

EMG and SPI-B: Mitigating risks of SARS-CoV-2 transmission associated with household social interactions

Purpose and Scope of the paper

This paper summarises current evidence on actions to mitigate risks of transmission of SARS-CoV-2 associated with social interactions with people from outside a household, with a particular focus on activities in the home. This may be relevant to a wide variety of contexts, ranging from hosting a small number of visitors through to larger family celebrations, and including national celebrations such as Christmas, Diwali, Eid, Hannukah, etc. This paper includes the following sections:

- A. Executive summary
- B. Ten principles for reducing household transmission during social interactions
- C. Risk factors and practical mitigations
- D. Bubbles and grouping
- E. Equity

In addition:

- Annex A outlines key risk factors, evidence for transmission routes and strategies to mitigate risks
- Annex B includes two illustrative examples for developing a ‘Household Plan’

The paper does not address managing transmission risks between household members under day-to-day circumstances or managing risk when there is a known or suspected case of coronavirus within the home. We also do not consider the population level risks associated with travel, or size and scale of groupings, as these have been covered in previous SAGE papers^{1,2}.

A. Executive Summary

- **Social interactions in the home increase the risk of infection.** The risk is greater with larger events and those which are inter-generational. Risk at a national scale is increased by national celebrations in which large numbers of people increase their mixing with others, which will result in increased transmission and a corresponding increase in infections and hospitalisations (*high confidence*).
- **The safest interactions are online or outdoors;** if interactions do take place indoors the risks can be reduced by physical and behavioural interventions but cannot be eliminated (*high confidence*).
- **Interactions in a home environment may pose greater risks than public and workplace settings due to familiarity** with the location and people, and a lack of clear responsibility to ensure that an environment is safe. People are more likely to relax and let their guard down with those they are closest to (*medium confidence*).
- **The risks posed by social interactions can be reduced** through reducing the numbers of people involved; the sizes of their networks; minimising the numbers of overlapping networks (for example through restricting repeated connections to just two or three household bubbles); reducing the duration of events; and maximising mitigation measures affecting the physical environment and the types of activities that take place (*medium confidence*). Clear guidance is

needed to enable people to select and apply appropriate mitigations and understand why they are important.

- **Mitigations are likely to be more effective if people agree an approach in advance of a social interaction** and plan how an event will take place (*medium confidence*). Planning for events should be done in an inclusive way that enables people from different groups to engage and ensures that support is provided to those who are physically and/or socially vulnerable.
- **The ability to undertake mitigations may be affected by the physical nature of the home and surroundings** (house type, available space and number of rooms, sanitary and ventilation provision, and outside space), and this is likely to be more challenging for people in crowded or cramped housing or with limited facilities (*high confidence*). Financial constraints or concerns about comfort may limit the ability of some people to provide effective mitigations, and support may be needed to enable them to ensure their environments are as safe as possible.
- **Principles of equality and fairness must be at the heart of providing guidance** as guidance is more likely to be adhered to if perceived as fair and just (*high confidence*).

Ten principles for reducing household transmission during social interactions

1. Consider whether in-person interactions are essential and cannot be postponed or replaced by safer forms of interaction.
2. Consider replacing indoor events with outdoor activities or using community spaces to host events.
3. Recognise that most transmission occurs due to prolonged, close interaction with familiar people in a home environment.
4. Take special care to protect people who are particularly vulnerable to serious consequences from infection.
5. Ensure people who are emotionally vulnerable have social support.
6. People who have to self-isolate or quarantine should not have any in-person social interactions.
7. Limit interactions to the same small group of people as far as possible.
8. Limit the duration of time spent together, especially if meeting indoors.
9. Manage the home environment and how people interact together.
10. Negotiate and communicate with family, friends, and other visitors to create a safe meeting plan where responsibilities are appropriately shared.

B. Ten principles for reducing household transmission during social interactions

It is inevitable that social interactions need to happen in a different way during the COVID-19 pandemic. Social events, celebrations and observances over the winter period pose a particular challenge. The following principles aim to set out an evidence-based structure to support decision making surrounding social interactions and enable any interactions that do take place to be as safe as possible.

