

Preventing occupational exposure to Hazardous Medicinal Products (HMPs) Survey Results

BY IAN LINDSLEY, SECRETARY OF EBN

FÓRSA/EBN SUMMIT, DUBLIN, 30 JANUARY 2024

Methodology

The survey was launched in January 2023 on the online platform SurveyMonkey with a target audience of healthcare workers and professionals based in Ireland.

The European Biosafety Network (EBN) drafted the survey with the support of a working group of experts from unions, government organisations and professional associations in healthcare, who also distributed the survey link to their networks and members.

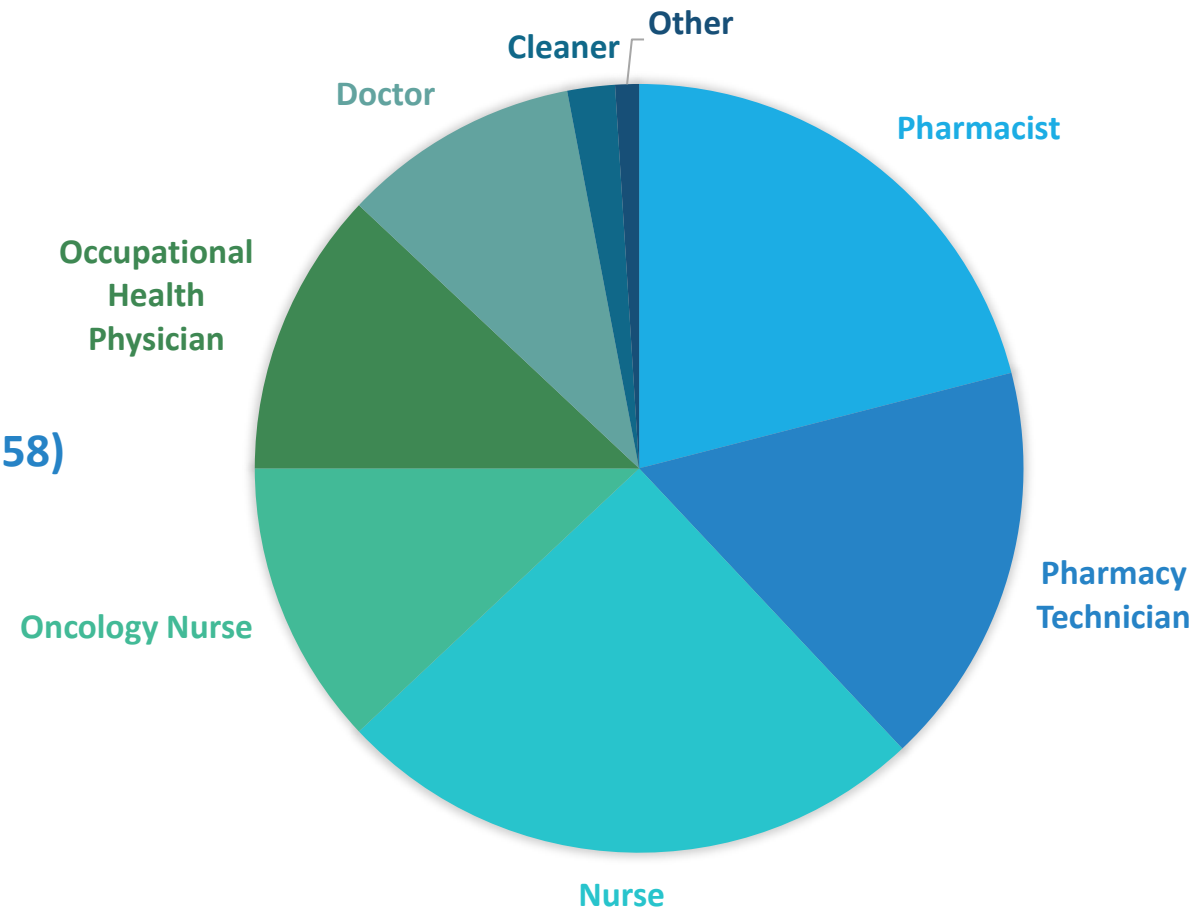
The objective of the survey was to measure the current awareness of the problem of exposure to HMPs among healthcare workers in Ireland and to understand how many of the preventive measures and best practice for safe handling of HMPs are currently in use across the country.

The survey closed on 1st December 2023 and in total there were 480 respondents, although not all respondents completed every question in the survey.

1. What is your current occupation and grade?

Responses:

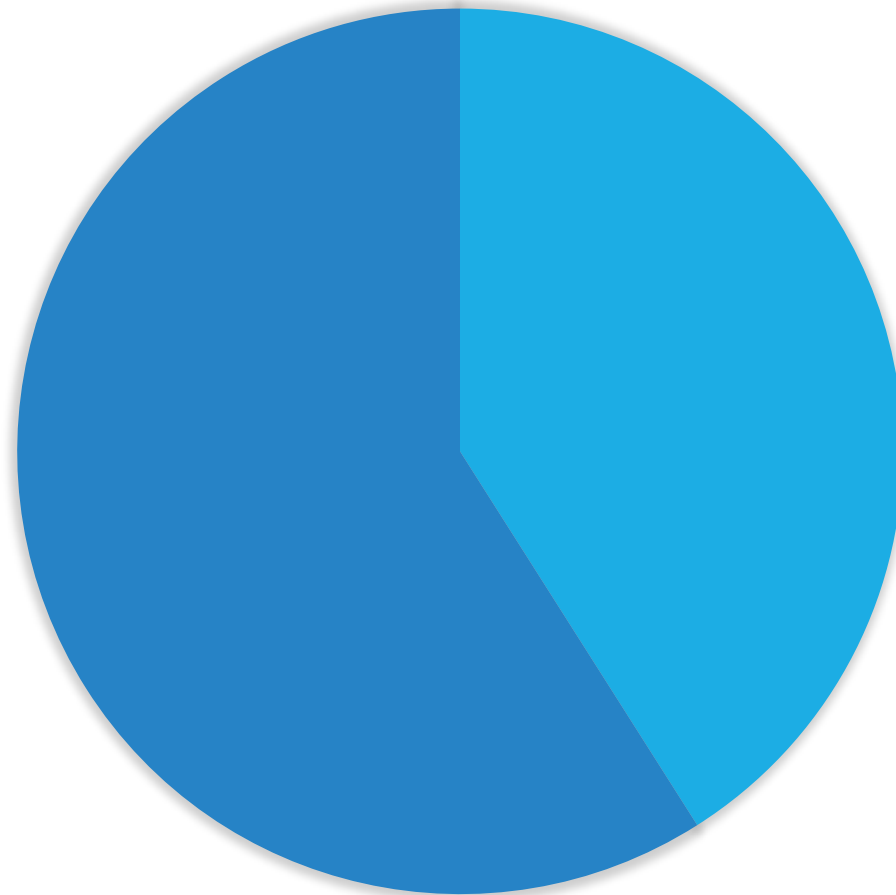
- Pharmacist – **21% (101)**
- Pharmacy Technician – **17% (82)**
- Nurse – **25% (120)**
- Oncology Nurse – **12% (58)**
- Occupational Health Physician – **12% (58)**
- Doctor – **10% (48)**
- Ancillary staff (eg Cleaners) – **2% (9)**
- Other (eg Admin staff) – **1% (4)**



2. Do you use a list of HMPs in your workplace to identify HMPs?

Occupation	Responses
Pharmacist	14% (41)
Pharmacy Technician	10% (29)
Nurse	33% (92)
Oncology Nurse	13% (37)
Occupational Health Physician	14% (40)
Doctor	11% (31)

No
59%
(283)



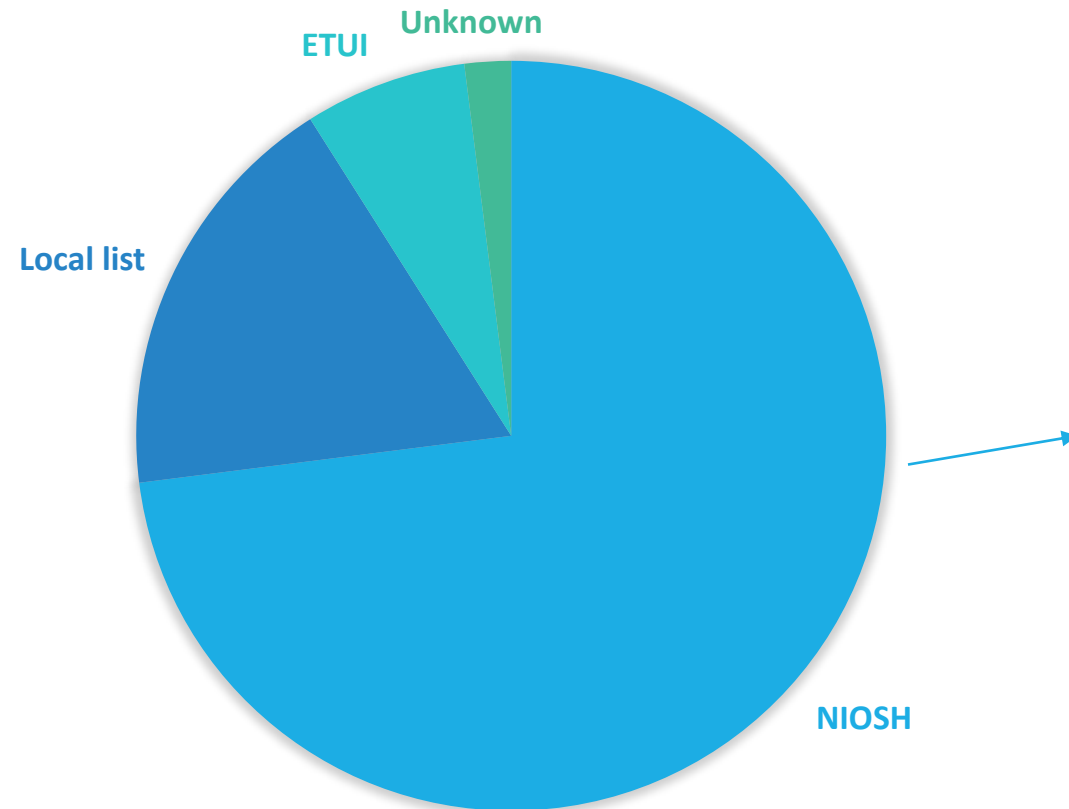
Yes
41%
(197)

Occupation	Responses
Pharmacist	30% (60)
Pharmacy Technician	27% (53)
Nurse	14% (28)
Oncology Nurse	11% (21)
Occupational Health Physician	9% (18)
Doctor	9% (17)

3. If so, which list? (NIOSH, ETUI, etc.)

Of those that said yes to the previous question answers for this question included:

- NIOSH – **73% (144)**
- Local list – **18% (35)**
- ETUI – **7% (14)**
- Unknown – **2% (4)**



Occupation	Responses
Pharmacist	30% (43)
Pharmacy Technician	26% (39)
Nurse	15% (21)
Oncology Nurse	13% (19)
Occupational Health Physician	8% (11)
Doctor	8% (11)

Data Trends

Less than half of respondents use a list of HMPs in their workplace

For those that don't use a list to identify the hazard, it makes it more difficult to know which drugs are hazardous let alone to prevent exposure to it.

