

**Supplementary material 1.** Questionnaire used for in-depth interviews with confirmed MPX cases.**MONKEYPOX EPIDEMIOLOGICAL QUESTIONNAIRE**

Interview conducted by \_\_\_\_\_ on \_\_\_/\_\_\_/\_\_\_\_\_

**A. DEMOGRAPHIC DATA** (See clinical CRF, only link with unique ID number)

Unique ID number \_\_\_\_\_

*Hello, my name is \_\_\_\_\_. I am a researcher at the Institute of Tropical Medicine. I received your information through Dr. XXX, where you are being treated, and I would like to talk to you about a recent infection with the monkey pox virus that you were diagnosed with. First of all, how are you doing now? [supportive listening of the investigator].*

*As you probably know, much is still unknown about how the monkeypox virus is transmitted, who can transmit it and when you are contagious. Therefore, we would like to understand this better by surveying patients with confirmed infections. You have already indicated your willingness to participate in this, for which we thank you. Are you currently available for an interview that will last about 60 minutes, or would you like me to call you at a later time that is more convenient for you?*

Does not wish to reply Y/N

*You may have already read about the monkey pox epidemic in Europe. This infection is caused by a virus, which is most likely transmitted between people through close and prolonged physical contact, such as skin-to-skin contact, but also the sharing of contaminated material, such as bed linen. In the current outbreak of the virus, most infections have been among men, many of whom self-identify as gay or bisexual, suggesting possible transmission of the virus during or through sexual contact. However, this form of transmission has not been described before. Through this questionnaire, we try to get a better idea of possible behavioural factors that may play a role in the transmission of the virus. These questions are mainly aimed at mapping the nature and circumstances of your social contact during the period of the estimated time of infection. Some of these questions also focus on more intimate contacts and sexual practices, which we suspect may play a relevant role in this epidemic. These questions can sometimes feel uncomfortable, but they are important in determining which practices increase the risk of infection. These insights will also help to formulate advice that protects public health and is based on science. I would like to inform you that at any time you may indicate that you do not wish to answer a particular question, or that you wish to discontinue the conversation. I also remind you that this questionnaire is completely confidential.*

**B. GENERAL INFO AND RELEVANT HISTORY**

Question	Response options
May I first ask what you do for a living? Do you have any regular hobbies or activities?	
I would like to start by confirming the date when you first experienced HUIDSYMPTOMS (rash, papules, blisters). - <u>If available from clinical data</u> : is it true that this was on ___/___/____? - <u>If not available from clinical data</u> , can you remember the date when you first became aware of these symptoms?	____/____/____ (if exact date known) 1 day ago 2-3 days ago 4-5 days ago 6-7 days ago More than 1 week ago More than 1.5 weeks ago 2 weeks or more ago
How did the symptoms progress for you (timeline with overview of symptoms and injuries per day)? How do you feel now?	

<p>When did you first hear about the monkey pox virus?</p> <ul style="list-style-type: none"> <li>- <i>Was this before or after you became aware of complaints?</i></li> <li>- <i>Which way (e.g. news, social media, others?) did you hear about monkey pox for the first time?</i></li> <li>- <i>Have you been contacted by someone who was diagnosed with the infection and with whom you had contact? If yes, please give further details on the context of the contact.</i></li> </ul>	
<p>Did you have a suspicion when you noticed the symptoms that it could be a monkey pox virus infection?</p> <ul style="list-style-type: none"> <li>- <i>If yes, why?</i></li> <li>- <i>Do you have any idea where you might have caught the infection?</i></li> </ul>	

### C. HIGH-RISK AND HOUSEHOLD CONTACTS

*I would like to start by asking you some questions about your social contacts with the persons who may have been infected with the monkeypox virus and persons who belong to your household, i.e. persons with whom you live under the same roof. Is that OK with you [wait for permission].*

Question	Response options
<p>In the <b>three weeks</b> before your symptoms (past two weeks if no symptoms), have you been in close contact with a person who had a possible monkey pox infection, or had signs that might indicate monkey pox, such as skin lesions or flu-like syndrome?</p>	<p>No            Yes, with a confirmed monkeypox case            Yes, with a suspected monkeypox case            Yes, with a person with skin lesions and/or flu-like syndrome</p>
<p><i>If so, when?</i></p>	<p>____/____/____</p>
<p>What was the link with this contact?</p>	<p>Permanent partner            Family member (or relatives living under the same roof)            Roommate (not a family member)            Occasional (non-stable) sexual contact            Patient (and interviewee is a healthcare professional)            Other, please specify</p>
<p>If "patient" or "other"            Specify type of contact (multiple options possible)</p>	<p>Kiss on greeting or farewell            Handshake            Touch rash            Been within &lt;1.5m for less than five minutes (cumulative)            Been within &lt;1.5m for more than five minutes (cumulative)</p>
<p>If "patient" or "other"            Specify duration spent in the same room (several options possible)</p>	<p>Not been in the same room            Remained in the same room for &lt;5 minutes            Remained in the same room for 5 to 15 minutes</p>

