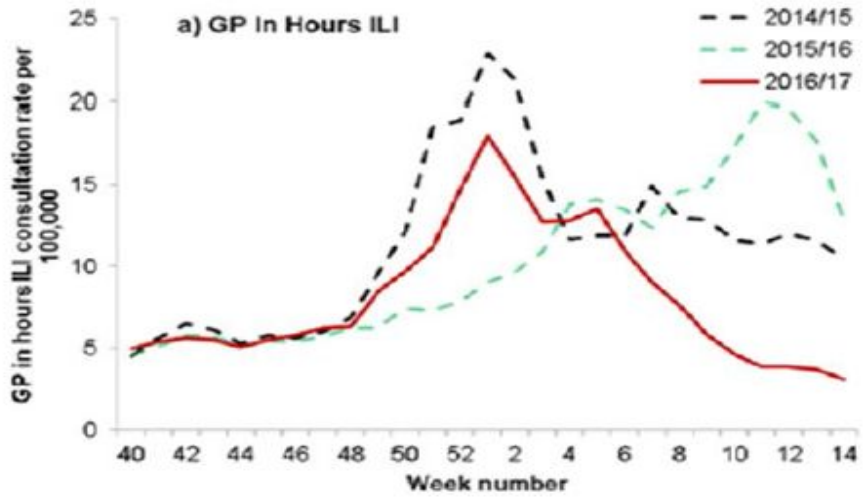
Burden of ill health

Influenza is not a notifiable disease (i.e. there is no statutory requirement for cases to be notified to PHE as there is for measles, for example) so surveillance is based on national PHE syndromic surveillance systems, including GP in hours (see Table 1) and out of hours consultations, sentinel emergency department attendances and NHS 111 calls monitoring a range of indicators sensitive to community influenza

[5] Cabinet Office (2017). National risk register of civil emergencies. 2017 edition. Cabinet Office. September 2017.

activity. The burden of ill health associated with seasonal flu and influenza like illness varies year on year.

Table1. National weekly all age (a) GP in hours consultations for influenza like illness (ILI).



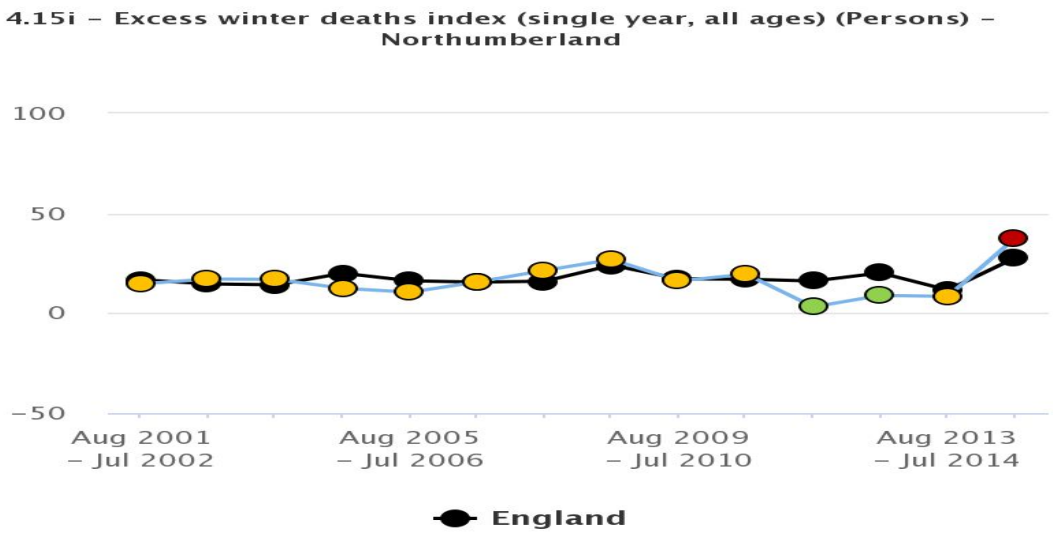
The main circulating strain in 2014/15 and 2016/17 was influenza A(H3N2) which may explain why the peaks were similar in terms of timing; the main circulating strain in 2015/16 was influenza A(H1N1).

