SAFE DISTANCING GUIDELINES FOR NUS LABORATORIES

1. Introduction

1.1. In light of the current COVID-19 pandemic, MOH and MOM have issued guidelines related to physical distancing measures to reduce the risk of transmission of the virus in schools and workplace. We therefore would like to remind Principal Investigators, laboratory managers and researchers to ensure safe distancing measures in their workspaces.

1.2. We note that it is more challenging for laboratories, given that researchers might not have dedicated workspaces and have to use shared equipment. These guidelines are therefore meant to provide general guidance on achieving physical distancing measures in the laboratory/workshop. These examples are non-exhaustive and we encourage you to share your best practices with Departmental Safety Committee/OSHE.

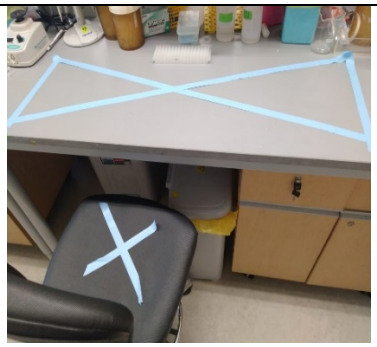
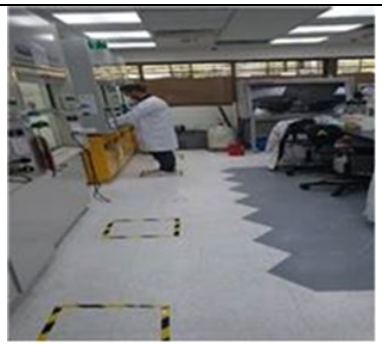
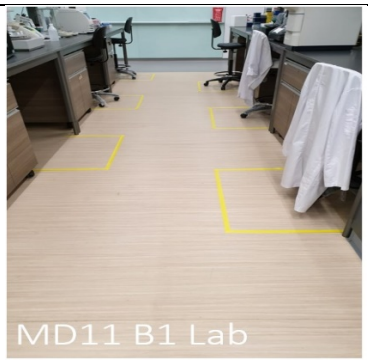
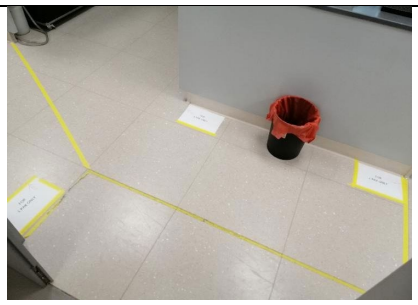
1.3. The measures below are categorized into those that increase the physical space between equipment or activities, and other measures to minimise contact time and cross-contamination if physical space measures are not feasible for operational reasons.

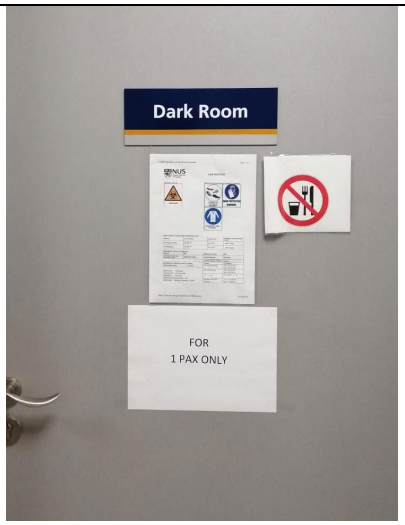
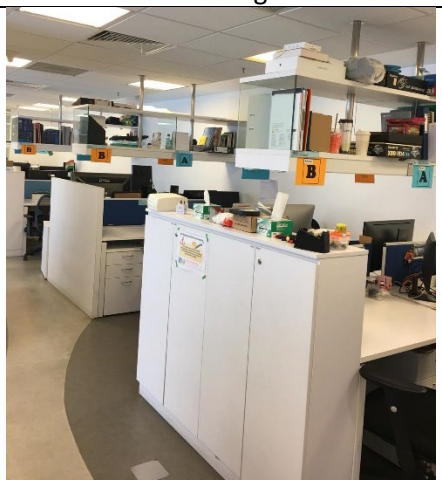
1.4. Some laboratories have higher biosafety containment levels (Biosafety Level 3) and researchers working in these laboratories are already following protocols that minimise exposure risk between people and biohazardous materials, and amongst researchers in these laboratories.

2. Examples of Physical Distancing Measures

Category	**Examples (refer to photos below for illustration)**
1. Space *Achieving 1 metre separation between researchers*	1. Remove chairs or label chairs to prevent use so as to provide separation between researchers when they are at the workbench. 2. If the researchers are working on back-to-back benches (back facing each other), their physical distancing could be less than the required 1 m. In such cases, closing down alternate workspace on each bench to create a staggered workspace across all the lab benches in a zig zag pattern will be necessary. 3. Place markers on the floor to identify 1 m separation when queuing up for the use of shared equipment, dispensing of chemicals in fume hood, disposing of waste materials, etc.