	<i>Remained in the same room for &gt;15 minutes</i>
Specify use of mouth mask during contact with	<i>High-risk contact and you wore surgical mask</i> <i>High-risk contact wore surgical or FFP2 mask and you FFP2 mask</i> <i>High-risk contact wore mask but you did not</i> <i>High-risk contact did not wear a mouth mask but you did</i> <i>Neither wore a mouth mask</i>
In the three weeks before your symptoms (past two weeks if no symptoms), have you been in a hospital, clinic or to a general practitioner or other health care provider?	<i>Yes, general practitioner or other health care provider's practice</i> <i>Yes, STI clinic</i> <i>Yes, hospital</i> <i>Yes, other. Specifieer _____</i> <i>No</i>
If yes, specify possible risk exposure	
With which persons do you live under the same roof?  - <i>What is your relationship with these people? (go through each contact)</i>	<i>Family</i> <i>Roommate (not a family member)</i> <i>Partner</i> <i>Other</i>
During the <b>three weeks before the onset of symptoms</b> (cf. reference date), how would you describe the physical contact you had with these persons ? (go through each contact, see below)	<i>No physical contact</i> <i>Occasional physical contact (e.g. fleeting touch, embrace, kiss as greeting)</i> <i>Regular physical contact (e.g. daily kissing, daily touching and hugging - <b>not sexual</b>)</i>
<b>Contact 1:</b>  <b>Contact 2:</b>  <b>Contact 3:</b>  <b>Contact 4:</b>  <b>Contact 5:</b>  <b>Contact 6:</b>	
<i>If regular physical contact with household members:</i>  How would you describe this contact? (nature, frequency, duration)  <i>(for sexual contact, see next section)</i>	

<p>Have you had contact (touch, dung, faeces or urine removed) with an animal in the <b>three weeks before the onset of symptoms</b>?</p> <p>If yes, please specify the type of animal and whether it was dead or alive.</p>	<p>No</p> <p>Yes</p>
<p><b>In the three weeks before the onset of symptoms</b> (cf. reference date), have there been any social activities (non-sexual) during which there was intense (physical) contact between persons (e.g. parties, celebrations, activities with close physical proximity)? If so, could you describe this further?</p> <p><i>(place, date, indoors or outdoors, duration, number of people present, physical contact)</i></p>	

#### D. SEXUAL CONTACTS WITH STABLE PARTNER

*Given the presumed importance of close physical contact for the transmission of this virus, I would like to ask some more intimate questions that relate to any sexual relationships and practices during the two weeks before the onset of symptoms. Are you comfortable with these questions? [Waiting for permission] You can always indicate if you want to skip certain questions.*

Question	Response options
Did you have any form of sexual contact (including vaginal, anal insertive/receptive, oral and use of sex toys) during the <b>three weeks before the onset of symptoms</b> (cf. reference date)?	<p>Yes</p> <p>No (<i>go to F</i>)</p>

*The following questions relate to contact with any regular sex partners, i.e. a husband or wife or a boyfriend with whom you have a serious relationship.*

Question	Response options
Do you have one or more steady sexual partners? (i.e. a husband or wife or a stable friend with whom you have a serious relationship)	<p>No (<i>go to E</i>)</p> <p>Yes, one permanent partner</p> <p>Yes, several permanent partners, namely _____ (number)</p>
Does it concern a permanent sexual relationship with (one or more) men, women, trans men, trans women, non-binary persons or other?	<p>Man: _____</p> <p>Woman: _____</p> <p>Transman: _____</p> <p>Transvrouw: _____</p> <p>Non-binary person: _____</p> <p>Other: _____</p>
Did you have sexual contact with one or more of these regular partners during the <b>three weeks before the onset of symptoms</b> (cf. reference date)?	<p>Yes</p> <p>No (<i>go to E</i>)</p>
How often did you have sexual contact with one or more of these regular partners during the <b>three weeks before the onset of symptoms</b> (cf. reference date)?	<p>Daily</p> <p>Almost daily</p> <p>Weekly</p> <p>Only a few times</p>
How did you have sexual contact with this/these steady sex partner(s) in the <b>three weeks before the onset of the symptoms</b> (cf. reference date)? ( <i>go</i>	Anal and I was the active partner ("top")

