

Section A: Demographics

1. Are you male or female?
 - Male
 - Female
2. In what year were you born? _____
3. Which of the following describes your ethnic group?
 - Ngalop
 - Sharshop
 - Lotshamp
 - Others (please specify): _____
4. What is the highest level of education you have completed?
 - Primary school/High school
 - Diploma
 - Bachelor's degree
 - Postgraduate degree

Section B: Employment

1. Which hospital do you currently work in?
 - JDWNRH
 - Wangdue/Bajo hospital
 - Paro hospital
2. Which of the following best describes your current occupation?
 - Medical doctor
 - Surgeon
 - Anaesthesiologist
 - Others (please specify): _____
 - Dental doctor
 - Clinical officer
 - Nurse
 - Clinical nurse
 - Staff nurse
 - Nurse Anaesthetist
 - Medical technologist
 - Laboratory officer
 - Pharmacist
 - Others (please specify): _____
 - Medical technician
 - Laboratory technician
 - Pharmacy technician
 - Others (please specify): _____

- Health assistant
- Support staff
 - Ward boy/girl
 - Cleaner
 - Others (please specify): _____

3. Which department/ward do you currently work in?

4. How long have you been working as a healthcare worker?

- Less than 1 years
- 1–5 years
- 6–10 years
- 11–20 years
- 21–30 years
- More than 30 years

5. What is your current position level/grade? _____

Section C: Latex gloves

1. Do you wear gloves at work?

- Yes
- No → GO TO SECTION D ON **PAGE e2**

2. What are the gloves made from?

- Latex
- Others (please specify): _____
- I don't know → Are the gloves stretchy and creamy white in colour?
 - Yes
 - No

3. Are the gloves powdered on the inside?

- Yes
- No

Section D: Sterilization

4. Do you sterilise instruments or other equipment yourself?

- Yes
- No → GO TO SECTION E ON **PAGE e4**

5. What sterilisation method is usually used?

- In a solution
- In an autoclave or sterilisation unit
- None of the above

6. What chemical is used? Please select all that apply:
- Glutaraldehyde or Cidex
 - Quaternary ammonia compounds
 - Formaldehyde or formalin
 - Others (please specify): _____
7. Do you manually pour or drain liquid sterilising agents into trays or processing units?
- Yes
 - No

The next questions address the use of personal protective equipment (PPE). Depending on your job and exposures, PPE may not be required.

8. How often do you wear water resistant gown or outer garment while handling sterilising agents?
- Always
 - Sometimes
 - Never
9. How often do you wear protective gloves while handling sterilising agents?
- Always
 - Sometimes
 - Never
10. How often do you wear eye or face protection (e.g., goggles, face shields) while handling sterilising agents? (Do not include personal eye glasses).
- Always
 - Sometimes
 - Never
11. Do you wear any of the following while handling sterilising agents?
- Standard surgical mask
- N95 respirator
 - I do not wear masks or respirators
12. What are the reason(s) you do not wear personal protective equipment (gloves, gowns, eye or face protection, masks) while handling sterilising agents? Please select all that apply:
- An engineering control (e.g., closed disinfection system) is used
 - Skin exposure is minimal
 - Not part of our protocol
 - Not readily available in the work area
 - No one else who does this work uses them
 - Too uncomfortable or difficult to use
 - Others (please specify): _____
 - I always wear personal protective equipment
13. When was the last time you received training on safe handling of sterilising agents?
- Within the past 12 months
- More than 12 months

I never received training

14. Does your hospital/department have standard operating procedures for safe handling of sterilising agents?
- Yes
 No
 I don't know

Section E: Dental

15. Do you work in the Dental department?

Yes
 No → GO TO SECTION F ON PAGE e5

16. Do you manufacture crowns, false teeth or bridges?

Yes → Do you do this in an enclosed box or system?
 Yes
 No
 No

17. Do you take or work with dental impressions?

Yes → Are the dental impressions made from epoxy resins?
 Yes
 No
 No

18. Do you perform endodontic treatment?

Yes → Do you use sodium hypochlorite (bleach)?
 Yes
 No
 No

The next questions address the use of personal protective equipment (PPE). Depending on your job and exposures, PPE may not be required.

19. Do you wear any of the following while manufacturing false teeth or bridges, taking dental impressions, or performing endodontic treatment?

Standard surgical mask
 N95 respirator
 I do not wear masks or respirators

20. What are the reason(s) you do not wear masks while manufacturing false teeth or bridges, taking dental impressions, or performing endodontic treatment? Please select all that apply:

Not part of our protocol
 Not readily available in the work area
 No one else who does this work uses them
 Too uncomfortable or difficult to use
 Others (please specify): _____

- I always wear masks

Section F: Laboratory

21. Do you work in a laboratory?

- Yes
 No → GO TO SECTION G ON **PAGE e7**

22. Do you use methylene blue or aniline blue to stain tissue?

- Yes
 No

23. Do you use any of the following? Please select all that apply:

- Xylene
 Toluene
 Formaldehyde
 Benzene
 Ammonia or ammonium compounds
 Trichloroethylene
 None of the above

24. Do you handle or come into contact with any of the following acids? Please select all that apply:

- Chromic acid
 Sulfuric/sulfur dioxide acid
 Glacial acetic acid
 Hydrochloric acid
 Peroxyacetic or peracetic acid
 None of the above

25. What do you usually clean your glassware with? Please select all that apply:

- Alcohol
 Chromic acid
 Detergent
 Aqua regia
 Others (please specify): _____

The next questions address the use of personal protective equipment (PPE). Depending on your job and exposures, PPE may not be required.