Of those that do use a list, the majority use the NIOSH list of hazardous drugs, which is the comprehensive list from the US, dating from 2020

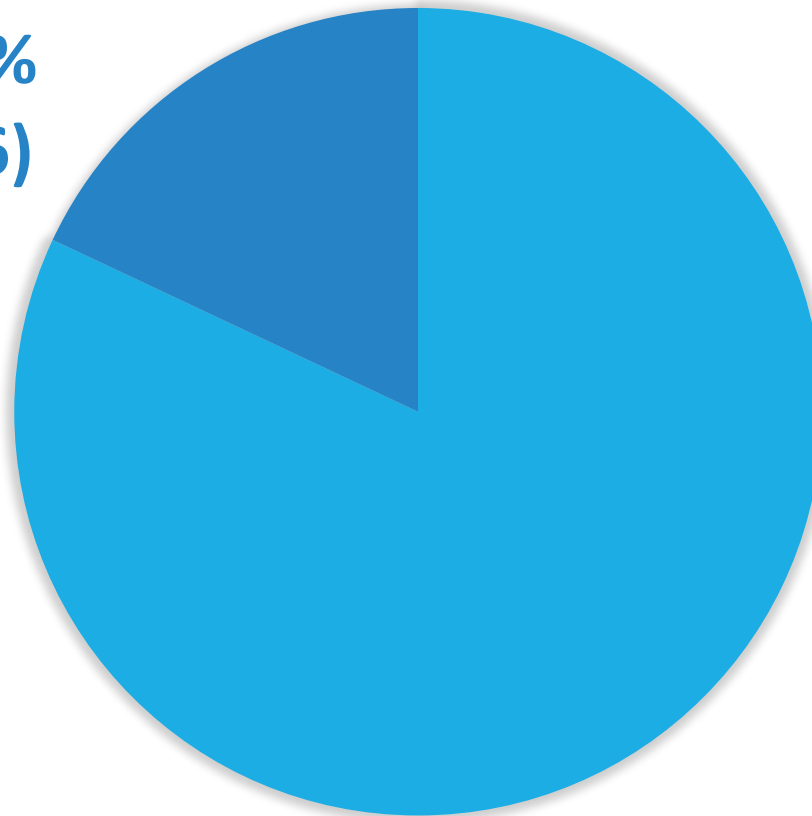
The NIOSH list does not necessarily reflect the HMPs which are actually in use in Ireland

It is encouraging to see that some are using the ETUI list, in anticipation of the EU list - which will not be available unfortunately until 2025

4. Do you use manufacturers' safety data sheets or other labelling to identify HMPs? (Where applicable)

Occupation	Responses
Pharmacist	12% (10)
Pharmacy Technician	9% (8)
Nurse	19% (16)
Oncology Nurse	22% (19)
Occupational Health Physician	17% (15)
Doctor	6% (5)

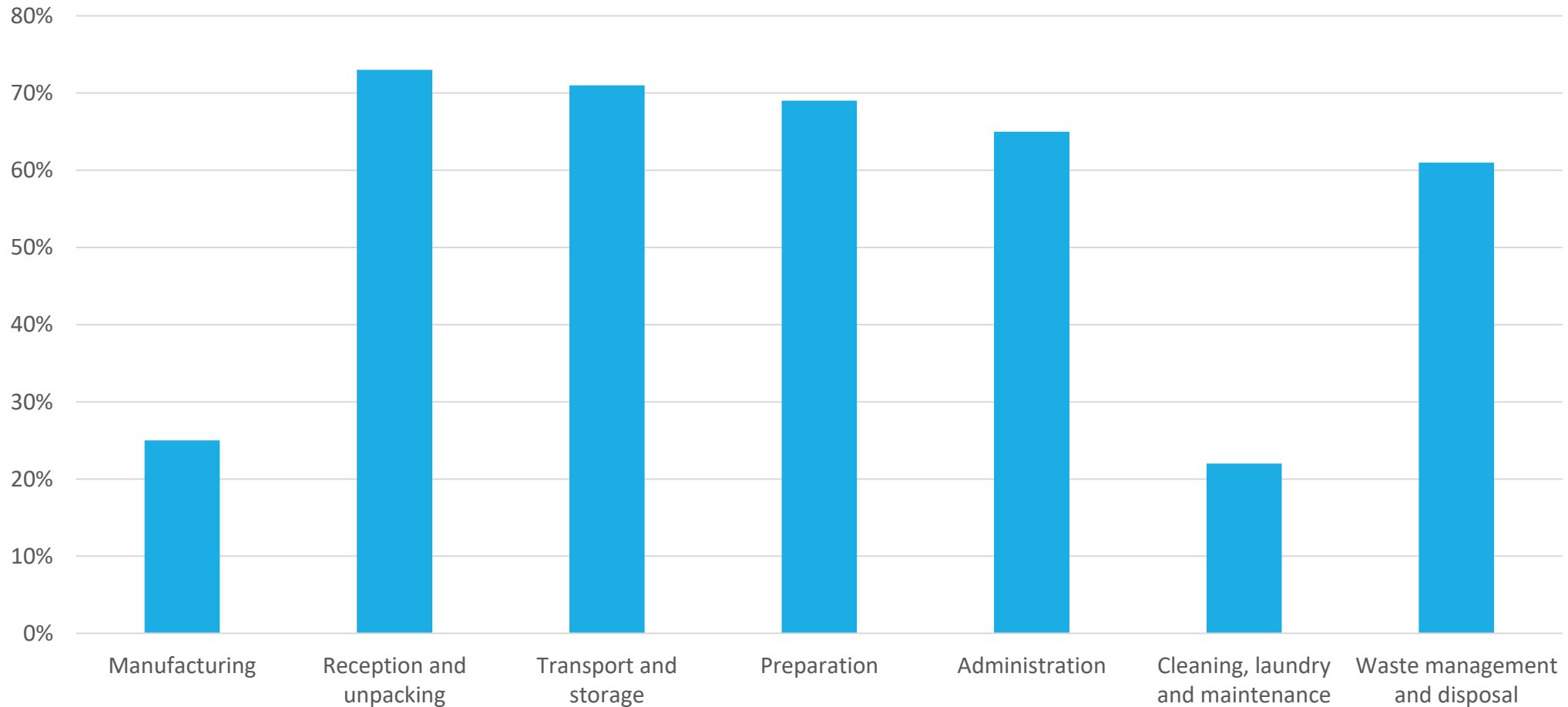
No
18%
(86)



Yes
82%
(394)

Occupation	Responses
Pharmacist	23% (91)
Pharmacy Technician	19% (74)
Nurse	26% (104)
Oncology Nurse	10% (39)
Occupational Health Physician	11% (43)
Doctor	11% (43)

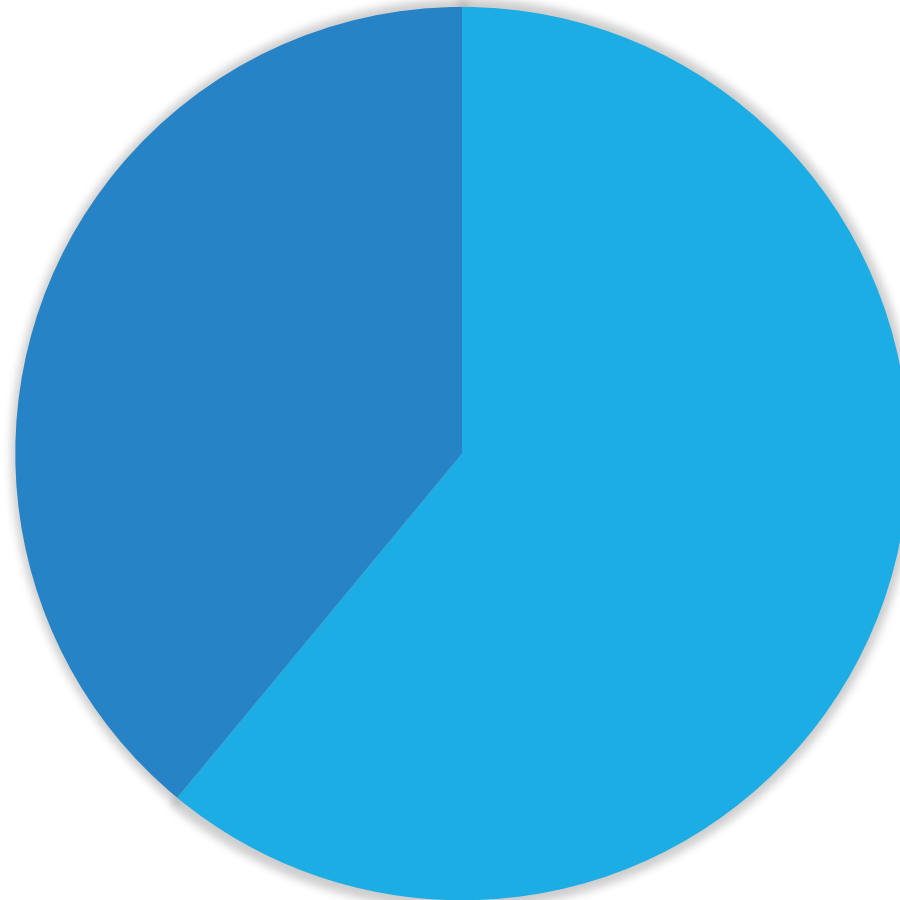
5. In which stages of the whole life cycle of HMPs are they used at your workplace?



6. Does your workplace have a written protocol or guidance (i.e. policy) for handling HMPs?

Occupation	Responses
Pharmacist	9% (16)
Pharmacy Technician	7% (13)
Nurse	30% (57)
Oncology Nurse	19% (35)
Occupational Health Physician	16% (29)
Doctor	14% (27)

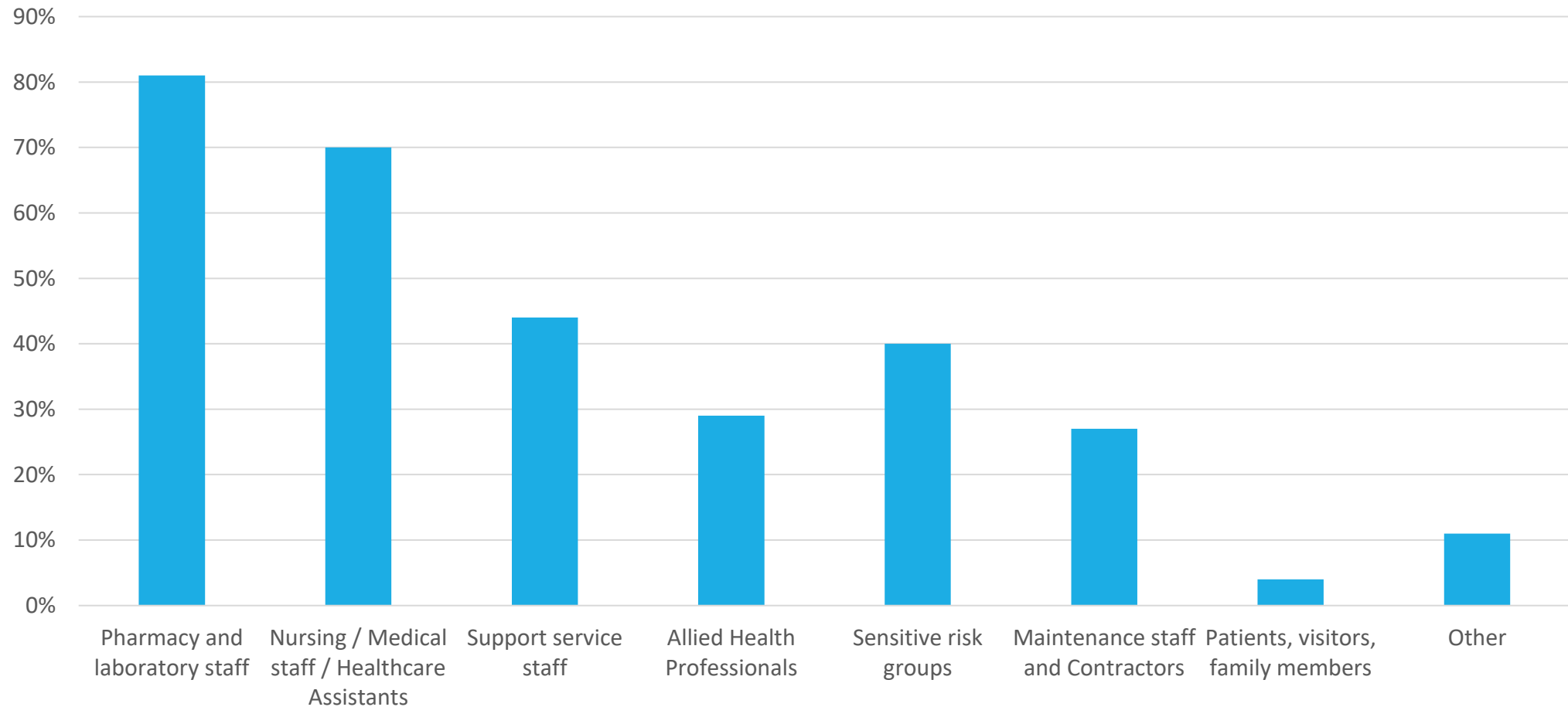
No
39%
187



Yes
61%
293

Occupation	Responses
Pharmacist	29% (85)
Pharmacy Technician	24% (69)
Nurse	21% (63)
Oncology Nurse	8% (23)
Occupational Health Physician	10% (29)
Doctor	7% (21)

