- appreciate the importance of variability
- learn from international experiences, such as Canada, in explaining science effectively

The Committee was also informed that many of these recommendations are not new and have been highlighted prior to the pandemic.

Scientific advice to inform decision-making

- A principle of good scientific advice is to provide decision-makers with options to choose from. This ensures that the provision of advice does not become directional.
- The pandemic highlighted different policy challenges and these weren't always well communicated or analysed, such as the direct versus indirect harms of COVID-19.
- There were examples from the pandemic where risk was communicated well and other examples where this was less effective. For example, there wasn't a good understanding of risk in different settings (e.g. care homes and schools). In contrast, risk was communicated effectively in the vaccination programme.
- A key public health message used by governments was that decision-making "followed the science". This was not well communicated because scientific analysis and advice is evolutionary and not static. This led to confusion about the rationale for decision-making, particularly where policy judgements changed over time.
- As a starting point, the "science" and process for analysing data needs to be contextualised. It is important to take time to explain key scientific issues and the scientific process with "communicators", such as the media, so that they can have an informed understanding of issues when sharing these with the wider public and scrutinising decision-making.

Public health data gathering and accessibility for decision-making

- Epidemiological modelling is an important tool that can help inform decision-making. For example, this helped to identify the likelihood of the second wave of infections in the UK.
- It is important that epidemiological modelling can be compared against public health data. Scotland has been developed this facility through the pandemic into a world-leading EAVE initiative led by Professor Aziz Sheik, University of Edinburgh. This has enabled Scotland to show the impact of vaccination.
- Health data is generally difficult to access in Scotland for research purposes. This is due to factors including the introduction of the General Data Protection Regulation and a culture of data protection within the National Health Service and public bodies. The guardians of public health data can be risk averse and are not rewarded for collaborating with scientists to make data accessible to