	These measures apply to non-lab areas as well, such as changing rooms and reception counters. 4. Avoid performing non-lab work activities such as computer or paper work in the lab if there are ongoing lab activities nearby. Do note that safe distancing measures apply outside of the lab too (e.g. research staff and student rooms) 5. Staff should use alternate fume cupboard if available, or wait in turn for use.
2. Time *Minimise contact time of researchers during experiments*	1. Implement time-stagger for different teams to start and end work so as to minimise contact time and avoid peak hours for travel. 2. Implement split team arrangements for laboratory usage, e.g. Team A and Team B to work on alternate days or half-day shifts. 3. Implement a booking system with a specific downtime/blocked period for the use of common equipment to prevent physical encounter of the two persons e.g. 10 min interval before the next person can use the equipment. This also applies for activities or equipment that are unable to be physically separated for operational reasons. 4. Ramp down research activities. Refer to the NUS Laboratory Ramp-Down Checklist that offers a guide for laboratories who plan to decrease their research activities. 5. Postpone non-essential laboratory activities.
3. Exposure reduction *Minimise cross-contamination*	1. Determine the maximum occupancy allowed at each time for satellite/core/common rooms/facilities. 2. Assign work areas such as desk or bench to individual staff or student, and each researcher should only use their assigned work area. 3. Ensure regular disinfection of areas where gloves are not used, e.g. door handles, handles at wash basins, or common equipment such as workstations before and after use. 4. Users should also wash hands before and after laboratory work as well. Hand sanitisers may be placed at strategic locations. 5. Change of work processes e.g. assigning specific tasks to the same person to restrict people movement across laboratories such as confocal microscopy, cell culture, etc. 6. Do not come to campus if you are unwell. Seek medical attention immediately 7. Minimise contact with other staff outside of work as well, such as meals, transport, social gatherings, etc. 8. Restrict visitors to only essential visitors such as contractors and vendors.

Workstation labels and Floor Markings	
 Labels for out-of-bound bench area and chair	 Floor labels where users should work
 Floor labels for chairs / standing work	 Floor labels for waiting when another user is at the shelf
 Floor label indicating that others should not enter if someone is inside	 Floor labels to indicate separate work areas
 Floor label to indicate working positions	 Floor labels to indicate waiting area

Adjustment of laboratory layout / entrance	Door Labels
 Excess chairs are removed to prevent overcrowding in lab	
 Desks in lab – Team A vs Team B seating	
 Working on separate benches	

Annex A: Additional Resources

Table 1: Examples of useful resources for safe distancing in laboratories

	Title of Reference	File (with link)
1	NUS Circulars on Safe Distancing Measures	2020-0330-OSHE-COVID-19-Circular-16 2020-0325-OSHE-COVID-19-Circular-15 https://emergency.nus.edu.sg/circulars/wp-content/uploads/2020/03/2020-0330-OSHE-COVID-19-Circular-16-6.45.pdf https://emergency.nus.edu.sg/circulars/wp-content/uploads/2020/03/2020-0325-OSHE-COVID-19-Circular-15-9.30.pdf
2	Ministry of Manpower Advisory on Safe Distancing Measures	MOM advisory on safe distancing mea https://www.mom.gov.sg/covid-19/advisory-on-safe-distancing-measures
3	Examples of Safe Distancing Measures in NUS	Examples of Maintaining Social D SPH Workplace Social Distancing M Compilation of SDM across labs in N
4	University of Washington: Social Distancing in Laboratories and Continuity Guidance	Uni of Washington social distancing in https://www.ehs.washington.edu/about/latest-news/social-distancing-laboratories-and-continuity-guidance
5	University of South Alabama Research Continuity Policy and Guidance during Pandemic Event	research-continuity-policy-and-guidanc https://www.southalabama.edu/departments/research/resources/research-continuity-policy-and-guidance-during-pandemic-event.pdf
6	The Rockefeller University: Social Distancing Guidelines for the Workplace During the COVID-19 Outbreak	Rockefeller University Safe Dista Rockefeller University Guidance Rockefeller University Guidance https://www.rockefeller.edu/coronavirus/social-distancing-guidelines/ https://www.rockefeller.edu/coronavirus/guidance-conduct-approved-covid-19-related-research-university-closure/ https://www.rockefeller.edu/coronavirus/guidance-for-conduct-of-critical-laboratory-activities-closure/
7	European Centre for Disease Prevention and Control. Considerations relating to social distancing measures in response to COVID-19	covid-19-social-distancing-measuresg-g https://www.ecdc.europa.eu/sites/default/files/documents/covid-19-social-distancing-measuresg-guide-second-update.pdf