Assessment of the effectiveness of modified vaccinia Ankara (MVA-BN) (Imvanex) against monkeypox in England

Preliminary plans

UKHSA

2nd August 2022
Three groups of individuals to assess the vaccine

• Health care and laboratory workers
• Contacts of cases
• Gay and bisexual MSM (GBMSM) attending sexual health clinics
Designs for health care workers

- Cohort analysis:
  - Identifying vaccine eligible health care workers and any cases within this population and vaccination history. Note that we do not envisage this will have power due to very high coverage in this population and low risk.
  - Comparing incidence by time between vaccination and exposure and by number of doses.
    - If within those vaccinated some are exposed shortly after, or before vaccination then protection will be less than those vaccinated and this can be assessed within those vaccinated should cases arise.
  - Note power likely to be very low. (so far N ~ 700 in database)
Designs for Contacts of cases

• Comparison by time since exposure.
  • Incidence rates can be compared by time since exposure, assuming rapid vaccination would be more effective than vaccination too long after exposure. This does require data on exposure in contacts – we are now (as of August 2022) implementing capture of this information when vaccination occurs.

• Case-control
  • If cases occur in those known to have had contact with a previous case for whom vaccination was offered (prior to becoming a case) then all known contacts of the original case can be used as matched controls and vaccination status assessed. Note however many contacts of cases are anonymous (and likely those at higher risk) and these cannot be used.

• Note power may be low to detect the size of effect that protective effect prophylactic use may give
Designs for gay and bisexual MSM attending sexual health clinics

• Cohort / case-control / case-coverage
  • Although pii data cannot be shared outside the clinics, if vaccination and cases are identified within clinics then anonymous data can be shared to allow cohort or nested case-control analyses.
  • Data extracts through the GUMCAD system (that clinics report into) are usually quarterly so there will be delays. A GUMCAD number is provided than can be used if we go back to clinics to identify individuals. It may be possible to be quicker using a few large clinics (e.g. in London).
  • Case-coverage may provide more rapid estimates if we can estimate coverage and we know for cases they are eligible for vaccination at the clinics (we do get vaccination status of cases). But coverage estimates may be hard to get.
  • Other controls not through clinic registers? No current proposals but interested in suggestions. We don’t think test-negative would work – but interested on others ideas.
• Likely much bigger numbers vaccinated, but power reduced by lower exposure (than contacts of cases) and loss of cases that do not present at the clinic they usually attend. Also could be miss-classification issues if vaccination given at clinics they don’t usually attend.