In 2016/17 there were 91 emergency admissions with a primary diagnosis of flu, compared to 66 in 2015/16 at a (NHS) cost of £137k and £99k respectively.[6] However, the bigger impact on hospital admissions is in the context of community acquired pneumonia (CAP) since influenza-related secondary bacterial infections overall may account for up to 30% of cases of CAP.[7] CAP is also a leading cause of death in children under the age of 5 years. In 2016/17 there were 1344 emergency admissions for a condition with a primary diagnosis of pneumonia compared to 1056 in 2015/16 at a (NHS) cost of £4.040M and £2.985M respectively. If up to 30% are attributable to flu and if 50% of those could have been prevented by flu vaccination, the cost of preventable secondary CAP in 16/17 could be as high as £606k with 201 avoidable admissions. Admissions for CAP reflect inequalities in other areas with higher admission rates in the most deprived communities.

Whilst the factors contributing to excess winter deaths are complex, it is unlikely to be a coincidence that the particularly high number of winter deaths in 2014/15 (Table 2) coincided with the year in which there was a mismatch between the circulating strains of flu and those strains which featured in the seasonal flu vaccine.

[6] North of England Commissioning Support Unit (2017). Emergency admissions for acute conditions not usually requiring hospital admissions (CCG OIS Indicator 3.1) flu/pneumonia. 25 Sept 17.
[7] Joseph et al. (2013). Bacterial and viral infections associated with influenza. Influenza and Other Respiratory Viruses 7(Suppl. 2), 105–113. Available from: http://onlinelibrary.wiley.com/doi/10.1111/irv.12089/pdf.

Table 2. Excess winter deaths index Northumberland (single year, all ages, persons). 2001/2 - 2014/15



(Source: Public Health Outcomes Framework)

Closed settings, such as care homes, schools and hospitals, are high risk sites for transmission of influenza. The likelihood of transmission of influenza is increased in these settings because of relatively close and prolonged contact between a cohort of individuals. The risk of a poor outcome is also increased since vulnerable individuals (such as elderly or immunocompromised individuals) are often found in closed settings. For these reasons, outbreaks of influenza in closed settings, with the exception of those in hospitals, are typically managed with the assistance of the PHE Health Protection Team. In the North East in 2016/17, there were 19 outbreaks of suspected influenza in care homes, of which 12 were confirmed by virological testing.

Prevention

Minimising the impact of flu is effected through the National Flu Plan.[8] The prevention of flu is focused on:

- The national flu immunisation programme

- Promoting good infection prevention and control processes across health and social care settings including the prompt notification and management of influenza outbreaks

[8] PHE (2016). Flu Plan Winter 17/18. PHE publications gateway number: 2016697 March 2017.

- Consistent communications which emphasise the key messages.

These prevention measures are underpinned by the surveillance of flu vaccine uptake and flu/influenza-like-illness activity.

This year, the flu vaccine has been extended to encompass all children aged two to eight years. This is part of a phased rollout to all children aged two to seventeen years which commenced in 2013 with the aim of providing both individual protection to the children themselves but more importantly, to reduce transmission across all age groups, particularly between children and those who they may come into contact with who fall into one of the risk groups.

Flu vaccine uptake in Northumberland

In Northumberland, flu vaccine uptake in people aged over 64 years remains high but lower than the target of 75% (see Table 3). Locally and nationally, vaccine uptake has dropped since 2014/15 and this may be partly attributable to reduced confidence in the vaccine following the mismatch in 2014/15.

