# MPX VE Case Control Study – Data Quality Checks

## Case/Control Questionnaire Checks

* Dose 1 and Dose 2 Vaccination Interval
  + Examine distribution for the time between dose 1 and dose 2 to identify implausible intervals
    - Interval = second\_dose\_date - first\_dose\_date
  + Flag intervals <24 days
  + Flag intervals >28 days (although this will likely be more common due to roll out of vaccine in jurisdictions)
* Prior Smallpox Vaccination Timing
  + Examine year of smallpox to ensure it occurs after birth year
  + Flag if priorvax\_year < birth\_year
* Length of Hospitalization
  + Examine distribution of length of hospitalization for any extreme values
  + Examine if length of days of hospitalization is longer than the time between illness onset and survey submission
    - Flag if hospitalized\_days > (submitted date - symptoms\_date)
* Number of sexual partners
  + Examine distribution of number of sexual partners for any implausible values
  + Variables: sex\_part\_num\_case and sex\_part\_num\_control

## Case & Vaccination Status vs C/C Questionnaire

* Case Status – HD vs Self Report
  + Compare case status from health department to self-reported MPX diagnosis
  + Flag if case\_yesno in (1,2) and provider\_dx = 2
  + Flag if case\_yesno = 3 and provider\_dx = 1
* Symptom Onset Date vs Test Date (Cases)
  + Compare symptom onset date to ensure same day as or before positive test result (cases only)
  + Flag if symptoms\_date > test\_result\_date
* Clinic Visit Date – HD vs Self Report (Controls)
  + Compare clinic visit as reported from HD compared to self-report
  + Flag if (clinic\_date - control\_visit\_date) > +/- 2
* Vaccine Dose 1 and Dose 2 Interval
  + Examine distribution for the time between dose 1 and dose 2 to identify implausible intervals
    - Interval = dose2\_date – dose1\_date
  + Flag intervals <24 days
  + Flag intervals >28 days (although this will likely be more common due to roll out of vaccine in jurisdictions)
* Vaccine Dose Number – HD vs Self Report
  + Compare number of vaccine doses reported from HD compared to self-report
  + Flag if dose1\_yesno = 1 and first\_dose\_yesno = 2
  + Flag if dose1\_yesno = 2 and first\_dose\_yesno = 1
  + Flag if dose2\_yesno = 1 and second\_dose\_yesno = 2
  + Flag if dose2\_yesno = 2 and second\_dose\_yesno = 1
* Vaccine Administration Date – HD vs Self Report
  + Compare dates of vaccination administration between HD and self-report (add +/- 1 or 2 days)
  + Flag if (dose1\_date - first\_dose\_date) > +/- 2
  + Flag if (dose2\_date - second\_dose\_date) > +/- 2
* Route of administration – HD vs Self-Report
  + Compare route of administration from HD to self-reported injection site
  + Flag if HD reports subcutaneous and participant reports vaccination in forearm or below shoulder blade OR if HD reports intradermal administration and participant reports vaccination in upper arm
  + Flag if dose1\_adminroute=2 and first\_dose\_site=2,3
  + Flag if dose1\_adminroute=1 and first\_dose\_site=1
  + Flag if dose2\_adminroute=2 and second\_dose\_site=2,3
  + Flag if dose2\_adminroute=1 and second\_dose\_site=1
* Check to make sure birth year is within range of a person being between 18-49 years old
  + Invalid birth years/ages should be captured via REDCap checks, except for some unusual situations which should be reviewed and resolved on a case-by-case basis
  + Flag if submitted date – birth\_year > 49
  + Flag if submitted date – birth year < 18
* Compare reason for getting vaccine (why\_vax) and exposure to someone diagnosed (contact\_mpx\_dx\_case, contact\_mpx\_dx\_control) or with symptoms (contact\_mpx\_symp\_case, contact\_mpx\_symp\_control). Flag if the reason for getting vaccinated exposure and they did not report any exposures.
* Partially completed responses
  + Team to noodle on this to determine what counts as a “complete” response