26. How do you usually handle laboratory chemicals?

- In a fume hood
 In a sealed box with manipulation tool
 Others (please specify): _____

27. How often do you wear water resistant gown or outer garment while handling laboratory chemicals?

- Always
 Sometimes
 Never

28. How often do you wear protective gloves while handling laboratory chemicals?
- Always
 - Sometimes
 - Never
29. How often do you wear eye or face protection (e.g., goggles, face shield) while handling laboratory chemicals? (Do not include personal eye glasses)
- Always
 - Sometimes
 - Never
30. Do you wear any of the following while handling laboratory chemicals?
- Standard surgical mask
 - N95 respirator
 - I do not wear masks or respirators
31. What are the reason(s) you do not wear personal protective equipment (gowns, gloves, eye or face protection, masks) while handling laboratory chemicals? Please select all that apply:
- An engineering control (e.g., fume hood) is used
 - Skin exposure is minimal
 - Not part of our protocol
 - Not readily available in the work area
 - No one else who does this work uses them
 - Too uncomfortable or difficult to use
 - Others (please specify): _____
 - I always wear personal protective equipment
32. When was the last time you received training on safe handling of laboratory chemicals?
- Within the past 12 months
 - More than 12 months
 - I never received training
33. Does your hospital/department have standard operating procedures for safe handling of laboratory chemicals?
- Yes
 - No
 - I don't know

Section G: Suturing and antiseptics

34. Do you perform sutures?
- Yes
 - No → GO TO SECTION H ON **PAGE e7**
35. Do you use glues for suturing?

- Yes → Do you use cyanoacrylate super glue?
- Yes
 - No
- No

36. Do you apply antiseptics?
- Yes → Do you apply chlorhexidine (Savlon)?
- Yes
 - No
- No

Section H: Surgery

37. Do you work in the operation theatre (OT)?
- Yes
 - No → **GO TO SECTION I ON PAGE e8**
38. Do you handle or come in contact with bone cement?
- Yes
 - No
39. Do you operate diathermy equipment or work within one and a half meters of diathermy equipment?
- Yes
 - No

The next questions address the use of control measures and personal protective equipment (PPE). Depending on your job and exposures, PPE may not be required.

40. Local Exhaust Ventilation (LEV) captures and removes the contaminants at the point where they are being produced, such as a portable smoke evacuator or a flexible tube connected to a room (wall) suction system. LEV does not include blood suction canister systems. How often was LEV used while you worked within one and a half meters of the source of surgical smoke during diathermy?
- Always
 - Sometimes
 - Never
41. What are the reason(s) LEV was not always used during diathermy? Please select all that apply:
- General room ventilation was sufficient to dissipate smoke plume
 - Used a different system (e.g., blood suction canister) to remove the smoke
 - Exposure was minimal
 - Not part of our protocol
 - Not readily available in the work area
 - No one else who does this work uses them
 - Too difficult to use
 - Too bulky or noisy
 - Others (please specify): _____

42. How often do you wear N95 respirators during diathermy?
- Always
 - Sometimes
 - Never
43. What are the reason(s) you do not wear N95 respirators during diathermy? Please select all that apply:
- An engineering control (e.g., local exhaust ventilation system) is used
 - Exposure is minimal
 - Not part of our protocol
 - Not readily available in the work area
 - No one else who does this work uses them
 - Too uncomfortable or difficult to use
 - Others (please specify): _____
 - I always wear a N95 respirator
44. When was the last time you received training on addressing hazards of surgical smoke?
- Within the past 12 months
 - More than 12 months
 - I never received training
45. Does your hospital/department have standard operating procedures for addressing hazards of surgical smoke?
- Yes
 - No
 - I don't know

Section I: Anaesthetic gases

46. Do you administer anaesthetic gases to patients?
- Yes
 - No → GO TO SECTION J ON **PAGE e9**
47. How often do you use a waste gas scavenging system (e.g., patient nasal mask with scavenging, local exhaust hood places near the patient's mouth) when you administer anaesthetic gases?
- Always
 - Sometimes
 - Never
48. When administering anaesthetic gases to patients, how often do you check anaesthesia machines, breathing circuits, and other components for leaks?
- Always
 - Sometimes
 - Never
49. When administering anaesthetic gases to patients, how often do you start the anaesthetic gas flow after delivery mask or airway device is applied?
- Always