Table 3. Seasonal flu vaccine uptake 2014/15 - 2016/17

CCG	65 and over (%)			Under 65 at risk (%)		
	2014/15	2015/16	2016/17	2014/15	2015/16	2016/17
Gateshead	74.9	72.6	**73.8**	55.1	50.3	**54.9**
South Tyneside	76.6	73.6	**74.0**	57.5	51.4	**54.3**
Sunderland	74.7	71.5	**72.2**	50.8	43.4	**48.0**
Newcastle West	76.2	73.9	**74.2**	54.5	47.8	**51.9**
Newcastle North & East	77.6	74.6	**74.9**	51.2	44.7	**48.1**
North Tyneside	74.9	71.9	**72.4**	50.8	46.3	**50.3**
Northumberland	75.2	73.5	**73.9**	54.0	48.2	**51.8**
Cumbria	75.3	73.5	**73.6**	56.9	51.6	**54.5**
North Durham	73.4	71.5	**70.8**	51.8	45.8	**50.8**
Darlington	72.8	71.3	**70.6**	47.0	40.6	**46.5**
DDES*	72.4	70.6	**70.2**	46.1	41.1	**47.9**
Hartlepool & Stockton**	73.4	71.4	**71.0**	48.0	43.2	**50.0**
South Tees	75.7	71.3	**72.2**	48.0	42.1	**48.3**
CaNE$	74.7	72.4	**72.5**	51.9	46.1	**50.8**
England	72.7	71.0	**70.4**	50.3	45.1	**48.7**

*Durham Dales, Easington & Sedgefield CCG. ** Hartlepool and Stockton on Tees CCG
$ Cumbria and North East

(Source: PHE/NHSE (2017). Seasonal influenza vaccination report 2016/17. Cumbria and the North East. June 2017)

This relatively high uptake in those over 64 years contrasts markedly with the much lower uptake in all other risk groups which was 51.8% locally, about the same as the regional but higher than the England average. We also know that within the various

clinical risk groups, uptake varies; for instance, the uptake in people with diabetes is likely to be higher than for those with chronic liver disease.[9] The uptake in pregnant women has remained at about 50% over the last 3 years. The school based programme for children in years 1 - 3 achieved higher uptake in 2016/17 between 62.8% and 64.3%, largely reflecting easier access (having children vaccinated in schools is easier for parents than taking them to their GP). Between practices in Northumberland, uptake rates ranged from 59.4% to 84.4% for those aged over 64 years and from 37.8% to 66.3% for those under 65 years in a clinical risk group.

Table 4. Seasonal flu vaccine uptake in frontline healthcare workers by NHS Trust 2014/15 to 2016/17

Organisation	2014/15	2015/16	2016/17
City Hospitals Sunderland FT	55.8	70.6	77.2
South Tyneside FT	62.4	49.1	77.5
Gateshead Health FT	57.2	66.6	76.1
Newcastle Upon Tyne Hospitals FT	64.9	53.9	59.3
Northumbria Healthcare FT	57.3	51.6	62.0
Northumberland, Tyne and Wear Mental Health FT	62.4	63.6	64.4
North East Ambulance Service FT	34.6	47.8	48.4
North West Ambulance Service Trust	56.1	47.4	53.0
North Cumbria University Hospitals NHS Trust	56.0	58.1	75.4
University Hospitals of Morecambe Bay FT	70.2	78.5	76.8
Cumbria Partnership FT	49.2	43.0	66.7
County Durham & Darlington NHS FT	76.6	53.0	57.1
North Tees & Hartlepool NHS FT	55.5	43.4	58.6
South Tees NHS FT	75.5	75.2	76.5
Tees Esk & Wear Valley NHS FT	42.1	39.1	55.4
CaNE	61.5	56.1	64.6
England	54.9	50.8	63.4

(Source: PHE/NHSE (2017). Seasonal influenza vaccination report 2016/17. Cumbria and the North East. June 2017)

Data for uptake amongst frontline social care workers is not currently available but nationally the uptake amongst this cohort is low.

What are the barriers to vaccination

The reasons why people hesitate to have any vaccine are complex but generally fall into three categories:

- Confidence. Does the vaccine work and is it safe; do people trust the motivations of the policy-makers recommending the vaccine; and do they trust the service and people delivering it

[9] NHS Wales/ Public Health Wales (2017). Seasonal influenza in Wales 2016/17 Annual Report.