- 1) **Consider whether in-person interactions are essential and cannot be postponed or replaced by safer forms of interaction.** Identify where in-person interactions could be replaced by online events or postponed until an appropriate future date.
- 2) **Consider replacing indoor events with outdoor activities or using community spaces to host events.** Community spaces such as community centres, neighbourhood parks, unused business space, temporary pedestrianisation of streets, etc. may provide more physical space and better ventilation compared to households with less space.
- 3) **Recognise that most transmission occurs due to prolonged, close interaction with familiar people in a home environment.** Within the home we may be more likely to assume people and places we know are safe. This may lead to an 'intimacy paradox' whereby a place we think is safe is in fact risky.
- 4) **Take special care to protect people who are particularly vulnerable to serious consequences from infection.** This includes older people and those with underlying health conditions. It is also important to reduce the risk of infection among those who have close contact with particularly vulnerable people.
- 5) **Ensure people who are emotionally vulnerable have social support.** Special care should be taken to interact safely with people who are socially isolated, including meeting outside if possible, online or by phone. People who have very little contact with others are unlikely to be infected and may be able to meet together safely. It is important to consider the particular needs of people who are very old or terminally ill.
- 6) **People who have to self-isolate or quarantine should not have any in-person social interactions.** If people have to self-isolate due to COVID-19 symptoms or a positive test, or quarantine because they have been in contact with a confirmed case, then it is essential to do so regardless of the occasion. Whenever possible this should include self-isolating from other household members, especially if they are vulnerable to infection. This does not apply to children, who should have at least one parent/carer isolate with them. Detailed government guidance has been provided on how to protect other people in the household when someone is self-isolating or quarantining^{3,4}.
- 7) **Limit interactions to the same small group of people as far as possible.** This reduces the probability that someone will come into contact with the virus and limits how far the virus can spread if there is transmission. Meeting two groups of different people in the same week increases the risk of spreading the virus compared with meeting the same group of people twice. Limiting or avoiding interactions with other people in the 7-14 days before meeting, and reducing travel across different parts of the country can further reduce the likelihood of transmission^{1,2}.
- 8) **Limit the duration of time spent together, especially if meeting indoors.** Indoor interactions should be restricted as much as possible and reserved for short duration quality time. Children

should meet vulnerable relatives, including grandparents, outside where possible; brief meetings such as walking or playing outside are safest.

- 9) **Manage the home environment, and how people interact together.** Transmission through airborne, droplet and surface contact routes can be reduced by following the existing guidance on 'Reducing the spread of COVID-19 in your household'³ and considering specific risks and activities that may be associated with the event. It is important to support visitors and household members to practice good hygiene behaviours.
- 10) **Negotiate and communicate with family, friends, and other visitors to create a safe meeting plan where responsibilities are appropriately shared.** This plan is likely to be most successful if it is agreed in advance, and considers the location and duration of events, the physical environment and how people will interact. This includes communicating with children and those who are more vulnerable.

C. Risk factors and practical mitigations

There is substantial evidence that a significant proportion of transmission occurs within household environments, and that both infection and mortality increase with size of household and for some groups in multi-generational households^{5,6}. There is also good evidence that activities associated with social gatherings and celebrations increase risk, including shared dining and events such as weddings and parties. It is therefore important that any social interactions that occur in household settings are conducted in ways that minimise the likelihood of transmission.

Risk increases with duration of contact, and transmission risks are highest when people spend extended periods of time in close proximity to infected individuals. Transmission can happen:

- 1) through direct physical contact
- 2) due to respiratory droplets and aerosols when people are close together
- 3) through viral aerosols when people are in poorly ventilated shared spaces
- 4) through contact with contaminated surfaces and objects

Measures to mitigate risk should consider a hierarchy of controls approach, as detailed previously by EMG⁷, with a recognition that those measures that eliminate in-person interactions or substitute for lower risk alternatives are more effective than controls that rely on conscious behavioural decisions by individuals. **It is essential that a bundle of measures to reduce transmission by all transmission routes is applied – no single approach will be effective on its own.**

There is evidence that behaviours such as handwashing, surface cleaning and mask wearing in the home can reduce transmission of infection, including of COVID-19⁸. There is also evidence that currently most people do not implement these as thoroughly as they could⁹, and that providing in-depth, personalised advice on how to implement infection control in the home can reduce infections in household members^{10,11}.

The table in Annex A sets out key risk factors, evidence for the transmission routes that may be involved and strategies to mitigate risks. It is never possible entirely to eliminate the risk of transmission, but these measures should be regarded as steps that can be taken to make an event safer.

