

Glossary of Terms

Appendix C

ANTIBODY: Proteins made by B-lymphocytes that recognise and bind to viral antigens

ANTIGEN: 3D stretches of protein used by immune system to identify viral strains.

ANTIGENIC DRIFT: The accumulation over time of mutations in viral antigens that can lead to the immune system losing the ability to recognise those antigens as 'foreign'.

ANTIVIRAL DRUG: Pharmaceutical that inhibits viral replication and spread.

CASE FATALITY RATIO (CFR): the proportion of the population who develop symptoms during an influenza outbreak and who subsequently go on to die as a result of that infection.

CLINICAL ATTACK RATE (CAR): the proportion of the population who develop symptoms, ranging from severe to mild, during an influenza outbreak.

CYTOKINE STORM: Hyperactive immune response to a viral infection that can lead to death.

CONTAINMENT: The act of attempting to prevent a viral outbreak from spreading further.

CROSS-PROTECTION: The ability of an immune system response against one specific viral strain to target additionally other viral strains.

CROSS-REACTIVITY: The ability of an antigen to induce an immune response that interacts additionally with other antigens.

EXCESS MORTALITY: The number of deaths that occur during an outbreak and above that expected for the time of year.

GENOME: The genetic constitution of any organism, including viruses.

HAEMAGGLUTININ (HA or H): Viral surface protein used to gain entry to host cells.

HERD IMMUNITY: Protection from infection brought about when a high proportion of the population is immune.

HOUSEHOLD PROPHYLAXIS: Post-exposure prophylaxis of household contacts with antiviral drugs.

IMMUNE: The state of a person that is protected from a specific type of infection.

IMMUNE SYSTEM: Body's defense mechanism against 'foreign' antigens, including those from viruses, bacteria, fungi, parasites and cancer cells.

IMMUNISATION: Manipulation of the immune system to confer, or bolster, its ability to protect.

MODELLING: Theoretical system, based on complex mathematics, used to simulate pandemic scenarios.

MITIGATION: Strategy to delay the spread, or moderate the severity or extent, of a pandemic.

NEURAMINIDASE (NA or N): Viral surface protein used to release newly-synthesised viral particles from host cells.

OSELTAMIVIR: Antiviral drug, marketed by Roche Pharmaceuticals under the trade name Tamiflu ®, that acts by inhibiting Neuraminidase activity and thus blocking viral spread.

PANDEMIC: Worldwide epidemic of a disease.

PANDEMIC-SPECIFIC VACCINE: Vaccine developed against the antigens of the specific viral strain responsible for the pandemic.

POLYMERASE (PB1): Protein of virus used to replicate new, additional copies of itself following infection of a host cell.

POST-EXPOSURE PROPHYLAXIS: Use of antiviral drugs to prevent infection *after* exposure to infected contacts.

PRE-EXPOSURE PROPHYLAXIS: Use of antiviral drugs to prevent infection *before* exposure to infected contacts.

PRE-PANDEMIC VACCINE: Vaccine developed, ahead of a pandemic, against antigens of a viral subtype.

PRIME-BOOST: Vaccination strategy whereby two different types of vaccine, both raised against the same antigen, are given sequentially in order to maximise the chances of inducing a robust immune response against that antigen.

PRIMING: Initial exposure of the immune system to an antigen, before subsequent exposure ('boosting') that leads to more robust immune system responses.

PROPHYLAXIS: The prevention of infection.

REASSORTMENT: The swapping of genomic segments between different subtypes during co-infection of a host to create a potentially-radically-altered novel viral subtype.

R (REPRODUCTION NUMBER): The number of people that an infected individual goes on to infect.

SEROLOGY: The study or diagnosis of blood (eg assessment of antibodies circulating in the blood).

SHEDDING: Release of newly synthesised viral particles from an infected host.

SPI: Scientific Pandemic Influenza Advisory Committee; provides scientific advice to the UK Government on pandemic preparedness and related issues

SUBTYPE: Viral strain classified by the versions of Haemagglutinin and Neuraminidase that it possesses.

SURVEILLANCE: Capture of data to understand the characteristics and impact of an influenza outbreak.

TRANSMISSION: Viral spread via its replication in infected host cells following exposure to infected material.

VRULENCE: The capacity of an infectious agent to infect and cause illness.

WHO: World Health Organization.

ZANAMIVIR: Antiviral drug, marketed by GSK Pharmaceuticals under the trade name Relenza Neuraminidase activity, thus blocking viral spread.

CAR: Clinical attack rate
CFR: Case-fatality ratio
ERMH: Emergency Risk Management for Health
GAP: Global Action Plan for Influenza Vaccines