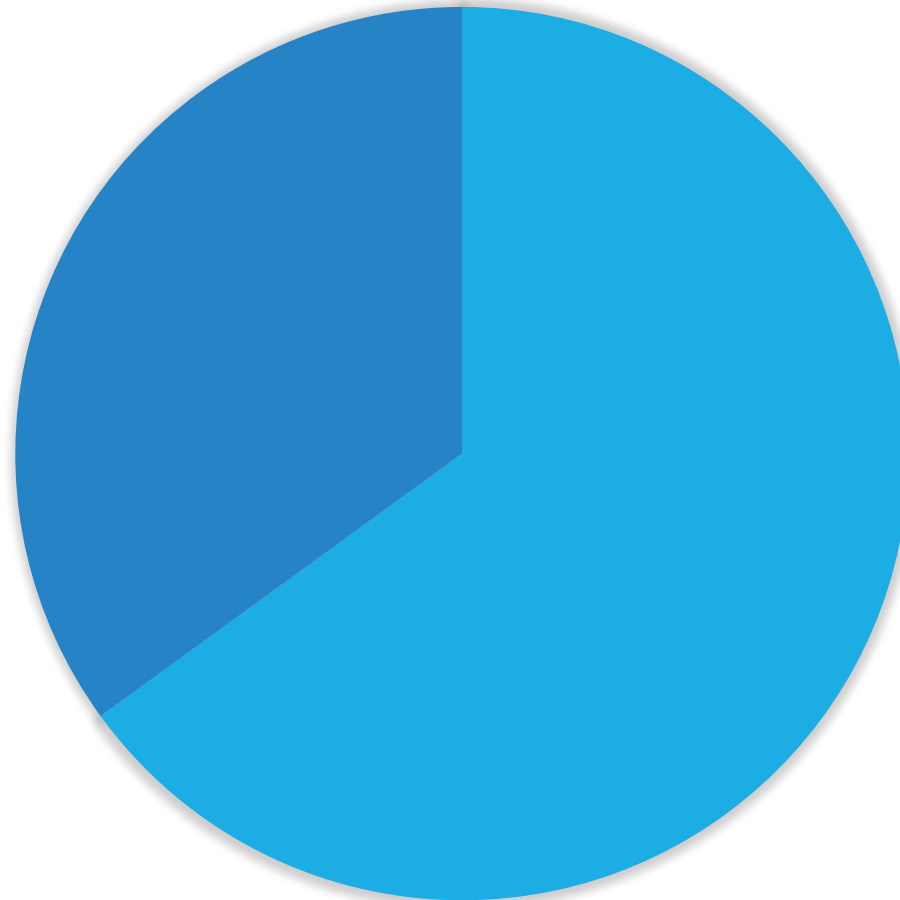
7. If so, which of these groups can access the protocol or guidance?



8. Is there an overall policy for handling HMPs in your workplace?

Occupation	Responses
Pharmacist	7% (12)
Pharmacy Technician	6% (10)
Nurse	36% (60)
Oncology Nurse	14% (24)
Occupational Health Physician	18% (30)
Doctor	11% (19)

No
35%
168



Yes
65%
312

Occupation	Responses
Pharmacist	29% (89)
Pharmacy Technician	23% (72)
Nurse	19% (60)
Oncology Nurse	11% (34)
Occupational Health Physician	9% (28)
Doctor	9% (29)

Data Trends – policy on handling HMPs

The vast majority of respondents use safety data sheets or other labelling to identify HMPs, but this does not usually include the majority of HMPs in use and thus is not comprehensive in the way that a defined or indicative list of HMPs is

There is a widespread awareness that HMPs are used across the whole life cycle of HMPs but low responses for manufacturing and for cleaning, laundry and maintenance

One would expect the vast majority of workplaces to have a written policy or guidance for handling HMPs, so it is concerning that nearly 40% of respondents do not

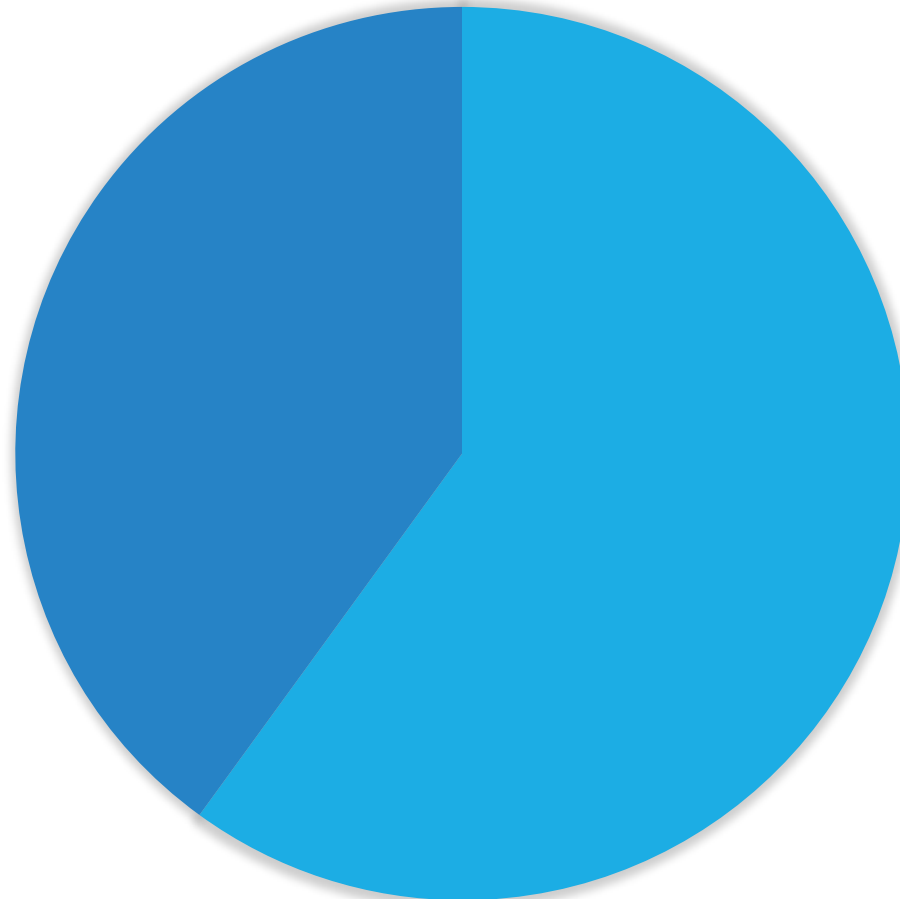
And for those who do have a **written** policy or guidance, it is mainly only accessible for pharmacy, nursing and medical staff not other groups affected in the life cycle of HMPs

The figure for an overall policy on handling HMPs is slightly higher but still 35% do not have a policy in place

9. In your workplace, do you have a written policy for risk assessment of handling HMPs?

Occupation	Responses
Pharmacist	11% (21)
Pharmacy Technician	9% (16)
Nurse	38% (69)
Oncology Nurse	13% (24)
Occupational Health Physician	17% (31)
Doctor	12% (22)

No
40%
184



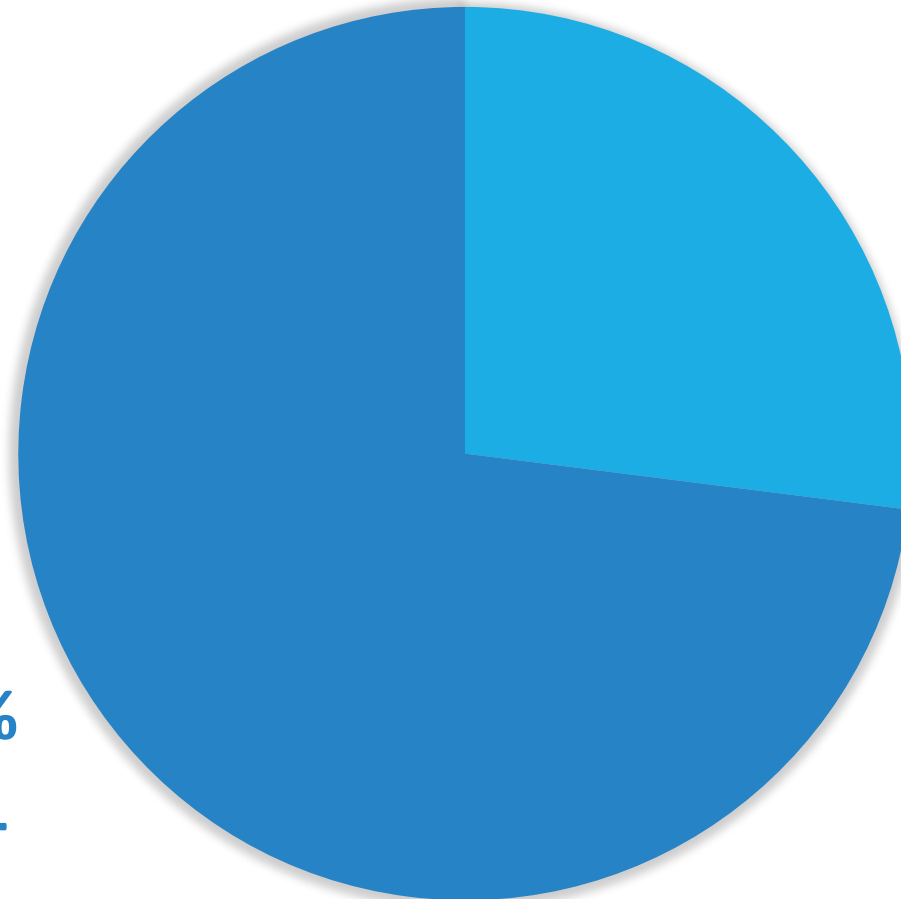
Yes
60%
276

Occupation	Responses
Pharmacist	29% (79)
Pharmacy Technician	24% (65)
Nurse	18% (50)
Oncology Nurse	12% (32)
Occupational Health Physician	9% (26)
Doctor	8% (24)

10. If so, is this policy reviewed at least annually?

Occupation	Responses
Pharmacist	28% (57)
Pharmacy Technician	25% (50)
Nurse	15% (30)
Oncology Nurse	12% (24)
Occupational Health Physician	10% (20)
Doctor	10% (20)