Negotiating and communicating an agreed plan may enable households to understand risks and agree how they will interact together, particularly when a social occasion is linked to a major event such as a birthday or Christmas. This is likely to improve adherence to both national guidance and

measures that are likely to mitigate transmission and ensure a more equitable approach. There is good evidence that planning is associated with behaviour being more likely to happen¹².

A plan could consider aspects such as who will meet, how often, where you will meet and for how long, as well as agreements around managing activities and the physical environment (two illustrative examples of household plans are given in Annex B). It is beneficial explicitly to consider vulnerable people and the potential to create opportunities for them to participate safely.

Events involving children may also need particular consideration, especially if children are mixing with older adults who are at elevated risk from the consequences of the virus. Very young children may struggle to understand/comply with mitigations, and some children may be anxious about the risks associated with a family occasion. Any plan needs to balance the risks of transmission with the harms that may come to children from social isolation.

Negotiating a plan may pose challenges and create tensions. Communication campaigns may help to prompt discussions in ways that make the process more effective¹³. Planning is likely to be more successful where it is clear and accessible for all those involved¹⁴.

D. Bubbles and grouping

Clear guidance needs to be given to households on how to form bubbles or groups, particularly where they are in place over periods of celebration or observances. Communications should explain that restricting connections to a small number of households is safer than connecting the same number of people from many different households in different events. It is important to emphasise that bubbles are overall safer than the rule of six; people from two households are likely to facilitate fewer connections than 6 people from 6 different households.

Large families and networks should be encouraged to 'share the care' for various elderly or vulnerable relatives and friends. This could form part of cross-household plans for periods of celebration and observances. Discussion should be encouraged about how various groups of households could together take care of various members of their networks.

Once bubbles or groups are formed, they should be maintained for the permitted period. Clarity on this in guidance is important to reduce the risk that people inadvertently create multiple sequential bubbles through not understanding the principles of why bubbles are effective.

Connections between the same number of households of any size would be the most equitable form of connection. This would support disadvantaged and minority groups who rely on extended family support more than other sections of the population and have a large number of members in a single household.

E. Equity

Guidance is more likely to be adhered to if it is perceived as fair and just for all groups in society¹⁵. For the recommendations to be implemented by all groups, additional support may be required to facilitate equitable access and enable the recommended activities. This requires consideration across a number of aspects:

- **Digital access.** The safest option to celebrate with others requires online meet ups or telephone contact. This may disadvantage low digital literacy groups and exclude them from celebrating with significant others if knowledge or physical capability of using online resources is limited

and/or physical resources such as data are not available due to financial restrictions. Mitigations should include support for individuals and households to facilitate online or telephone contact.

- **Physical space.** Mitigations to make indoor social gatherings safer will be difficult to implement in cramped or crowded households, or where there are limited facilities (such as shared bathrooms and small kitchens). Overcrowded households are linked to socio-economic disadvantage and increased deprivation and are linked to poor housing quality and inadequate ventilation⁸. Limited physical space will make it difficult to maintain adequate physical distance. To ensure groups are not excluded or disadvantaged communities are not further disadvantaged because they do not have the opportunity to implement mitigations within the household, additional support may be required to open up community spaces to allow families and/or friends to meet and celebrate events outside the home. This could include larger indoor spaces such as community centres and unused business spaces or facilitate access to safe outdoor spaces such as temporary pedestrianisation of streets, neighbourhood parks, golf courses, etc. which will create a safer alternative space to a crowded indoor household gathering. In addition to community spaces, places of worship may provide adequate space and should be opened to support communities to participate in significant events, where this can be done in line with guidance.
- **Gender equality.** The impact of the pandemic has been considered gender regressive as women have experienced increased unpaid care responsibilities due to the heightened need to care for elderly family members and childcare due to school and nursery closures¹⁶. It is therefore especially important to involve women in decision making about creating safer household environments, and to promote gender equity in communications and policies relating to household social interactions.
- **Culturally relevant communication.** Communities which prioritise wide kin networks should be supported using culturally relevant communication including language that emphasises protecting the family. This could potentially reduce difficult conversations and decisions particularly for larger households with extended family networks to implement safe measures within the household during social gatherings.
- **Houses of multiple occupation.** Guidance is required to support HMOs to develop a social script (as outlined in EMG/SPI-B household paper⁸) to negotiate and develop a household plan as it may not be possible for all occupants to invite family and/or friends at the same time due to the number of permitted bubbles that can join together.
- **Financial barriers.** Implementing the recommendations may be more challenging for some households due to financial constraints. For example, adequate ventilation may be difficult to achieve due to concerns that additional heating costs will be incurred as a result of opening windows or for those in flats without windows that open. Furthermore, purchasing masks and hand gel may not be feasible for households that do not have sufficient finances to cover the additional expense. Supportive measures, including financial support for measures to increase safety, are likely to increase perceptions of fairness and equality which will increase trust and adherence to recommendations¹⁷.