- Sometimes
 Never
50. When administering anaesthetic gases to patients, how often do you turn off the anaesthetic gas flow before turning off the flow of carrier gas to the breathing system?
 Always
 Sometimes
 Never
51. When administering anaesthetic gases to patients, how often do you mainly use high flow anaesthesia (3-6L/min of fresh gas)?
 Always
 Sometimes
 Never
52. Do you personally fill anaesthesia vaporizers?
 Yes
 No
53. When filling anaesthesia vaporizers, which system do you use?
 A “key filler” or other closed system
 A “funnel fill” system (also called “pour fill” or “screw cap fill” system)
54. When was the last time you received training on safe handling of anaesthetic gases?
Within the past 12 months
 More than 12 months
 I never received training
55. Does your hospital/department have standard operating procedures for safe handling of anaesthetic gases?
 Yes
 No
 I don't know

Section J: Antineoplastic drugs

56. Do you administer or compound antineoplastic drugs?
 Yes
 No → GO TO SECTION K ON **PAGE e11**
57. Do you administer antineoplastic drugs?
 Yes → While administering antineoplastic drugs, which of the following do you use? Please select all that apply
 Closed-system transfer device (e.g., PhaSeal)
 Luer-Lock fittings for all needle-less systems, infusions, and pumps
 A needle-less system
 None of the above

No

58. Do you compound antineoplastic drugs?

Yes → While compounding antineoplastic drugs, which of the following do you use:

A room or area dedicated to the preparation of these agents

A biological safety cabinet

An isolator

Others (please specify): _____

None of the above

No

59. Do you prime IV tubing for antineoplastic drugs?

Yes → How do you prime the IV tubing? Please select all that apply:

With antineoplastic agent

With diluents (i.e., another liquid other than antineoplastic agent)

No

The next questions address the use of personal protective equipment (PPE). Depending on your job and exposures, PPE may not be required.

60. How often do you wear a non-absorbent gown with closed front and tight cuffs while administering/compounding antineoplastic agents?

Always

Sometimes

Never

61. Have you taken home any clothing that came into contact with antineoplastic agents?

Yes

No

I don't know

62. How often do you wear gloves while administering/compounding antineoplastic agents?

Always

Sometimes

Never

63. When wearing gloves, how often do you wear two pairs (i.e., double gloves)?

Always

Sometimes

Never

64. How often do you wash hands after removing gloves?

Always

Sometimes

Never

65. How often do you wear eye or face protection (e.g., goggles, face shield) while administering/compounding antineoplastic agents? (Do not include personal eye glasses)

- Always
- Sometimes
- Never

66. Do you wear any of the following while administering/compounding antineoplastic agents? Please select all that apply:
- Standard surgical mask
 - N95 respirator
 - I do not wear masks or respirators
67. What are the reason(s) you do not wear personal protective equipment (gowns, gloves, eye or face protection, masks) while administering/compounding antineoplastic agents? Please select all that apply:
- An engineering control (e.g., closed-system drug transfer device) was used
 - Exposure is minimal
 - Not part of our protocol
 - Not readily available in the work area
 - No one else who does this work uses them
 - Too uncomfortable or difficult to use
 - Cross-contamination to other areas is not a concern
 - Others (please specify): _____
 - I always wear personal protective equipment
68. When was the last time you received training on safe handling of antineoplastic drugs?
- Within the past 12 months
 - More than 12 months
 - I never received training
69. Does your hospital/department have standard operating procedures for safe handling of antineoplastic drugs?
- Yes
 - No
 - I don't know

Section K: Cleaning

70. Is one of your tasks to clean the work place?
- Yes
 - No → *Thank you for participating in the survey*
71. Do you handle or come in contact with any of the following cleaning agents while you are at work? Please select all that apply:
- Bleach
 - Ammonium solutions/Quaternary ammonium compounds
 - Disinfectants (e.g., Dettol)
 - Chlorhexidine (Savlon)
 - White spirits, mineral turpentine or mineral spirits
 - None of the above

72. Do you use any of the following acid-based products? Please select all that apply:

- Drain cleaner, please specify the brand name: _____
- Other acid cleaners (please specify): _____
- No, I do not use any

The next questions address the use of personal protective equipment (PPE). Depending on your job and exposures, PPE may not be required.

73. How often do you wear protective gloves while handling cleaning agents?

- Always
- Sometimes
- Never

74. How often do you use goggles while handling cleaning agents? (Do not include personal eye glasses)

- Always
- Sometimes
- Never

75. Do you wear any of the following while handling cleaning agents? Please select all that apply:

- Standard surgical mask
- N95 respirator
- I do not wear masks or respirators

76. What are the reason(s) you do not wear personal protective equipment while handling cleaning agents?

Please select all that apply:

- Exposure is minimal
- Not part of our protocol
- Not readily available in the work area
- No one else who does this work uses them
- Too uncomfortable or difficult to use
- Others (please specify): _____
- I always wear personal protective equipment

77. When was the last time you received training on safe handling of cleaning agents?

- Within the past 12 months
- More than 12 months
- I never received training

78. Does your hospital/department have standard operating procedures for safe handling of cleaning agents?

- Yes
- No
- I don't know