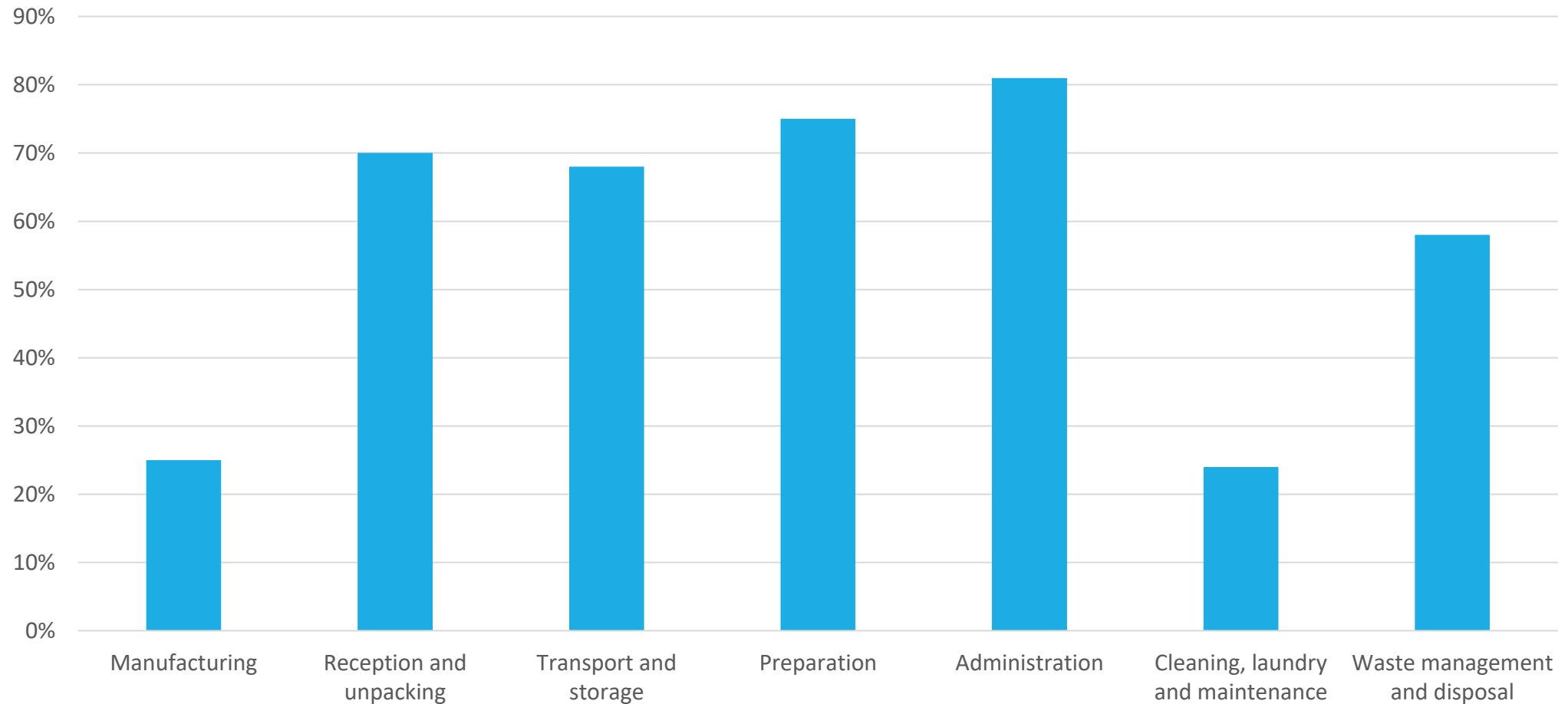
No
73%
201



Yes
27%
75

Occupation	Responses
Pharmacist	29% (22)
Pharmacy Technician	20% (15)
Nurse	27% (20)
Oncology Nurse	11% (8)
Occupational Health Physician	8% (6)
Doctor	5% (4)

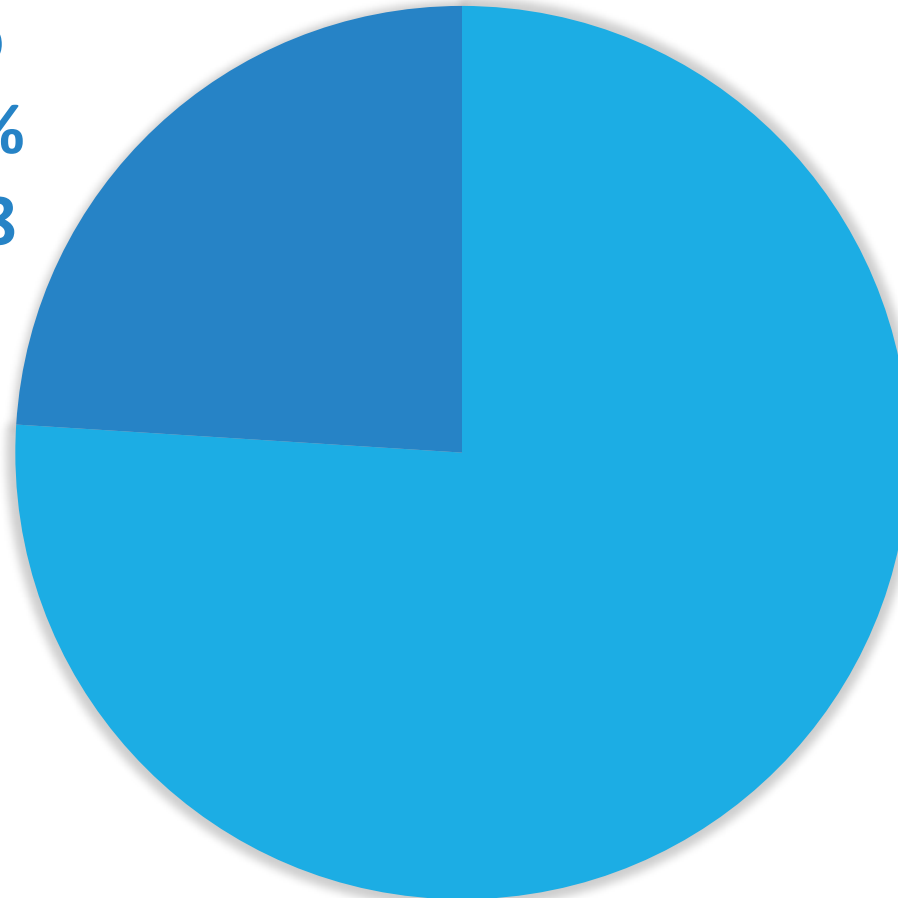
11. In which stages of the whole life cycle of HMPs does the risk assessment apply?



12. Do you currently record incidents where employees have been exposed to HMPs?

Occupation	Responses
Pharmacist	6% (6)
Pharmacy Technician	3% (3)
Nurse	33% (36)
Oncology Nurse	26% (28)
Occupational Health Physician	19% (20)
Doctor	13% (15)

No
24%
108



Yes
76%
342

Occupation	Responses
Pharmacist	27% (94)
Pharmacy Technician	23% (77)
Nurse	24% (82)
Oncology Nurse	7% (24)
Occupational Health Physician	10% (35)
Doctor	9% (30)

Data Trends – risk assessment

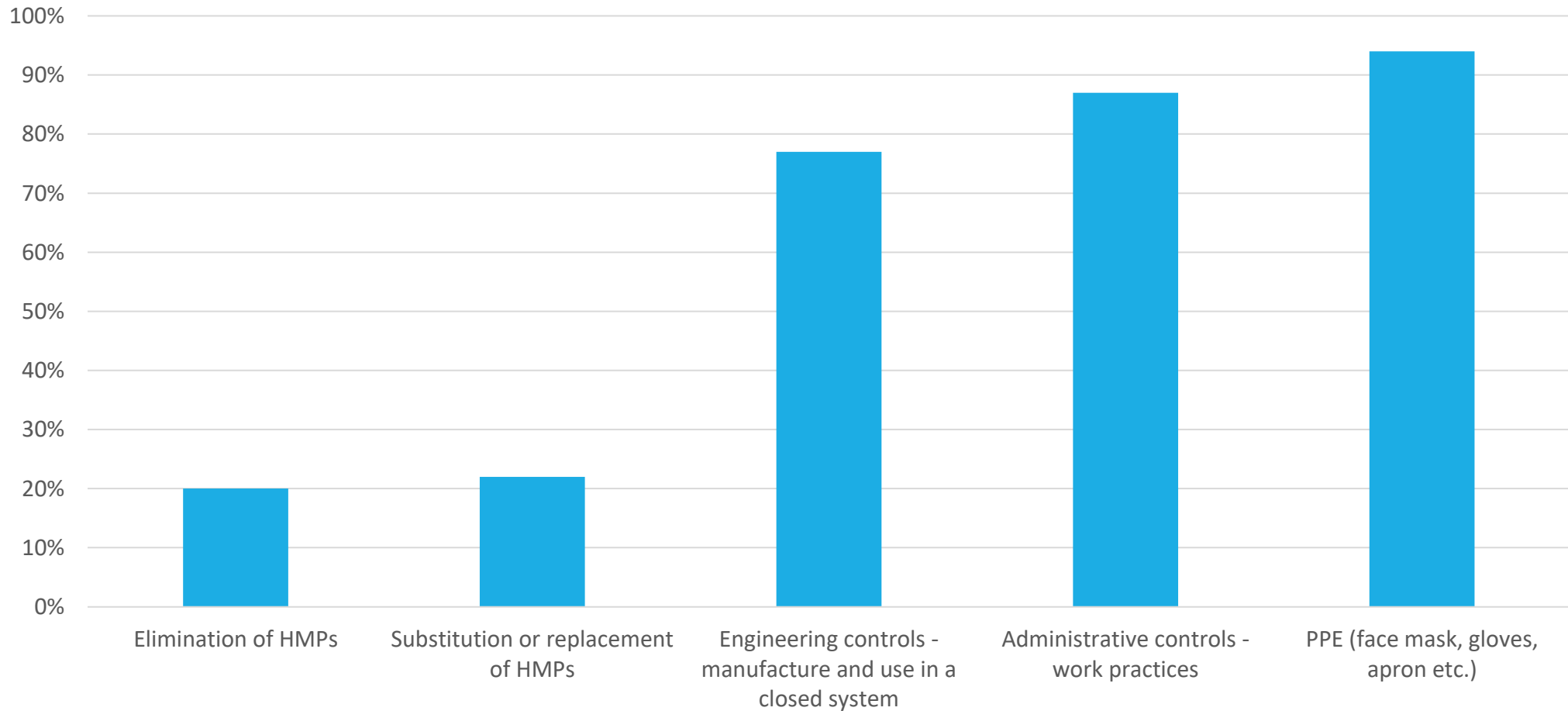
40% of respondents do not have a written policy for risk assessment for handling HMPs, which is almost the same percentage (39%) of respondents not having a written policy for handling HMPs

Also concerning, is the high proportion of respondents who said that where they did have a written policy for risk assessment it was not reviewed at least annually