Annex A – Key Risk Factors, Evidence for Transmission Routes and Strategies to Mitigate Risks

| Risk Factor | Transmission risk | Mitigations and considerations |
|---------------------------------|--|---|
| Overarching factors | | |
| Duration of interactions | Influences all transmission routes. The more interactions and the longer the duration, the greater the chance of exposure through any route, and the more likely that exposure is sufficient to cause infection ^{18,19} . It is possible that longer exposures may result in more severe disease due to higher viral load ²⁰ . | Determining the most important parts of an event or meeting can help to focus on planning for shorter durations and maximising quality time together. Meeting outdoors can enable an event duration to be extended as long as the interactions are socially distant (e.g. going for a walk together). |
| Crowded spaces | Influences all transmission routes. Higher numbers of people increase the likelihood of an infectious person being present, and the number of people to whom infection can be passed. Home social interactions frequently have more people in a space than it was designed for, meaning that it is hard to maintain distancing, and ventilation is less effective. | Risk can be reduced by limiting the number of people who are meeting together, and meeting in the largest space that is feasible - even if that means breaking traditions/turns over who is the host. Simple actions such as rearranging furniture, designing activities to minimise the likelihood of crowding, identifying pinch points (e.g. hallways) or spaces where people may gather (for example kitchens) and staggering activities (e.g. taking turns to cook, wash etc.) can help people to maintain space. Consider face coverings where distance cannot be maintained. |
| Travel to the event | Influences all transmission routes with exposure to droplets, aerosols, and surfaces in a small space. Travelling with a case is shown to be a risk ²¹ . There is a small amount of evidence relating to public transport, and growing concern that car sharing poses a high risk due to the confined space ¹⁹ . This may pose additional risks at certain events where people are picking up vulnerable relatives or are sharing a car to have a “designated driver” who is not drinking. | Planning travel carefully and particularly considering how any vulnerable people will travel will allow this to happen as safely as possible. Wearing face coverings and keeping windows open on vehicles are important mitigation measures. Keeping journeys as short as possible and avoiding unnecessary travel with people outside of your own household will also reduce risks. |
| Physical environment | | |

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| Enclosed spaces | Aerosol transmission risk. Evidence shows that the majority of transmission is in indoor spaces, and that poorly ventilated spaces pose a higher risk. This is more likely in colder weather when people shut windows ²² . Environments with low temperature and humidity may also increase the risk by enhancing virus survival ²³ . | Good ventilation through using trickle vents and windows, especially in rooms where people may be together for longer periods, can reduce risk. In colder weather short term airing (10-15 minute window opening every hour) alongside background ventilation may help to ensure that temperatures don't become uncomfortable. Ventilation can be further enhanced by using extractor fans, especially in kitchens and bathrooms that visitors use. The use of face coverings when people are not eating/drinking could be used to reduce risk further. |
| Shared bedrooms | Aerosol risks from shared air over a long period, and droplet/surface risks at close proximity. Several studies have shown this to be a risk factor ¹⁹ . | Avoiding overnight visits within a home environment reduces duration of exposure and the likelihood that people become complacent. Limiting people from different households sharing rooms as far as possible will reduce cross transmission risks (e.g. it is better for children to share a room with their parents rather than with children from different households). Keeping the bedroom door closed and opening windows slightly can limit the airflows between bedrooms and the rest of the house, and in shared rooms keeping a window open at night and positioning beds as far apart as feasible will reduce risks. |
| Shared bathrooms and other facilities | Risk from contaminated surfaces, or aerosol in poorly ventilated spaces. Although some meta-analysis studies have not identified shared bathrooms as a risk, other studies have shown higher contamination in bathrooms than other settings and suggested they are a link in transmission. | If there are sufficient facilities, designating a different toilet or bathroom for household members and visitors would limit sharing of surfaces and air. Regular cleaning of high touch surfaces such as door handles, taps and toilet flush will reduce the likelihood of transmission from shared surfaces. Cleaning using bleach-based products is likely to be most effective and use of PPE such as gloves will help to protect the person cleaning. Other measures include providing different towels for different households and making hand sanitizer available following bathroom use. Improving ventilation from these spaces by using window or extractor fans, keeping the door closed after use and allowing a gap between successive people using the facility and/or using face masks will reduce aerosol risks. |

