

# JOURNAL-BASED LEARNING EXERCISES



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## DEADLINE WEDNESDAY 4 SEPTEMBER 2019

### The NHS Long Term Plan. Overview and Summary.

(Note: Questions are set on the overview and summary only, pp 1–10)

[www.longtermplan.nhs.uk/wp-content/uploads/2019/01/nhs-long-term-plan.pdf](http://www.longtermplan.nhs.uk/wp-content/uploads/2019/01/nhs-long-term-plan.pdf)

Assessment No: 060919

### Eradication of measles: remaining challenges.

Holzmann H, Hengel H, Tenbusch M, Doerr HW. *Med Microbiol Immunol* 2016; 205 (3): 201–8. Assessment No: 060619

01	The NHS has been in operation since 1948.	01	Measles virus (MeV) is commonly regarded as a bloodborne virus.
02	Going forwards, there will be a provision of 2.2% funding increases annually.	02	MeV can predispose people to opportunistic infections due to its impairment on memory B and T cells.
03	The NHS is the largest employing organisation in the world.	03	MeV is easily transmitted between humans and animals, and vice versa.
04	There will be a major focus on digital systems going forwards, especially in primary and outpatient care.	04	Twenty-four genotypes of MeV compiled in eight clades have been identified after sequencing the 450 nucleotides of the <i>N</i> gene.
05	The plan ensures that specific scientific and technical training programmes are developed to support the implementation of the plan.	05	The pathognomonic Koplik spots appear on the buccal mucosa at the start of the prodromal phase.
06	The plan seeks to address health inequalities and demonstrate achievements via key metrics.	06	Subacute sclerosing panencephalitis (SSPE) is linked with MeV strains escaping specific immune responses persisting in neurons and glia cells of the brain.
07	There will be a drive to expand treatment at home with more community health provision.	07	The MeV reproductive rate is much higher in comparison to Ebola and influenza.
08	The plan will expand its mental focus to include autism and learning disabilities.	08	In the pre-vaccination era, MeV would be responsible for the deaths of 7–8 million children annually.
09	The plan acknowledges difficult-to-recruit specialisms and is looking at using new incentives in these areas.	09	With the increased risk of exposure that an epidemic brings, MMR vaccinations can be recommended for infants as young as 6–9 months of age.
10	The plan anticipates saving £70 million in five years.	10	After vaccination programmes started in the 1980s, the incidence rate dropped by roughly 70%.
11	The plan requires some changes to legislation.	11	Most MeV strains start the infection process by the interaction of glycoprotein F to virus-specific cell receptors such as CD120.
12	The plan envisages the use of artificial intelligence.	12	Pregnant ladies who've previously had an MeV infection or vaccination have a level of immunity that can offer vertical protection to their infants.
13	There will be no extra funds available for CPD.	13	Wars and the increased refugee migrations across Europe have increased the chances of the WHO reaching its eradication goal.
14	There will be a requirement for more-flexible rostering of workers.	14	The low reproduction rate of measles means that you only need 40% of a population to be immune to ensure herd immunity.
15	The plan notes that research and development are critically important.	15	Combined vaccines such as MMR lead to an impairment of the immunogenic infectivity of each of the single attenuated viruses.
16	There is a commitment to reduce air pollution, smoking and obesity.	16	For MeV surveillance systems to work appropriately within national health authorities, suspected cases must be reported rapidly.
17	It is recognised that delays to hospital discharges will remain problematic.	17	On average, patients are at their most infectious six days onwards after the onset of exanthema.
18	Over three million people contributed individually to consultations on the plan.	18	Whilst being developed over 50 years ago, the Ender/Schwarz strains are still the preferred strains in the live-attenuated vaccine.
19	The NHS has improved the outcomes for stroke and major traumas.	19	Within the laboratory, MeV diagnosis can be hampered due to false positives caused by recent vaccination history or cross-reactivity with other viruses.
20	The plan notes that employees are under stress.	20	The Rinderpest pandemic of 2010 has shown that <i>Morbillivirus</i> vaccines are ineffective.

## REFLECTIVE LEARNING

01	What impacts and implications do you foresee for pathology services based on this plan?	01	Apart from the viral vaccines mentioned in this article, there have been other vaccines available for use. Summarise a select few of these, including the challenges they have faced.
02	How could point-of-care testing assist in early diagnosis and community care?	02	Reflect on the differences between innate and adaptive immune responses within the human body.