<i>through each contact, see below)</i>	Anal and I was the passive partner ("bottom") Anal both as active and passive partner ("versa") Giving oral sex ("blowjobs") Getting oral sex ("getting a blowjob") Oral after anal sex Kissing (+ specify on which parts of the body) Tongue kissing "Deep kissing" Fisting Rimming ("baffen", anilingus) Vaginal sex (if applicable) Pee sex ("golden shower") Poop sex ("scat", "kaviar spiele", "copra") Other: _____
<b>Contact 1:</b>  <b>Contact 2:</b>  <b>Contact 3:</b>  <b>Contact 4:</b>  <b>Contact 5:</b>	
On average, how long were each of these sexual contacts? ( <i>go over for each sexual act</i> )	Volatile (less than 1 minute) Short duration (1 to 5 minutes) Medium duration (5 to 10 minutes) Prolonged (longer than 10 minutes)
<b>Contact 1:</b>  <b>Contact 2:</b>  <b>Contact 3:</b>  <b>Contact 4:</b>  <b>Contact 5:</b>	
Were <i>lubricants</i> (lubes) used in these sexual contacts?	No Yes, saliva Yes, bodily fluids other than saliva: _____ Yes, commercial means: _____ Other: _____
In how many of these sexual contacts with permanent partner(s) during the <b>three weeks prior to the onset of symptoms</b> (cf. reference date) was a condom used?	Once in a while In less than half of the contacts In about half of the contacts In more than half of the contacts Almost always Always



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### E. OCCASIONAL (non-STABLE) AND ANONYMOUS SEXUAL CONTACTS AND EVENTS

*The following questions concern contact with possible loose/occasional and anonymous sex partners. By loose/occasional sex partners we mean one or more people with whom you have sex on a regular basis but who are not in a permanent relationship, but who are also not anonymous (e.g. fuck buddies, friends with benefits, sex buddies). An anonymous sex partner is a person you don't know or don't know well, or who you just got to know, e.g. someone in a "dark room" or someone you meet for sex for the first time (e.g. in a sauna or after online contact on Grindr). Are you comfortable with these questions? [Waiting for permission] You can always indicate if you want to skip certain questions.*

Question	Response options
Did you have sexual contact with one or more single or anonymous sex partners during the <b>three weeks before the onset of the symptoms</b> (cf. reference date)?	No ( <i>go to F</i> ) Yes, one single/anonymous partner Yes, multiple single partners, approximately _____ (estimated number: 5-10-20- >20)
Does it concern sexual contact with (one or more) men, women, trans men, trans women, non-binary persons or other?	Man: _____ Woman: _____ Transman: _____ Transvrouw: _____ Non-binary person: _____ Other: _____
How often did you have sexual contact with one or more single/anonymous partners during the <b>three weeks before the onset of symptoms</b> (cf. reference date)?	Daily Almost daily Weekly Only a few times One time only
How did you meet these loose/anonymous partners? (several answers possible)	Via dating apps In bar/cafe In dance club In sex club or swinger club In darkroom/"backroom" In sauna Private (at person's home or party where sex took place) At a public event/festival Other: _____
<b>Comments encounters per contact</b>	
In the <b>three weeks before the start of the symptoms</b> (cf. reference date), did you visit one or more places where several people had sexual contact with each other?	Yes No

<p><i>If yes to the previous question:</i></p> <p>Can you further describe the context (place, date, circumstances and target audience) of this place/event?</p>	
<p>Have you participated in group sex (<i>i.e. sex with more than 1 person at the same time, including threesomes</i>) in the <b>three weeks before the onset of symptoms</b> (cf. reference date)?</p>	<p>Yes No</p>
<p>How did you have sexual contact with this/these loose/anonymous sex partner(s) during the <b>three weeks before the onset of symptoms</b> (cf. reference date) ?</p>	<p>Anal and I was the active partner ("top")          Anal and I was the passive partner ("bottom")          Anal both as active and passive partner ("versa")          Giving oral sex ("blowjobs")          Getting oral sex ("getting a blowjob")          Oral after anal sex          Kissing (+ <i>specify on which parts of the body</i>)          Tongue kissing          "Deep kissing"          Fisting          Rimming ("baffen", anilingus)          Vaginal sex (if applicable)          Pee sex ("golden shower")          Poop sex ("scat", "kaviar spiele", "copra")          Other: _____</p>
<p><b>Contact 1:</b></p> <p><b>Contact 2:</b></p> <p><b>Contact 3:</b></p> <p><b>Contact 4:</b></p> <p><b>Contact 5:</b></p> <p><b>Contact 6:</b></p> <p><b>Contact 7:</b></p>	
<p>On average, how long were each of these sexual contacts? (<i>go over for each sexual contact remembered</i>)</p>	<p>Volatile (less than 1 minute)          Short duration (1 to 5 minutes)          Medium duration (5 to 10 minutes)          Prolonged (longer than 10 minutes)</p>
<p><b>Contact 1:</b></p>	