| Behaviours and activities | | |
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| Close proximity and orientation | Risk from short range droplets and aerosols in exhaled breath, and surfaces contaminated close to an infected person. Risks are higher where people are face to face. Proximity is shown to be a risk in several studies. | Arranging furniture in rooms can reduce people from different households coming closer than 2m for any significant duration of time. This could be supported by pre-planning where people will sit based on risks. If space is limited, clustering people from the same household could be used to maintain the space between households. |
| Shared dining | Several studies have identified shared dining as a risk factor. Transmission risks by all routes including close range when seated without masks, aerosol in a poorly ventilated room, shared surfaces. Risks are enhanced due to duration and close proximity. | Mitigating risks focus on ensuring the room is well ventilated and spacing people out. Avoiding face-to-face positioning could reduce droplet transmission, with members of the same household seated opposite each other, and spacing members of other households further away. Reminders like table place names may be useful as a physical prompt. Contact transmission could be reduced through reducing the use of shared serving spoons and other shared objects. Limiting the duration of a meal is likely to reduce risks, especially if the space is small. Good hygiene with everyone washing/sanitising hands prior to the meal and ensuring those cooking/serving food also practice good hygiene will reduce risks if someone has virus on their hands. |
| Hugs, kissing and handshakes | Direct physical contact can transfer virus between hands or through closely inhaled droplets/aerosols. | Avoiding physical contact as far as possible will reduce risks, especially anything involving face-face or face-hand contact. Gestures such as elbow bumps or air greetings could be used as alternatives. If there is physical contact it is a good idea to keep it to the minimum duration, turn faces away and wash hands afterwards. |

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| Activities involving fomites | Transmission through contaminated surfaces. Games that may be traditionally played such as board games, cards, etc, giving of gifts, sharing of objects and vessels during religious observances. Direct evidence for fomite transmission is limited, however viral RNA has been found on high touch surfaces in close proximity to infected people and there is evidence that shared cigarettes and drinking vessels are associated transmission. High touch objects that are shared would increase potential for fomite transmission. | Risks can be reduced through substituting activities for those that minimise sharing of objects, for example through playing quiz-based games rather than those which involved lots of shared game pieces. Any objects which are likely to have direct contact with the mouth pose a particularly high risk. Where shared objects are involved good hand hygiene and avoiding touching the face during the activities can reduce risks. Mitigations are most effective where they target objects that are likely to be touched – it is very unlikely that items such as decorations will pose a risk as they are rarely handled. |
| Aerosol generating activities | Enhanced risk of aerosol and close-range transmission. Several studies have shown that singing produces higher numbers of aerosols and is associated with a high transmission risk in choirs and karaoke bars especially if ventilation is poor. Aerobic activities such as high energy dance fitness have been linked to outbreaks, which are likely to be due to higher breathing rates. | Avoiding singing or physical activities such as dancing in indoor spaces is the most effective way to reduce these risks. Where they do take place, limiting the loudness of singing and the duration of activities, and ensuring good ventilation is very good and space between people are likely to reduce risks. Wearing face coverings can further reduce the risk of transmission. |
| Hygiene behaviours | Transmission through contaminated surfaces and aerosol/droplets. Coughs and sneezes are shown to lead to much higher generation of droplets and aerosols than breathing/talking. Poor hygiene behaviours have been linked to transmission via high touch surfaces. | Good hygiene is an important mitigation, but reminders may be needed particularly for young children. Physical reminders such as signs/stickers and making sure tissues, wipes, and sanitiser are available may all help to maintain adherence. Provision of bins for these should also be considered. |
| Controlling the consequences of transmission | If a guest at a social interaction tests positive for COVID, steps will need to be taken to minimise onward spread. | Communication is an important part of managing risk of onward transmission. Planning to ensure that everyone can contact others if a case is reported to enable rapid isolation will help prevent spread. |

Annex B – Illustrative Examples for Developing a ‘Household Plan’

This Annex contains two illustrative examples to assist individuals in developing a Household Plan to mitigate the risks of SARS-CoV-2 transmission associated with household interactions. Two different examples have been provided to highlight that the exercise of developing a Household Plan will not necessarily follow a one-size-fits-all approach.