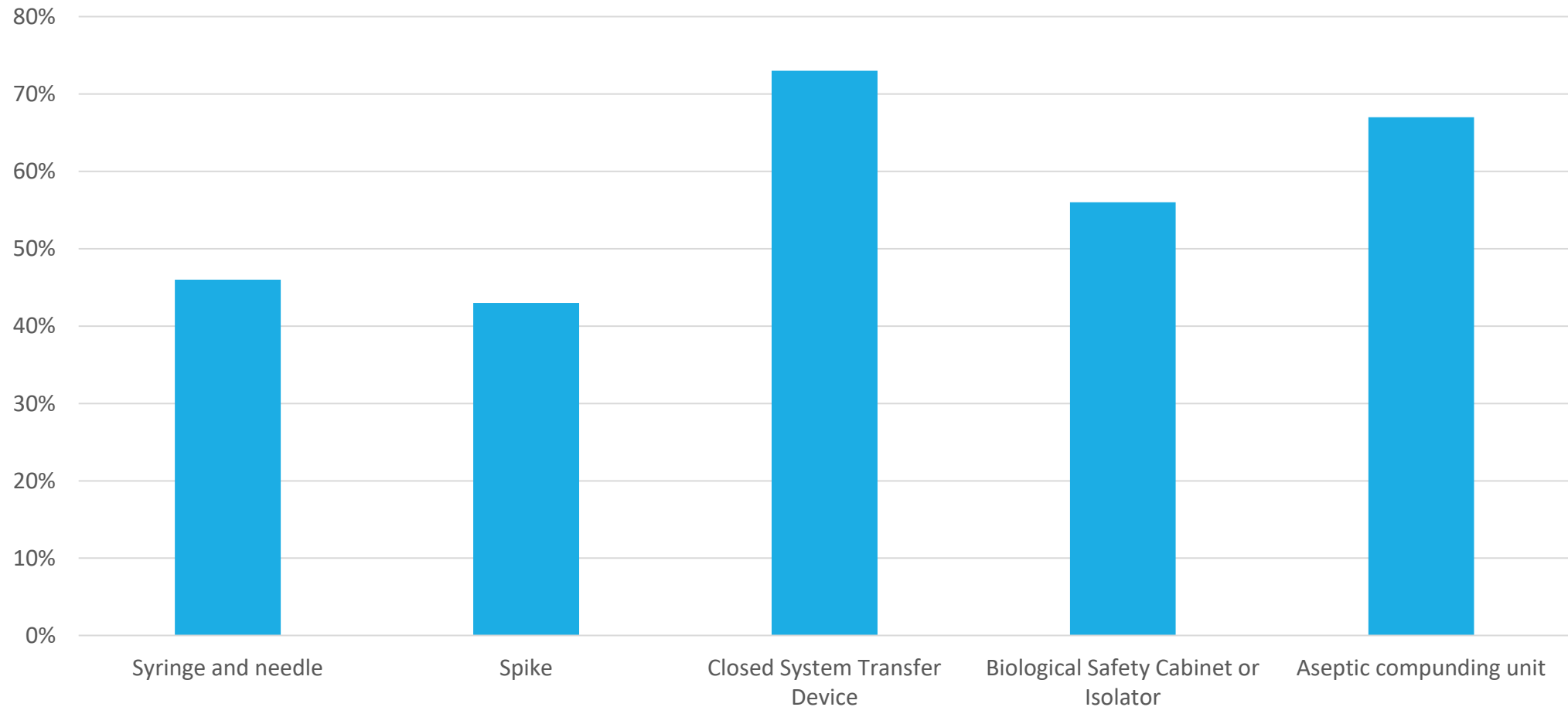
For those who do have a written policy for risk assessment, it is mainly only accessible for pharmacy, nursing and medical staff not other groups affected in the life cycle of HMPs, which is a similar pattern as for policy on handling HMPs

It is encouraging that the vast majority of respondents said that incidents of exposure to HMPs are reported

13. In your workplace which controls are used to prevent exposure to HMPs for workers?



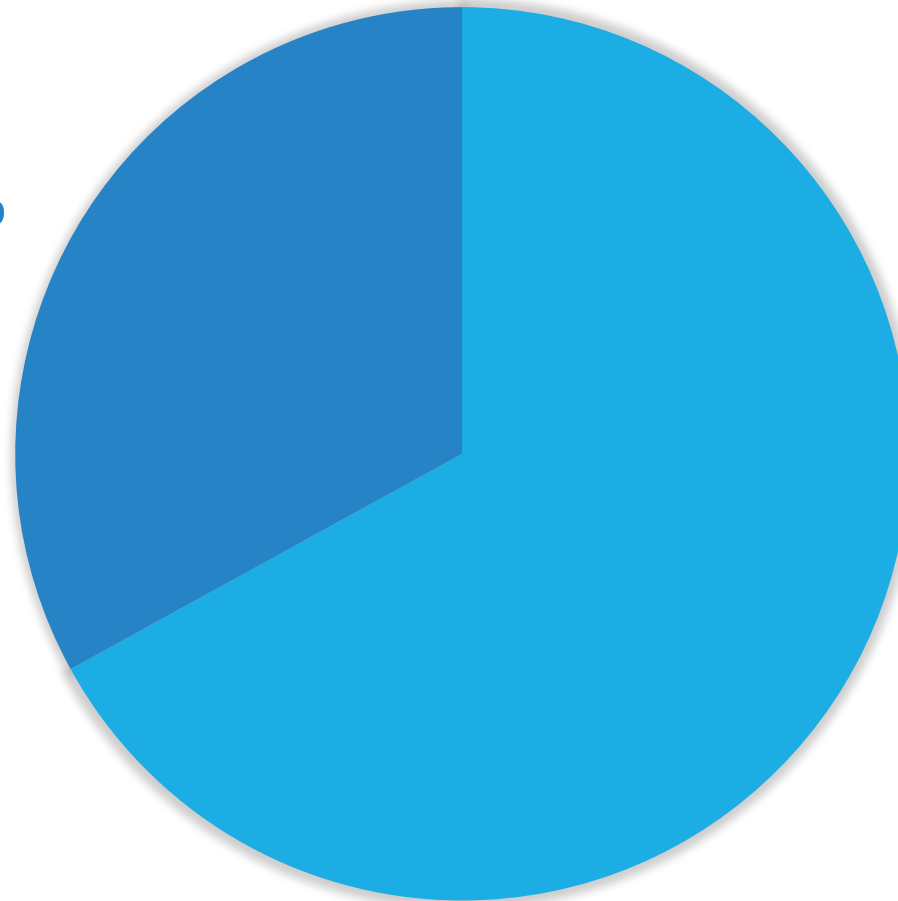
14. If relevant to your workplace, which engineering controls are used to prevent exposure to HMPs?



15. Does your workplace regularly review preventive control measures? (e.g. audit, incident reports review)

Occupation	Responses
Pharmacist	10% (14)
Pharmacy Technician	8% (11)
Nurse	37% (53)
Oncology Nurse	17% (25)
Occupational Health Physician	17% (25)
Doctor	11% (17)

No
33%
145



Yes
67%
295

Occupation	Responses
Pharmacist	29% (86)
Pharmacy Technician	23% (69)
Nurse	21% (61)
Oncology Nurse	10% (29)
Occupational Health Physician	8% (24)
Doctor	9% (26)

Data Trends – preventive controls and measures

Preventive controls and measures are in place and engineering controls are used in relevant workplaces

Preventive controls tend to focus more on PPE and administrative controls which are at the bottom of the hierarchy of controls, when compared with elimination, substitution and engineering controls which are at the top of the hierarchy

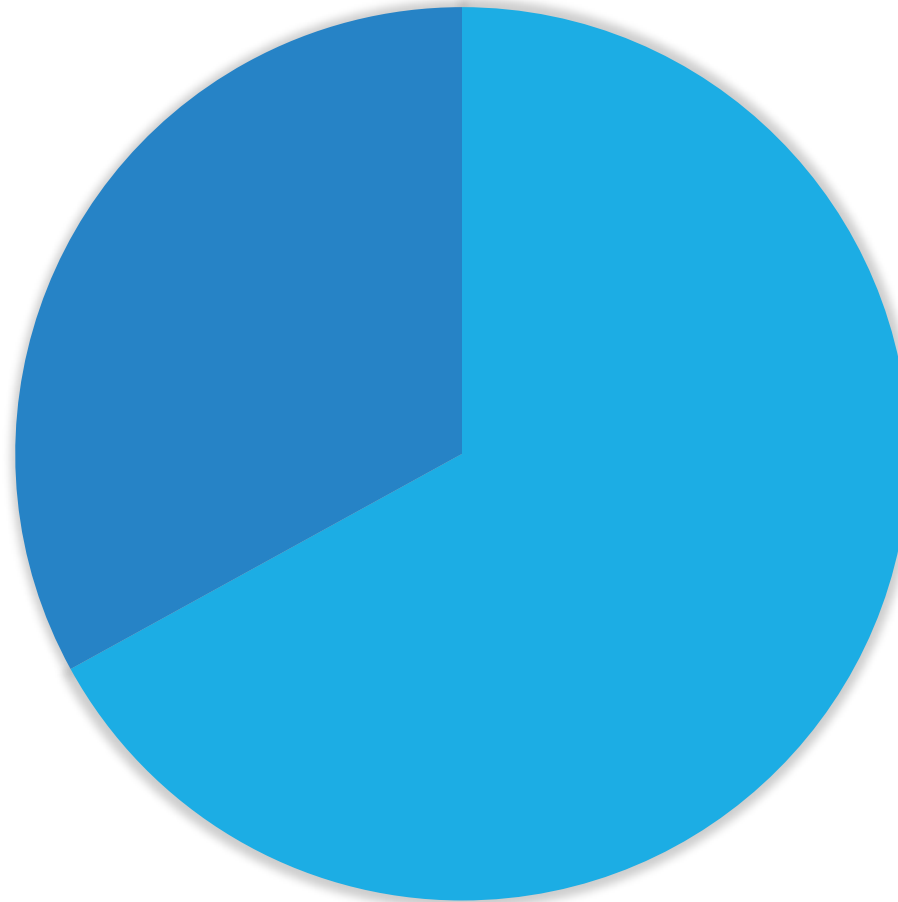
CSTDs, cabinets, isolators and aseptic compounding units are more prevalent in usage as engineering controls than syringes, needles and spikes

More than two thirds of respondents said control measures are regularly reviewed

16. Does your workplace have a written protocol for cleaning surfaces where HMPs are in use?

Occupation	Responses
Pharmacist	9% (13)
Pharmacy Technician	7% (10)
Nurse	32% (46)
Oncology Nurse	19% (27)
Occupational Health Physician	18% (25)
Doctor	15% (21)

No
33%
142



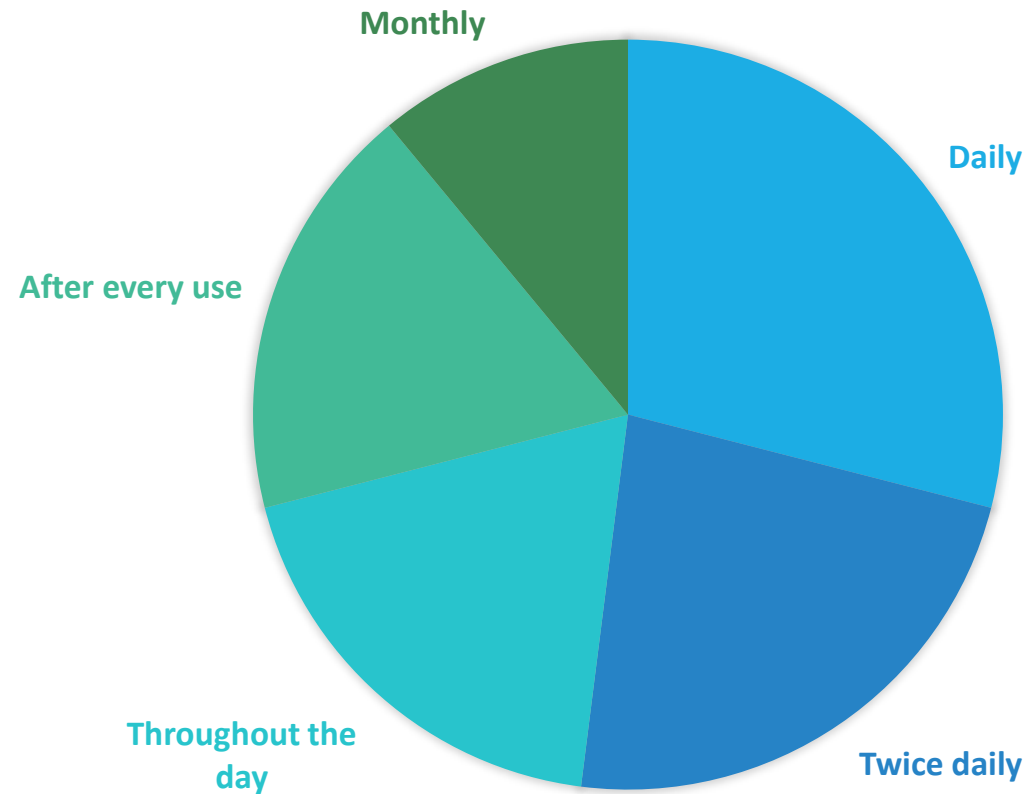
Yes
67%
288

Occupation	Responses
Pharmacist	28% (82)
Pharmacy Technician	24% (69)
Nurse	20% (58)
Oncology Nurse	10% (28)
Occupational Health Physician	11% (31)
Doctor	7% (20)