● Complacency. Where perceived risks of vaccine-preventable diseases are low and vaccination is not deemed a necessary preventive action; other life/health responsibilities may seem more important at that point in time

● Convenience. In the UK context for flu vaccination, this will relate to availability, geographical accessibility, ability to understand (language and health literacy), the quality of the service (real and/or perceived) and the degree to which vaccinations are provided at a time and place and in a cultural context that is convenient and comfortable.[10]

Barriers to influenza vaccination of healthcare workers include misconceptions or lack of knowledge about influenza infection (e.g. that up to 77% of people infected do not have symptoms[11]), the potential severity of the disease (a third of deaths during the 2009 pandemic were in previously healthy adults), the perception that the vaccine is not very effective and concern about side effects.[12]

One survey in an East Midlands Trust[13] found that one third of unvaccinated clinician respondents thought that universal infection control practices were sufficient; and one third reported they were not vaccinated because they had a good diet and/or took vitamins or supplements that worked as well as or better than the influenza vaccine. Whilst important, these are not a substitute for vaccination. Factors favouring vaccination include previous vaccination, the desire to protect oneself and one's patients, and the perceived effectiveness of the measure.

Measures in place to promote and improve flu vaccine uptake

Approaches to improve the uptake of seasonal flu vaccine relate to coordinated and consistent communications across organisational boundaries; financial incentives aimed at GP practices and Trusts; and targeted work aimed at practices with low uptake. The NE Seasonal Influenza Programme Board has its own plan to improve uptake across the NE as a whole and within individual LA areas.

Communications. For the public, communications messages are developed and coordinated jointly by PHE and NHS England and cascaded through routine communication channels such as the LA, CCG and Trust. Promotion of the flu vaccination is also included in the annual PHE and NHS England joint national winter media campaign, currently branded as "Stay Well This Winter". For NHS organisations, NHS Employers (which acts as the voice of employers in the NHS) supports the 'Flu Fighter' campaign aimed at NHS staff with a wide range of resources. NCC has its own communication strategy aimed at frontline social care staff which includes writing to eligible staff to highlight why the flu vaccine is

[10] WHO Strategic Advisory Group of Experts on Immunization (2014). Report of the SAGE working group on vaccine hesitancy. 12 November 2014

[11] Hayward A et al (2014). Comparative community burden and severity of seasonal and pandemic influenza: results of the Flu Watch cohort study. The Lancet Respiratory Medicine , Volume 2 , Issue 6 , 445 - 454.

[12] Domínguez A, Godoy P, Castilla J, Soldevila N, Toledo D, Astray J, et al. (2013) Knowledge of and Attitudes to Influenza Vaccination in Healthy Primary Healthcare Workers in Spain, 2011-2012. PLoS ONE 8(11): e81200. https://doi.org/10.1371/journal.pone.0081200

[13] Burch T (2012), Motivators and barriers for influenza vaccine uptake among healthcare workers: results of an online staff survey, East Midlands Seasonal Influenza Debrief.

important and their professional responsibilities to protect clients. PHE has sent letters to early years child care settings on revised infection prevention and control measures and resources for residential care settings have also been provided.

Financial incentives. Nationally, the Commissioning for Quality and Innovation (CQUIN) scheme has an element which includes increasing flu vaccine uptake in frontline healthcare workers in NHS Trusts. A sliding payment mechanism is in place which ranges from 25% (if vaccine uptake is between 50 - 60%) to 100% (if vaccine uptake is 70% or over). Locally, the CCG has an incentive scheme in place which provides a one off payment for practices which exceed 75% uptake in the older age group.

Targeted work. NHSE regularly review uptake across all practices in the North East and will focus support on those practices in which uptake is in the bottom 20%.