What is a Household Plan?

A Household Plan is a practical plan that may be used to prepare for social interactions. A plan should consider who will be meeting, how often, where, and how long for. The plan should also include agreements around managing activities and the physical environment. It is beneficial to explicitly consider vulnerable people and how they may be able to participate safely. Events involving children will require special consideration, especially if children are mixing with people who are particularly vulnerable to serious consequences from infection.

A plan is likely to be more successful if it is clear and accessible for all those involved. A physical or digital document/checklist is useful to help ensure that all aspects have been considered and that all those involved are aware of the “rules” they have agreed collaboratively. In many cases this will be a “living document” and may be adjusted to adapt to different occasions and interactions. It may also be beneficial to introduce physical reminders during the event to help people adhere. This could take the form of signs/stickers for reminders on particular behaviours, and place settings/agreed chairs to manage physical location of people.

Example 1

Creating a plan will allow you, your household, and your family and friends to plan how to see each other whilst keeping as safe as possible. It will also enable you to think about and discuss the key issues that need to be considered when making a plan. Below we structure the things for you to think about and provide some key tips for discussing your plan with others, especially those who may be either more or less cautious about their and others’ health than you.

To create the plan, consider:

- 1) Who?
- 2) How many? How long? How often?
- 3) Where?
- 4) What?

Then think about who should be involved in making the plan and how it should be made.

1. Who?

- Who is likely to be particularly vulnerable to serious consequences from infection? You may need to ask as some people may have underlying conditions you do not know about. Extra care should be taken when meeting with these people, for example limiting or avoiding interactions with other people for 7-14 days before the social interaction.
- Is anyone likely to be emotionally vulnerable? People who may be feeling isolated, lonely, or distressed may especially appreciate contact and support.

ACTION: List those you would like to see so you can have a conversation as to how you might meet up with them.

2. How many? How long? How often?

- *The fewer people you see* the less likely one of you is to become infected. Also, the fewer people those people have had contact with, the safer everyone will be. It can be useful to think about ‘bubbles’ (set groups of people you limit contact to).
- *The shorter the time you spend* with others, the safer everyone will be. Think about the shortest duration of meetups that would still be satisfying – this is likely to vary from person to person.
- *The more often* you see people the greater the total time the virus could spread. However, it is safer to see fewer people but more often than to see a wide range of people over the same time period.

ACTION: Make a timetable for when you will see whom for how long.

3. Where?

- Online meet-ups** - The safest way of having contact with others is through online meetups or the telephone. If there are people you want to be in contact with but don't think it is safe for them (or you), online meetups can be made fun for special occasions, with activities and games.
- Outdoors** - The next safest way of meeting people is outdoors – the virus is much less likely to transmit from person to person if you are outside. Think about different types of outdoor activities – meeting for a walk, or for a distanced drink outside someone's house or in a public place. This could become a community activity with others in your neighbourhood, especially those who may be lonely.
- Indoors** - This is the riskiest option but there are things that can be done to make the space safer.

Also consider:

- **Ventilation** – can you keep the room where you will be seeing people well ventilated, for example, by opening a window? This does mean you will need to explain to people why it may feel a bit chilly and warn them they may need to bring layers of warm clothes.
- **Separate space for visitors** – is there a part of the room that visitors can sit which household members can avoid for a while after visitors have gone? Can you keep 2 metres distance from visitors?
- **Objects** – if you touch surfaces e.g. chairs, crockery that visitors have touched ensure that you wash your hands immediately after and put crockery, cutlery etc. straight into hot soapy water or a dishwashing machine.
- **Safety routine** – ask everyone to wash or sanitise hands when coming into your home, have tissues available and encourage mask wearing by those who feel comfortable to do so. Having sanitiser, tissues and spare masks by the front door will help with this.

When you are indoors with other people it may help to keep safe by behaving as if someone in the group was infected. Having someone to stay overnight adds further risks not only because it is a long period of time, but it is very difficult to sustain safety routines for a longer period.

ACTION: Add 'location' to your timetable. If any of your meet-up places are indoors, create an additional 'Safe Indoors' plan.