17. How often is the cleaning of surfaces undertaken?

Responses:

- Daily – **29% (123)**
- Twice daily – **23% (98)**
- Throughout the day – **19% (81)**
- After every use – **18% (77)**
- Monthly – **11% (47)**



Breakdown by occupation

Daily

Occupation	Responses
Pharmacist	25% (31)
Pharmacy Technician	19% (23)
Nurse	30% (37)
Oncology Nurse	11% (13)
Occupational Health Physician	9% (11)
Doctor	6% (8)

Twice Daily

Occupation	Responses
Pharmacist	20% (20)
Pharmacy Technician	15% (15)
Nurse	31% (30)
Oncology Nurse	8% (9)
Occupational Health Physician	14% (14)
Doctor	10% (10)

Throughout the day

Occupation	Responses
Pharmacist	21% (17)
Pharmacy Technician	15% (12)
Nurse	36% (28)
Oncology Nurse	12% (10)
Occupational Health Physician	9% (8)
Doctor	7% (6)

After every use

Occupation	Responses
Pharmacist	18% (14)
Pharmacy Technician	17% (13)
Nurse	28% (21)
Oncology Nurse	17% (13)
Occupational Health Physician	14% (11)
Doctor	6% (5)

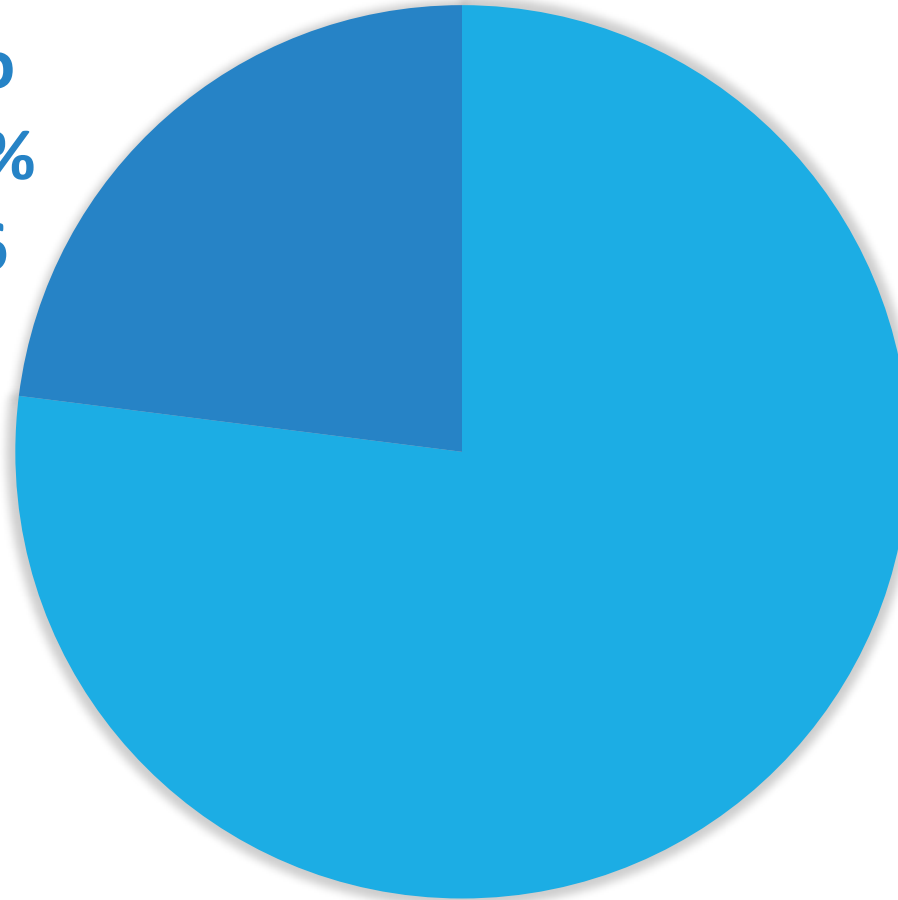
Monthly

Occupation	Responses
Pharmacist	23% (11)
Pharmacy Technician	15% (7)
Nurse	4% (2)
Oncology Nurse	15% (7)
Occupational Health Physician	17% (8)
Doctor	26% (12)

18. Is there a policy in place for staff who are pregnant or planning to become pregnant?

Occupation	Responses
Pharmacist	6% (8)
Pharmacy Technician	3% (1)
Nurse	33% (41)
Oncology Nurse	26% (16)
Occupational Health Physician	19% (19)
Doctor	13% (11)

No
23%
96



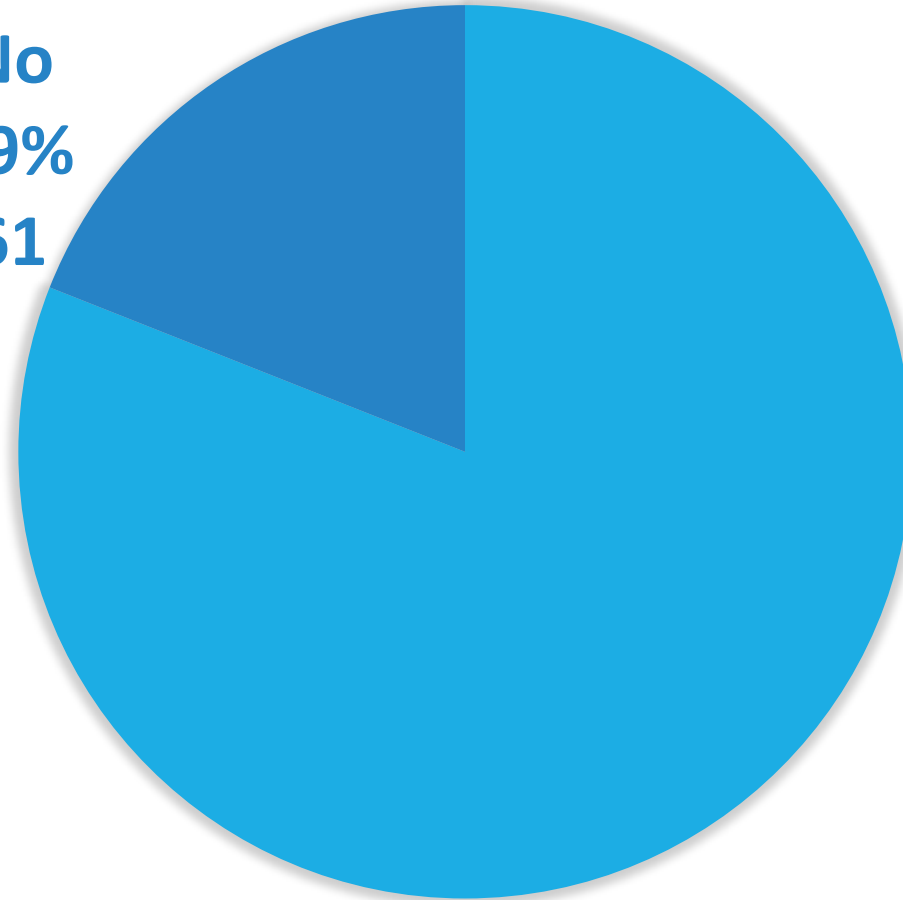
Yes
77%
322

Occupation	Responses
Pharmacist	28% (91)
Pharmacy Technician	21% (68)
Nurse	20% (65)
Oncology Nurse	11% (37)
Occupational Health Physician	10% (33)
Doctor	9% (28)

19. If yes, does the policy allow staff to choose not to work with HMPs?

Occupation	Responses
Pharmacist	7% (4)
Pharmacy Technician	2% (1)
Nurse	34% (21)
Oncology Nurse	21% (13)
Occupational Health Physician	25% (15)
Doctor	11% (7)

No
19%
61



Yes
81%
261

Occupation	Responses
Pharmacist	33% (87)
Pharmacy Technician	26% (67)
Nurse	17% (44)
Oncology Nurse	9% (24)
Occupational Health Physician	7% (18)
Doctor	8% (21)

Data Trends – cleaning and pregnancy

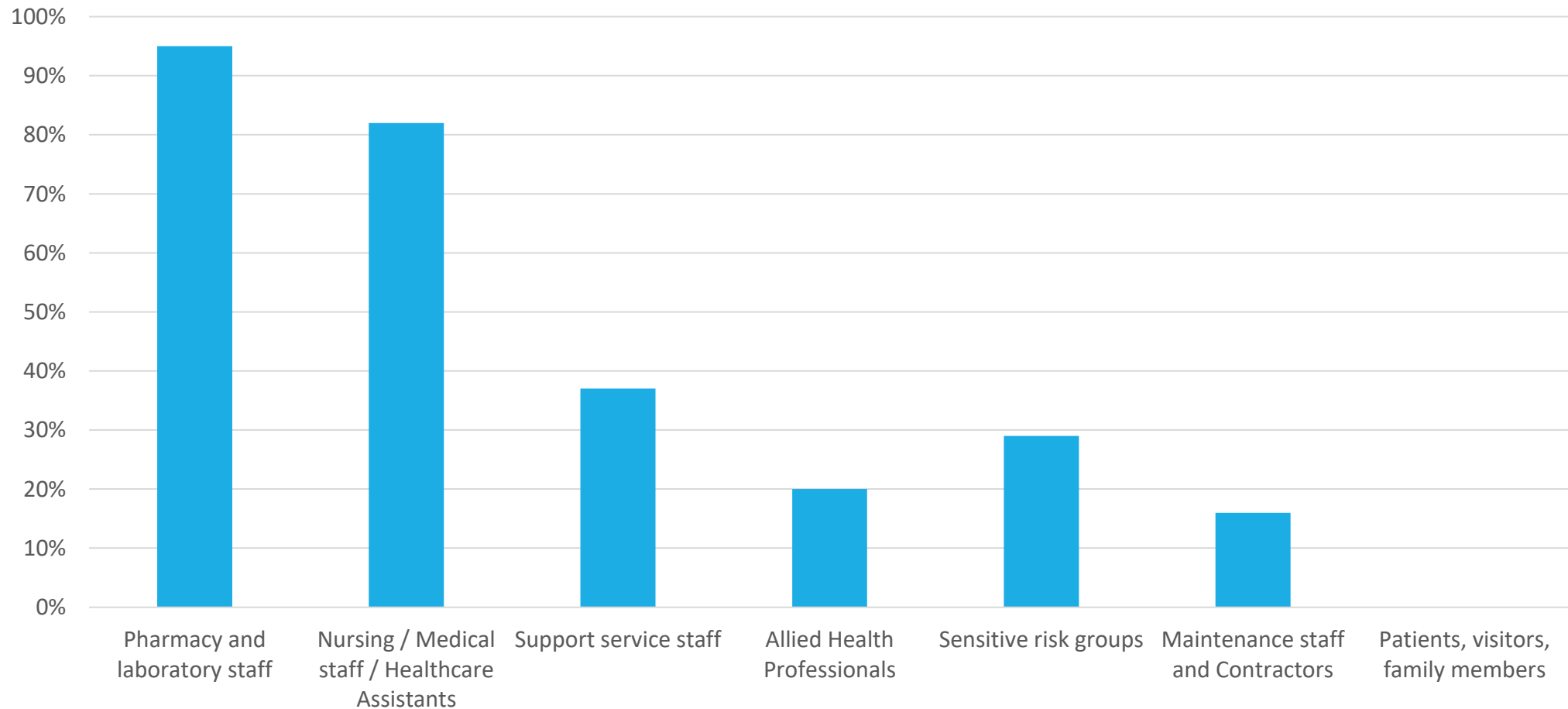
More than two thirds of respondents said that they have a written policy for cleaning surfaces where HMPs are in use