Challenges

There are a number of challenges with the delivery of the flu vaccination plan currently. These include:

- **Demographic changes.** Uptake rates do not necessarily reflect how hard GP practices have worked to deliver the programme. For instance, the highest uptake in the older age group (76.6%) was achieved in 2013/14 when 54,545 people in this group were vaccinated. In 15/16, more older people received the vaccine (54,936) but the uptake rate reduced to 73.5% because the pool of people in this age group increased.

- **Communication between providers.** Ensuring that uptake data is correct requires information about patients being vaccinated in community pharmacy or through employers to be communicated to the patient's GP and recorded appropriately.

- **Improving uptake in social care staff**. There is little evidence about what works to improve uptake in this particular group or what the uptake is but anecdotally, the uptake is likely to be low.

- **Limitations of current provision**. There are opportunities to increase uptake by broadening the offer to other healthcare settings such as midwifery services.

- **Vaccination of staff in residential and domiciliary care**. Although the vaccination of residential/nursing home and domiciliary care staff is an employer responsibility, this is a group who have historically struggled to access provision. Whilst some providers may arrange for the vaccination of staff, others may rely on staff using informal arrangements with GPs or staff self-funding; alternatively, staff may forego vaccination because of the cost. In Northumberland, NHFT has an arrangement in which staff from this sector can access Trust vaccination clinics and employers will only be charged the cost of the vaccine.

Plans for 17/18 and onwards

Increasing flu vaccination continues to be a key focus across the health care system and there are several initiatives to support this such as:

- Developing and implementing approaches to improving uptake in people with liver disease within NHFT

- NHSE commissioned service to improve uptake in pregnant women through community midwifery services

- Identifying and implementing good practice to improve uptake in frontline social care workers (supported by NHSE). All social care staff have been written to, to encourage them to participate in the Council/Trust funded vaccination programme and a video has been produced locally to dispel myths and promote uptake

- NHSE have recently announced that vaccination for care home staff will be made available at NHSE expense

- Continuing to provide and participate in financial incentives schemes to improve uptake

- Improving data flows between community pharmacy and midwifery services and GPs to ensure the data accurately reflects uptake rates (supported by NHSE).

Summary

Influenza, both seasonal and pandemic, remains one of the highest risks in terms of its annual impact on localised operational delivery and likelihood and impact in the event of a pandemic. The morbidity and mortality associated with seasonal influenza varies year on year depending on vaccine effectiveness, vaccine uptake and the characteristics of the circulating viruses but it is considerable. The control of influenza is based on prevention and control of spread through vaccination and good IPC processes; effective surveillance; and prompt and effective management of outbreaks. Vaccination is a cornerstone of the national flu plan and the system needs to remain focused on continuing to promote and support initiatives to improve uptake in the recommended groups.

APPENDIX 2

HEALTH PROTECTION ASSURANCE FRAMEWORK

Means of assurance	Purpose	
Public Health Oversight Group (PHOG)	Provide a forum for systematic assurance of NHS England's Public Health Section 7a Agreement (PHS7A) direct commissioning responsibilities* (see p.3) and for the sharing of stakeholder intelligence between public health partners in the local health and care economy and opportunities for the DsPH representatives to provide support and improve communication within their networks. This includes oversight of the quality, safety and patient experience of these commissioned services with a focus on improving health outcomes and reducing variation in quality across Cumbria and the North East. Assurance is a "positive declaration intended to give confidence". This group is not for direct commissioning performance management. This function is carried out through contract review processes as appropriate.	6 per y
Screening and Immunisation Oversight Group (SIOG)	Currently undergoing review but will probably be replaced by a local Northumberland forum twice annually to have a detailed discussion on screening and immunisation programme performance.	TBA
	NHSE commissioned Cancer and Non-Cancer Screening Programmes	
Cumbria and NE Regional Screening Programme Boards (Diabetic Eye Screening; Aortic Abdominal Aneurysm (AAA); cervical, breast and bowel cancer screening; Antenatal and Newborn screening programmes)	Provide strategic leadership for updating, planning and implementing the delivery of each programme for the north east and north Cumbria. Facilitate the sharing of good practice; ensure compliance with national guidance and effective	2 per y AAA
Local Screening Programme Boards	Provider led operational groups responsible for the delivery of local screening programmes including a local plan to identify and address inequalities.	Quarte
North Screening Quality Assurance Team	Assess the quality of population screening services, including through peer review. Give expert advice during the management of screening incidents. Provide daily support to commissioners and screening programme providers.	Each s progra least e
Information on screening incidents	DsPH are informed of serious incidents in their area and invited to be part of the SI Steering Group to ensure awareness in case of media interest and harm/potential harm to residents.	Ad hoc
Updates at regional DsPH meetings	Raise awareness of developments and issues in any of the programmes by exception Also provide ad hoc workshop sessions in response to requests.	Quarte
Annual Regional Screening Report	Discussion ongoing as to if annual report should be published and, if so, in what format (awaiting feedback from DPH meeting)	Annua
	NHSE commissioned immunisation programmes	