4. What?

- Consider what you want to do during your meet-up – are you dining together, playing games, sharing presents, sharing a religious observance or other social tradition?
- Identify whether any of these poses particular risks. For example, singing or aerobic activities like dancing are more likely to increase the amount of virus that people exhale, which pose greater risks in indoor environments. Activities such as buffet style dining or playing certain games could involve people touching the same surfaces or having direct physical contact.
- Plan how you can manage these risks, for example by swapping the activity for a different one, modifying the activity to do it outdoors or changing some elements, reducing duration, and introducing additional hygiene measures.

5. Making the Plan

- The more people in the household are involved in making the plan, the better the plan is likely to be and the more everyone is likely to stick to it.
- Who else do you need to talk to? Who will talk to whom? Think about the order you do this in, starting with those most important to you and build up slowly, stopping when you judge your household has taken enough risk.
- There may be differences of opinion as to who contact should be limited to, where and when you will see them. This requires careful negotiation and permitting everyone to say 'no' if they think anything is too risky (everything is risky to some extent). It is very important that everyone's views and feelings are considered and saying no does not mean a lack of affection or consideration.
- Write the plan down and put it up or place online where everyone can see it and be reminded of it.

Example 2

What is a Household Plan?

It is a plan that will enable you to meet up with friends and family for social interactions while keeping your risk of infecting each other with COVID-19 as low as possible.

Who should make a Household Plan?

Everyone who is planning for a social interaction with people from other households.

What should a Household Plan cover?

The plan should cover:

- 1) Who you will meet?
- 2) How often?
- 3) In what setting?
- 4) For how long each time?

It should also cover what you will do on each of these occasions to minimise the risk of infecting each other. This involves:

- a. Maximising spacing between people
- b. Ensuring enough ventilation
- c. Using face masks if it feels comfortable
- d. Making sure hands, objects and surfaces are regularly cleaned
- e. Planning your activities so that you limit those that have a higher risk of spreading the virus

Making the Plan:

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| Step 1: |
| Arrange a discussion with the people who are within your household to prepare the plan. |
| Step 2: |
| Between you, make a list of the people you would like to meet up with. For each of these decide: <ol style="list-style-type: none"> 1. How vulnerable you think they are because of age or health problems 2. Their emotional need for support and contact |
| Step 3: |
| From that list decide who has top priority, balancing their vulnerability and need. |
| Step 4: |
| Discuss by phone or online or outdoors with those who you decide to meet up with what their wishes are in terms of: <ol style="list-style-type: none"> 1. Whether and when to meet 2. In what setting 3. For what length of time <p>Use this to create a timetable. If you can meet up online instead of face to face, always choose that option. When it comes to <i>setting</i> always start with the safest options and only move to less safe ones if needed. Outdoors is safer than indoors. If meeting indoors, agree a time limit or break the time up with some outdoor activity allowing a refresh of the air in the space. When people</p> |

are coming together from two or more households consider whether it is easier to maintain space in some houses than others - don't just stick to tradition of "we always go to X's house" or "its Y's turn". When it comes to *mixing* take special care to protect those most vulnerable to serious illness if they are infected. When meeting indoors, avoid having more people in a room than can be separated by at least 1 metre and ideally 2 metres when seated.

Step 5:

Discuss the activities that you will do and how you can adjust them to reduce the risk of spreading the virus. For example, sharing dishes at a dinner table, playing games that involve lots of physical contact, singing or aerobic activities indoors are all activities that potentially increase transmission. Consider whether you can replace with lower risk alternatives or carry out some activities outdoors.

Step 6:

Make a record of your decisions and check that everyone involved is happy with the plan.

Step 7:

Make sure everyone does everything possible in the week before the visit to avoid getting infected, such as self-isolating if possible or at least minimising contact with others, wearing face masks in indoor public areas, always carrying hand sanitiser and using it regularly, not going to other gatherings.

Step 8:

Make sure you are prepared for each visit in terms of:

1. Having cleaned surfaces and objects beforehand and making sure hand sanitiser is always to hand for yourself and guests
2. How you will ensure maximum spacing between people
3. How you will maximise the ventilation while keeping everyone comfortable

Step 9:

Make sure all your guests and household members are familiar with the arrangements, paying special attention to people who might have difficulty understanding or adhering to the rules.

Step 10:

Immediately before the visit check with everyone that they do not have *any* of the symptoms and have not knowingly been in contact with anyone with symptoms.

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