Most respondents said that cleaning of surfaces is undertaken daily, twice daily or throughout the day

The vast majority of respondents said that there is a policy for pregnancy in place

As one would expect, most staff are able to choose not to work with HMPs when pregnant but worryingly nearly 20% do not have a policy to allow that

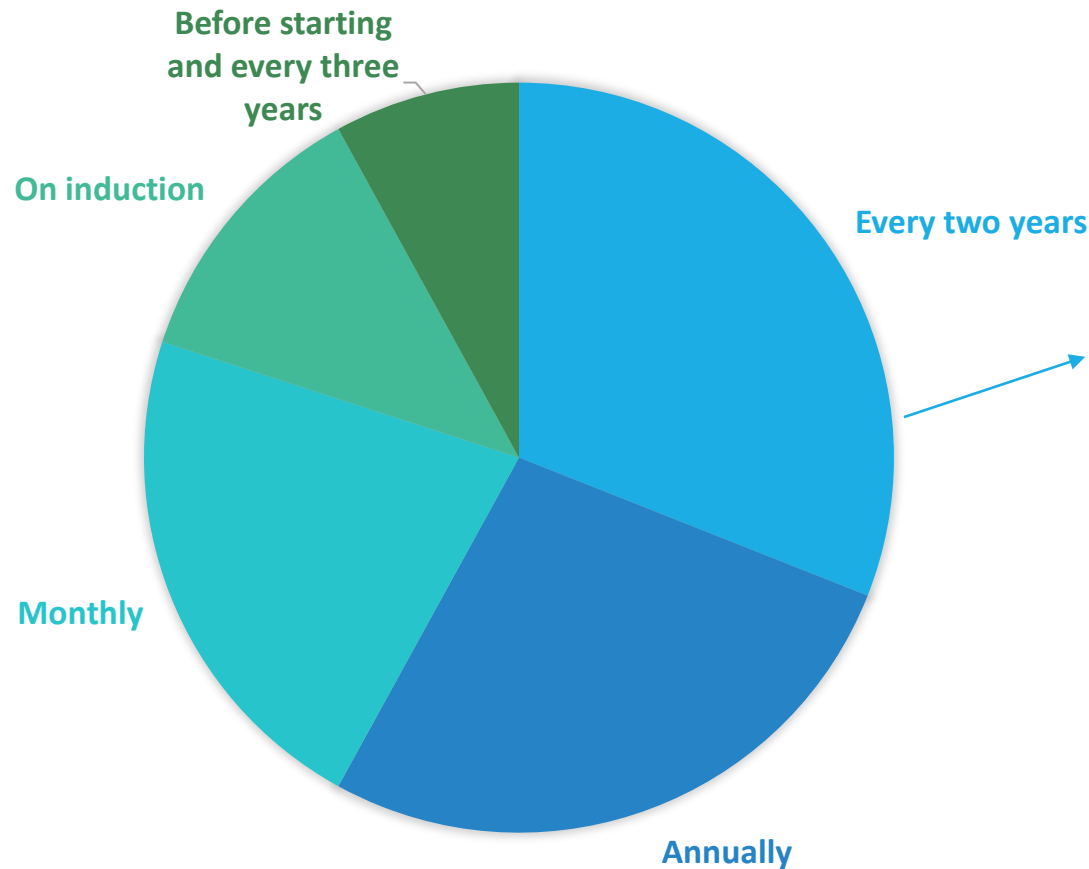
20. Which groups receive mandatory training in handling HMPs in your workplace?



21. How often is mandatory training on handling HMPs undertaken?

Responses:

- Every two years – **31% (125)**
- Annually – **27% (109)**
- Monthly – **22% (89)**
- On induction – **12% (48)**
- Before starting and every three years – **8% (32)**

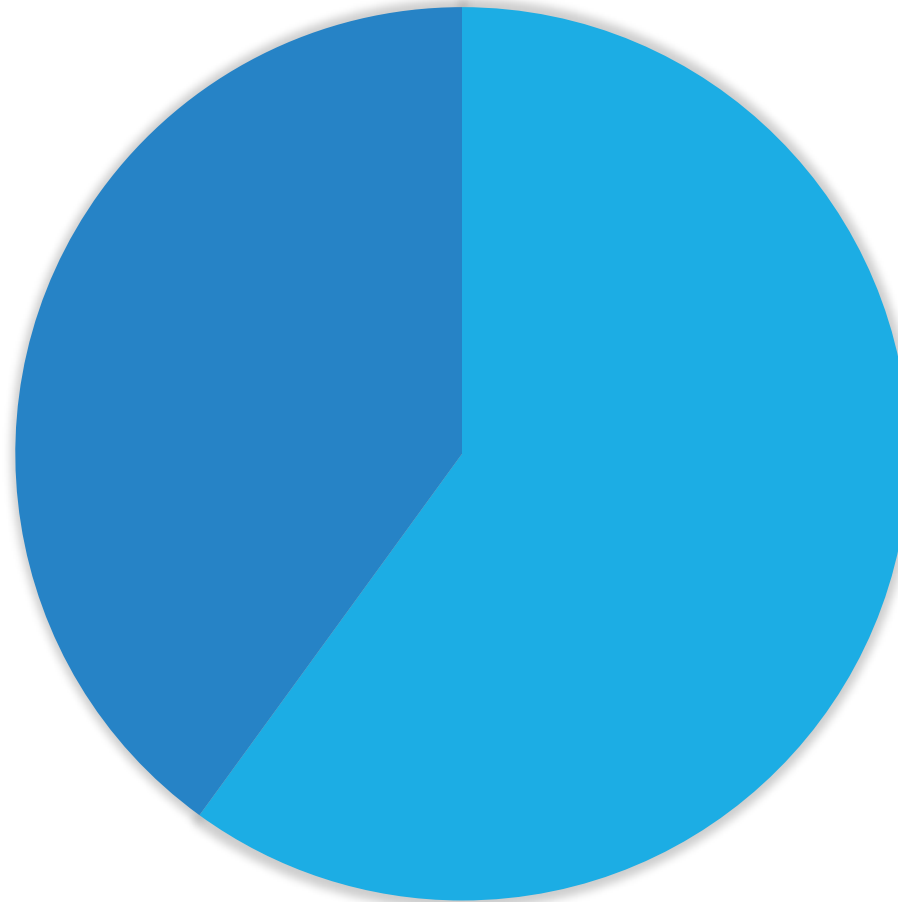


Occupation	Responses
Pharmacist	31% (39)
Pharmacy Technician	23% (29)
Nurse	14% (18)
Oncology Nurse	19% (24)
Occupational Health Physician	8% (10)
Doctor	4% (5)

22. Is there a requirement to keep a record of training on handling HMPs?

Occupation	Responses
Pharmacist	20% (34)
Pharmacy Technician	17% (29)
Nurse	28% (47)
Oncology Nurse	13% (22)
Occupational Health Physician	11% (19)
Doctor	10% (17)

No
40%
168



Yes
60%
252

Occupation	Responses
Pharmacist	24% (61)
Pharmacy Technician	21% (52)
Nurse	20% (50)
Oncology Nurse	12% (29)
Occupational Health Physician	13% (34)
Doctor	10% (26)

Data Trends – training

Pharmacy, nursing and medical staff have access to training on handling HMPs but most other occupational groups do not, or it is very limited

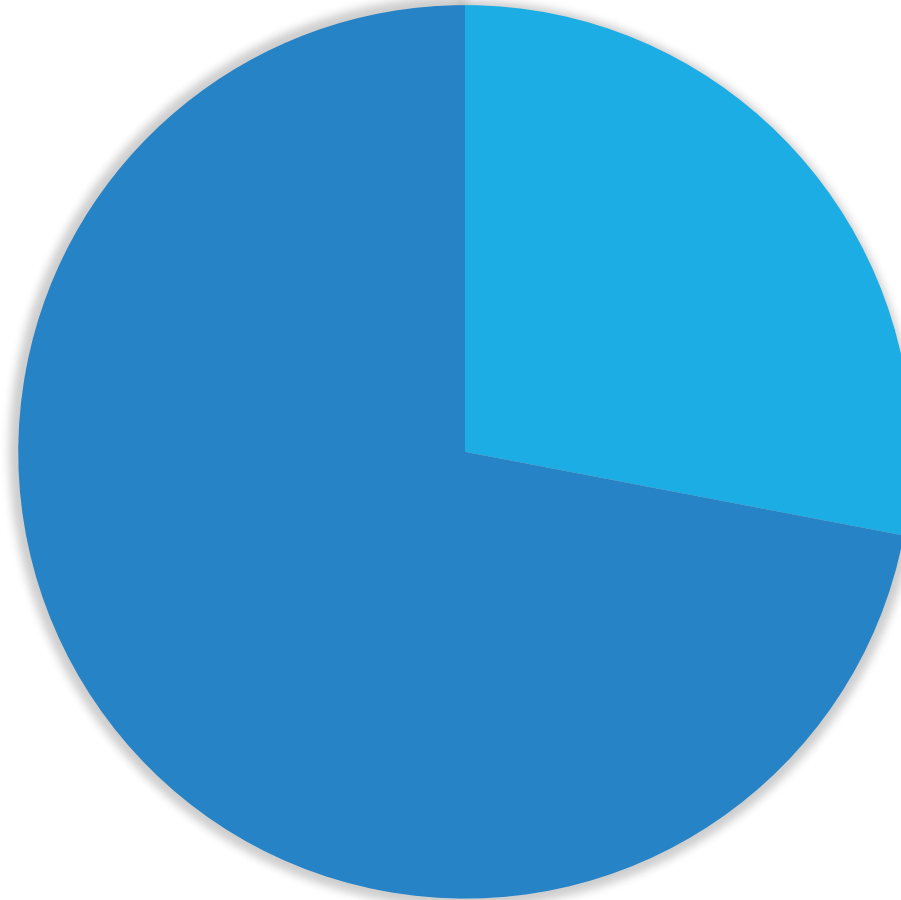
The largest group of respondents said that mandatory training on HMPs is provided every two years, followed by the next largest groups saying it is provided annually and monthly

It is concerning that for 40% of respondents there is no requirement to maintain a record of training on handling HMPs

23. Do you have an environmental monitoring programme in your workplace to measure surface contamination and thus potential exposure to HMPs?