0-19 Immunisation Programme Board; Seasonal Flu and Adult Immunisation Board.	Provide strategic leadership for updating, planning and implementing the delivery of the national 0-19 and influenza immunisation programmes for Cumbria and the north east (CANE). They facilitate the sharing of good practice; ensure compliance with national guidance and effective performance management. The Boards are responsible for identifying areas of improvement and opportunities for joint working to improve uptake and reduce inequalities.	Quarte
Updates at regional DsPH meetings	Raise awareness of developments and issues in any of the programmes by exception Also provide ad hoc workshop sessions in response to requests.	Quarte
ImmForm immunisation uptake data		When
Annual Seasonal Influenza Vaccination Report	Inform partners – CCGs/LAs/A&E Boards – of performance and developments in previous flu season and priorities for next season	Annua
	Health protection surveillance and case/incident management response	
DPH Quarterly Report on Infectious Disease	This report gives the Local Authority assurance regarding the burden of relevant infectious diseases of public health consequence in Northumberland. It gives an overview of the incidence in Northumberland of common causes of infectious gastrointestinal diseases, vaccine preventable diseases (including measles, mumps and rubella), and other selected organisms of public health consequence (eg. Legionella). It also includes a summary of Local Authority level vaccine coverage data.	Quarte
PHE NE Monthly HCAI Summary Report[14]	This report informs the Local Authority of the number of cases of the numbers of specific Healthcare Associated Infections (HCAI) in local hospital Trusts. Specifically, it covers numbers of MRSA, MSSA, C difficile and E coli cases. This data is collected by PHE's Field Epidemiology Service in support of the NHS, and is shared with Directors of Public Health for information.	Month
Operational updates on local health protection issues	This is a weekly confidential email from the Consultant in Health Protection covering the North of Tyne area highlighting any local outbreaks managed by the Health Protection Team and any individual cases which the Consultant believes may be of interest to the local Director of Public Health or hospital microbiologists. It also highlights any regional or national issues which are likely to have local consequences.	Weekl
HIV, Sexual and Reproductive Health Epidemiology Reports (LASER)	These are confidential reports for Directors of Public Health covering STIs, HIV and reproductive health at the Local Authority level, in order to inform joint strategic needs assessments.	Annua
Access to HIV / STI web portal	This is a restricted access data portal which provides Directors of Public Health with sexually transmitted infection surveillance data at a local level.	When
North East Quarterly Sexual Health Bulletin	This report gives the DPH an overview of the number of cases of gonorrhoea, chlamydia, syphilis, and genital warts diagnosed per quarter at each of the North East's GUM clinics. It includes a breakdown of cases by key demographics such as gender and age. It also gives an overview of the number of sexual health screens undertaken at each GUM clinic, and their positivity rate.	Quarte

[14] Healthcare Associated Infections (HCAI)