<b>Contact 2:</b>	
<b>Contact 3:</b>	
<b>Contact 4:</b>	
<b>Contact 5:</b>	
<b>Contact 6:</b>	
<b>Contact 7:</b>	
Were <i>lubricants</i> (lubes) used in these sexual contacts?	No Yes, saliva Yes, bodily fluids other than saliva: _____ Yes, commercial means: _____ Other: _____
In how many of these sexual contacts with single/anonymous partner(s) during the <b>three weeks before the onset of symptoms</b> (cf. reference date) was a condom used?	Once in a while In less than half of the contacts In about half of the contacts In more than half of the contacts Almost always Always
During these sexual contacts with single/anonymous partner(s), did you ever use drugs during the <b>three weeks prior to the onset of symptoms</b> (cf. reference date)?	Yes No
<i>If yes on drug use:</i> What drugs were used in these sexual contacts?	Ecstasy (E, XTC, MDMA) Amphetamine/ speed Crystal meth (methamphetamine, tina, pervitin, glass, ice) Heroin (or related) Mefedron (3/4-MMC, meow, methylon, bubbles) Synthetic (MXE) GHB/GBL (liquid ecstasy) Ketamine (K, Special K, Vitamin K) LSD (acid, lumps) Cocaine Crack Cannabis (Marijuana) Poppers I have taken drugs but did not know what it was
<i>If yes on drug use:</i>	Once in a while

How frequently were drugs used in these sexual contacts?	In less than half of the contacts In about half of the contacts In more than half of the contacts Almost always Always
<b>Additional comments on drug use:</b>	
Did you ever use sex toys during these sexual contacts with single/anonymous partner(s) in the <b>three weeks before the onset of symptoms</b> (cf. reference date)?	Yes No
<i>If yes on use of sex toys:</i>  Can you describe which sex toys were used, and in what way?  <i>Attention to: nature of toy, oral/canal insertion, use of saliva or other bodily fluids, duration of use, sharing with other partners.</i>	
<i>If yes on use of sex toys:</i>  Were these sex toys sometimes shared with other sexual partners?	Yes (frequency and number of partners) _____  No

**F. OTHER SOCIAL CONTACTS AND EVENTS**

Question	Response options
During the <b>three weeks before the onset of symptoms</b> (cf. reference date), did you attend any major social events (e.g. festivals, music concerts, etc.) where many people gathered in close proximity?	Yes (describe further) No
<b>Description:</b>	
Do you have certain personal items (e.g. clothing, accessories, hygiene material, bedding, etc.) that you share with other people?	Yes No

<b>If yes, description:</b>	
<i>If no sexual contact reported in the 3 weeks before the onset of symptoms:</i>	Yes (how many sex partners outside the steady relationship?)
Did your regular partner have sex with someone other than you three weeks before the onset of symptoms?	No I do not know I do not wish to answer

**G. CONTACT INVESTIGATION**

Question	Response options
Since the beginning of the symptoms, have you had any physical contact with the people with whom you live under the same roof?	Yes (describe and list contact if known) No
<b>Contact 1:</b>	
<b>Contact 2:</b>	
<b>Contact 3:</b>	
<b>Contact 4:</b>	
<b>Contact 5:</b>	
Have you had any sexual contact with your regular partner(s) since the onset of symptoms?	Yes (describe and list contact if known) No
<b>Contact 1:</b>	
<b>Contact 2:</b>	
<b>Contact 3:</b>	
<b>Contact 4:</b>	
<b>Contact 5:</b>	
Since the onset of symptoms, have you had any sexual contact with casual/occasional and anonymous partners?	Yes (describe and list contact if known)

	No
<b>Contact 1:</b>	
<b>Contact 2:</b>	
<b>Contact 3:</b>	
<b>Contact 4:</b>	
<b>Contact 5:</b>	
Since the onset of symptoms, have you had close physical (skin-to-skin) contact with other social contacts who are not part of your household?	Yes (describe and list contact if known) No
<b>Contact 1:</b>	
<b>Contact 2:</b>	
<b>Contact 3:</b>	
<b>Contact 4:</b>	
<b>Contact 5:</b>	

**H. OTHER**

Question	Response options
Finally, having gone through all these things, is there anything else that comes to mind that might be relevant to the possible cause or spread of the virus?	

*Thank you for your participation, which will enable us to better understand the current outbreak of monkeypox. If you have any questions, I can answer*

*them now or later via (email) or (tel).*