Occupation	Responses
Pharmacist	22% (62)
Pharmacy Technician	14% (41)
Nurse	31% (88)
Oncology Nurse	9% (25)
Occupational Health Physician	13% (38)
Doctor	11% (33)

No
72%
287



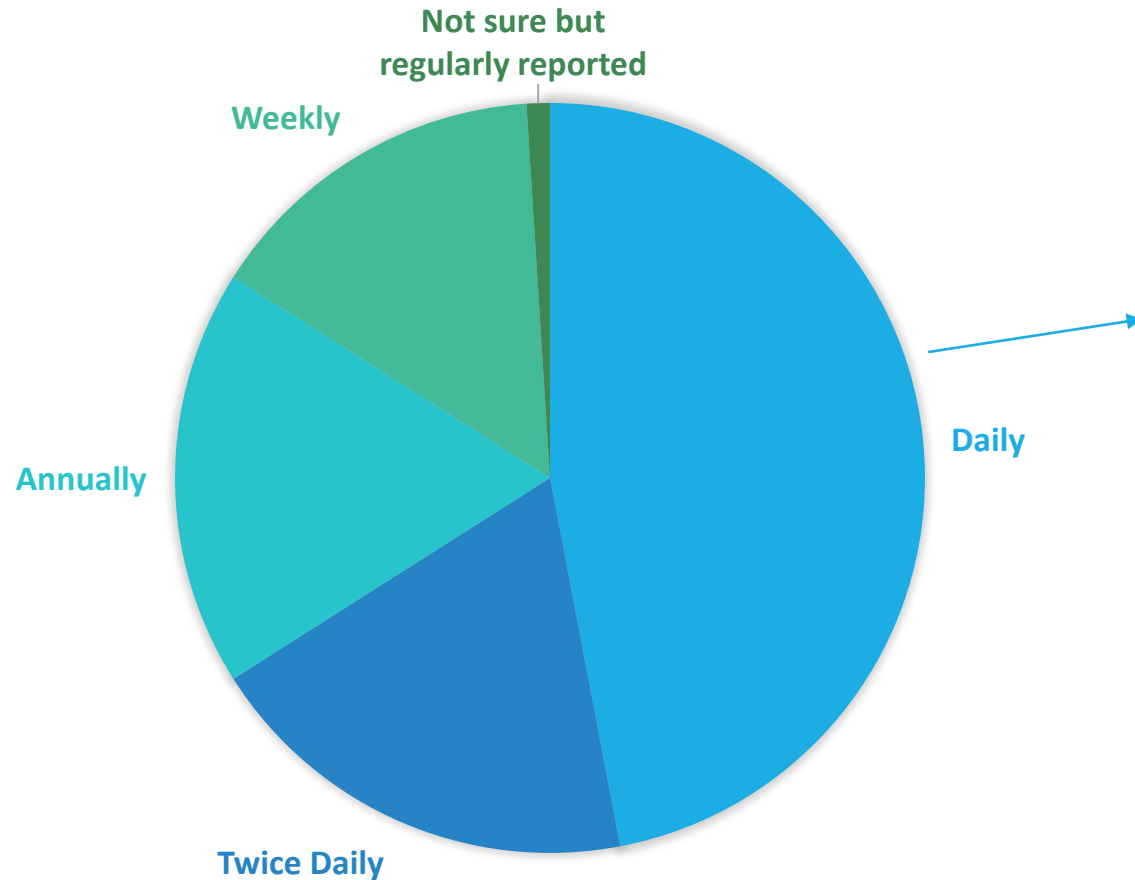
Yes
28%
112

Occupation	Responses
Pharmacist	30% (34)
Pharmacy Technician	27% (31)
Nurse	13% (14)
Oncology Nurse	13% (14)
Occupational Health Physician	9% (10)
Doctor	8% (9)

24. If so, how often does the surface monitoring take place?

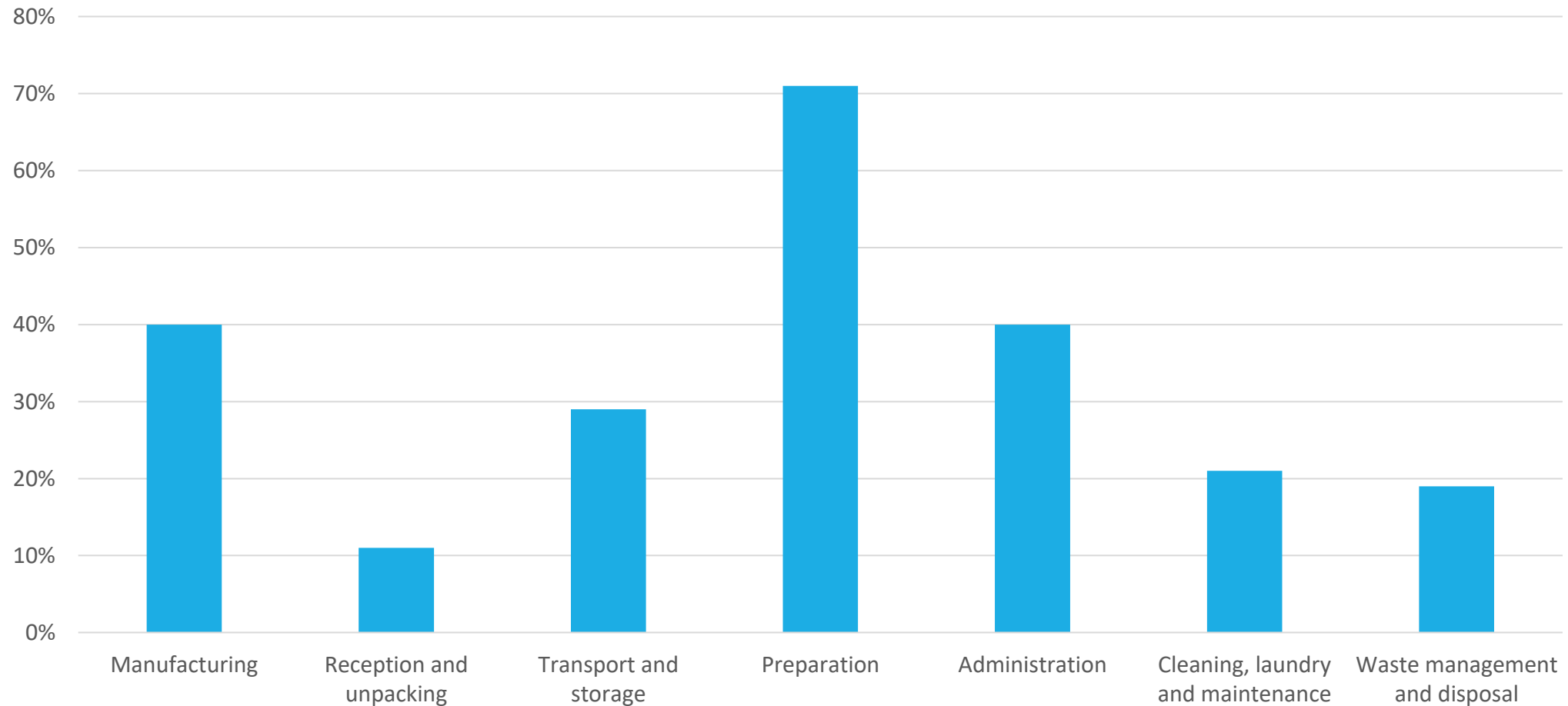
Responses:

- Daily – **47% (53)**
- Twice Daily – **19% (21)**
- Annually – **18% (20)**
- Weekly – **15% (17)**
- Not sure but it is regularly reported at health & safety meetings – **1% (1)**



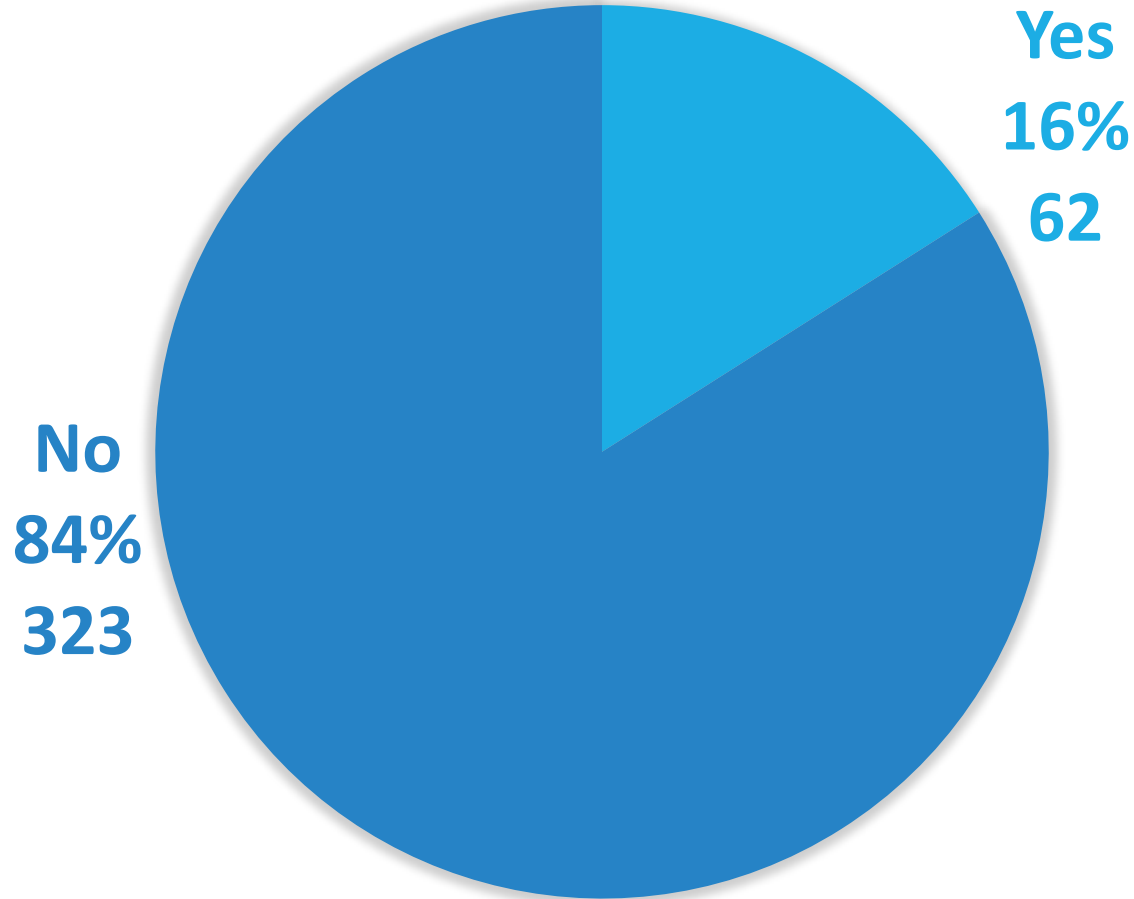
Occupation	Responses
Pharmacist	34% (18)
Pharmacy Technician	25% (13)
Nurse	15% (8)
Oncology Nurse	17% (9)
Occupational Health Physician	7% (4)
Doctor	2% (1)

25. In which stages of the life cycle of HMPs does surface monitoring occur in your workplace?



26. Did you receive any baseline health monitoring before you started working with HMPs?

Occupation	Responses
Pharmacist	16% (51)
Pharmacy Technician	12% (39)
Nurse	32% (105)
Oncology Nurse	15% (48)
Occupational Health Physician	12% (39)
Doctor	13% (41)



Occupation	Responses
Pharmacist	32% (20)
Pharmacy Technician	28% (17)
Nurse	13% (8)
Oncology Nurse	6% (4)
Occupational Health Physician	18% (11)
Doctor	3% (2)

Data Trends – monitoring

Less than a third of respondents said that they have an environmental monitoring programme to measure surface contamination, so the vast majority of healthcare workers and professionals do not have access to that information

If you are not measuring contamination, then it is impossible to know if staff are being exposed to HMPs at their workplace

For the minority who do have surface monitoring in place, the majority said it takes place daily or twice daily and then annually and weekly

Where there is surface monitoring, respondents said it is mainly in preparation and administration, not other areas of the life cycle of HMPs

The vast majority of staff did not receive any baseline health monitoring before starting work with HMPs

Conclusions

The survey highlights a lack of understanding and awareness among healthcare workers and professionals when it comes to the problem of occupational exposure to HMPs

This is evidenced by relatively poor identification of the HMPs, lack of written policies for risk assessment and handling of HMPs

Awareness of occupational exposure is higher in pharmacy and nursing but low in other areas of the life cycle of HMPs where exposure can occur, eg cleaning, transport and waste disposal

Reporting of incidents of exposure is good but this probably only reflects major spills and does not take into account long term low level exposure

Conclusions

Preventive measures and controls for the safe handling of HMPs are currently in pretty widespread use in Ireland; also, where controls are in place they are regularly reviewed

Cleaning of potentially exposed surfaces is good and policy is in place for most of those who are pregnant not to work in areas of potential exposure but for some 20% there is no policy on pregnancy; also, reproductive problems also affect male workers and this does not appear to be addressed

Training on HMPs for pharmacy, nursing and medical staff is good but most other occupational groups do not have access to it and recording is poor

Environmental and surface monitoring is not good and health monitoring of staff working with HMPs is not widely available