North East Annual Sexually Transmitted Infectious Report	This report covers the same topics as the Quarterly Bulletin, but for the full calendar year. The data is set in the context of previous years, allowing comparisons to be drawn and trends to be identified. This also includes commentary on national trends and outbreaks.	Annua
Access to PHE Fingertips data portal	This online data portal provides the DPH with an overview of a wide range of data relating to the health of the population, often available at Local Authority or CCG level. Several sets of data are of particular relevance to health protection: for example, 'Health Protection Profiles', 'Sexual and Reproductive Health Profiles' and 'TB Monitoring Indicators'.	When
Annual Regional Health Protection Report	This is an annual report for the North East region, prepared by the PHE North East Deputy Director for Health Protection. It gives an summary overview of the action taken by the Health Protection Team in the preceding year to protect the health of the North East population. It includes a summary of prevention, surveillance, and disease control activity, as well as a summary of emergency preparedness, microbiology, communications, and environmental work. It also describes work to improve the quality of health protection services year-on-year, and sets out the Team's priorities for the coming year.	Annua
Regional annual TB report	This report presents data on the burden of tuberculosis in the North East, and an overview of treatment outcomes in the preceding year. The data is broken down at Local Authority level. Incidence of cases is broken down by key demographics, including age and ethnic group, and is set in the context of incidence in other years so that comparisons can be drawn and trends identified. The report also includes recommendations for tackling TB in the North East over the coming year.	Annua
Area Health Protection Committee meetings	This meeting covers the Northumberland, North Tyneside, Newcastle upon Tyne, Gateshead, South Tyneside and Sunderland Local Authority areas. It is attended by the Directors of Public Health, members of their teams, members of three Local Authority Environmental Health teams, and representatives from the local hospital Trust microbiology teams. The meeting discusses recent outbreaks or incidents of wider interest, including sharing recommendations from incidents across the area. The meetings also provide DsPH with the opportunity to discuss and challenge the routine health protection response across the area.	Quarte
NE Quarterly TB Summary Report	This report provides data on the incidence of TB at local authority level, broken down by key demographics. Case numbers at local authority level are typically too small on a quarterly basis to reliably consider trends, but these reports provide the DPH with assurance that the number of TB cases within their area is within typical limits.	Quarte
NE PHE Centre Weekly Influenza and Intestinal Infectious Disease Reporting	These reports give an overview on influenza activity at an international, national and regional (North East) level. This includes the latest data on the circulating strains of influenza. This report also summaries the most relevant points from the PHE weekly national influenza report.	Weekl March
Participation in/Minutes of Outbreak Control Team (OCT) meetings	When community outbreaks of infectious disease occur which require multiagency management, the DPH is routinely invited to take part in Outbreak Control Team meetings chaired by the Consultant in Health Protection. This allows the DPH (or deputy) to represent the interests of the local population and the Local Authority in decisions taken to control the outbreak. Formal minutes of these meetings are produced, and typically	N/A

	circulated within 24 hours.	
Outbreak/Incident reports	Following the conclusion of any community outbreak of infectious disease for which an Outbreak Control Team has been convened, a formal report is always prepared by the Consultant in Health Protection who chaired the Outbreak Control Team (or a deputy). This includes a summary of the outbreak and actions taken to control it, as well as any recommendations for future practice or outbreak investigations. These are typically circulated within 8 weeks of the closure of an outbreak.	N/A
National Health Protection Report	This is a national online publication. It highlights new publications of a large range of different routine national data reports on infectious diseases (e.g. national data on laboratory reports of respiratory infections; sentinel surveillance of blood borne virus testing in England; and laboratory surveillance of Pseudomonas bacteraemia). It also highlights publication of new non-routine Health Protection publications by PHE, such as updated guidance.	Weekl
	Emergency Planning Resilience and Response (EPRR)	
Regional Local Health Resilience Partnership (LHRP)	Provides a strategic forum for local organisations to facilitate, develop and assure health sector preparedness and planning for emergencies at LRF level.	Every
EPRR Exercises	Test plans for responding to health and non health-related emergencies. Post exercise reports highlight areas for development and identifies amendments to the plan and secondary areas for development such as training.	N/A
LHRP to regional NHS England team review	Provides second party assurance of LHRP function, engagement and achievements. Identifies key risks, areas of concern and examples of good practice.	Annua