

"Mpox Vaccine Readiness in High-Risk Healthcare Workers: an Institutional Analysis"

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Background

There is a recommendation from the National Immunisation Advisory Committee that vaccination be offered as pre-exposure prophylaxis for healthcare or laboratory workers involved in the management of patients with mpox or their samples. In light of the ongoing epidemic in Central and East Africa we have offered vaccination to staff groups felt at highest risk of occupational exposure, but found the uptake to be minimal. We have conducted an local analysis of vaccine attitudes in regard to Mpox vaccination in St. James Hospital to help identify barriers to vaccinating staff and improve vaccine uptake. We have used and adapted version of the shortened scale 7Cs of vaccination readiness model which is psychometrically validated.

Methods

Survey responses were collected over a 2 month period in 2024 from 52 staff in the emergency department, infectious disease and genitourinary medicine departments and laboratory. The survey was made available to all patient facing staff in these areas. The survey included a question on vaccine intentionality, department, profession and 7 questions relating to vaccine readiness. These were scored on a 7 point Likert scale with higher scores equating with a higher readiness to accept the vaccine (minimum score 1 maximum score 7). Certain items were reverse coded in order to achieve this. Data was analysed using appropriate statistical tests using SPSS. Mean vaccine readiness score above 4 were used to define vaccine readiness based on existing literature. (1)

Mpox vaccination in healthcare workers- survey questions

Please evaluate how much you agree or disagree with the following statements from 1-7, 1 being strongly disagree and 7 being strongly agree.

I am confident the mpox vaccine is safe and effective (Confidence)

Vaccination is unnecessary as I am not at risk of mpox (Complacency)

I sometimes miss out on vaccines because vaccination is bothersome (Constraints)

When I think about being vaccinated I weigh it's benefits and risks to make the best decision (Calculation)

I see vaccination as a collective task against the spread of diseases (Collaboration)

Vaccinations cause diseases and allergies that are more serious that the diseases they ought to protect from (Conspiratorial)

It Should be possible to sanction people who do not follow vaccination recommendations by health authorities (Compliance)

	Mean	Median	IQR
Confidence	5.512	6	2.75
Complacency	4.538	5	3.75
Constraints	5.769	7	2.75
Calculation	2.134	2	3.75
Collaboration	6.403	7	1
Conspiratorial	6.212	7	1
Compliance	3.673	4	4

Conclusion

Factors which drove lower mean vaccine readiness scores included calculation, compliance and complacency. Calculation was reverse coded as in previous studies high scores have been associated with higher levels of deliberation associated with lower vaccine readiness. As expected readiness scores were negatively associated with vaccine intentionality. The data does not suggest that constraint (convenience) was a specific barrier to accepting a vaccine. Mean scores were overall similar between departments and professional roles.

References

1. Geiger M, Rees F, Lilleholt L, Santana AP, Zettler I, Wilhelm O, et al. Measuring the 7Cs of Vaccination Readiness. European Journal of Psychological Assessment. 2021-06-16.

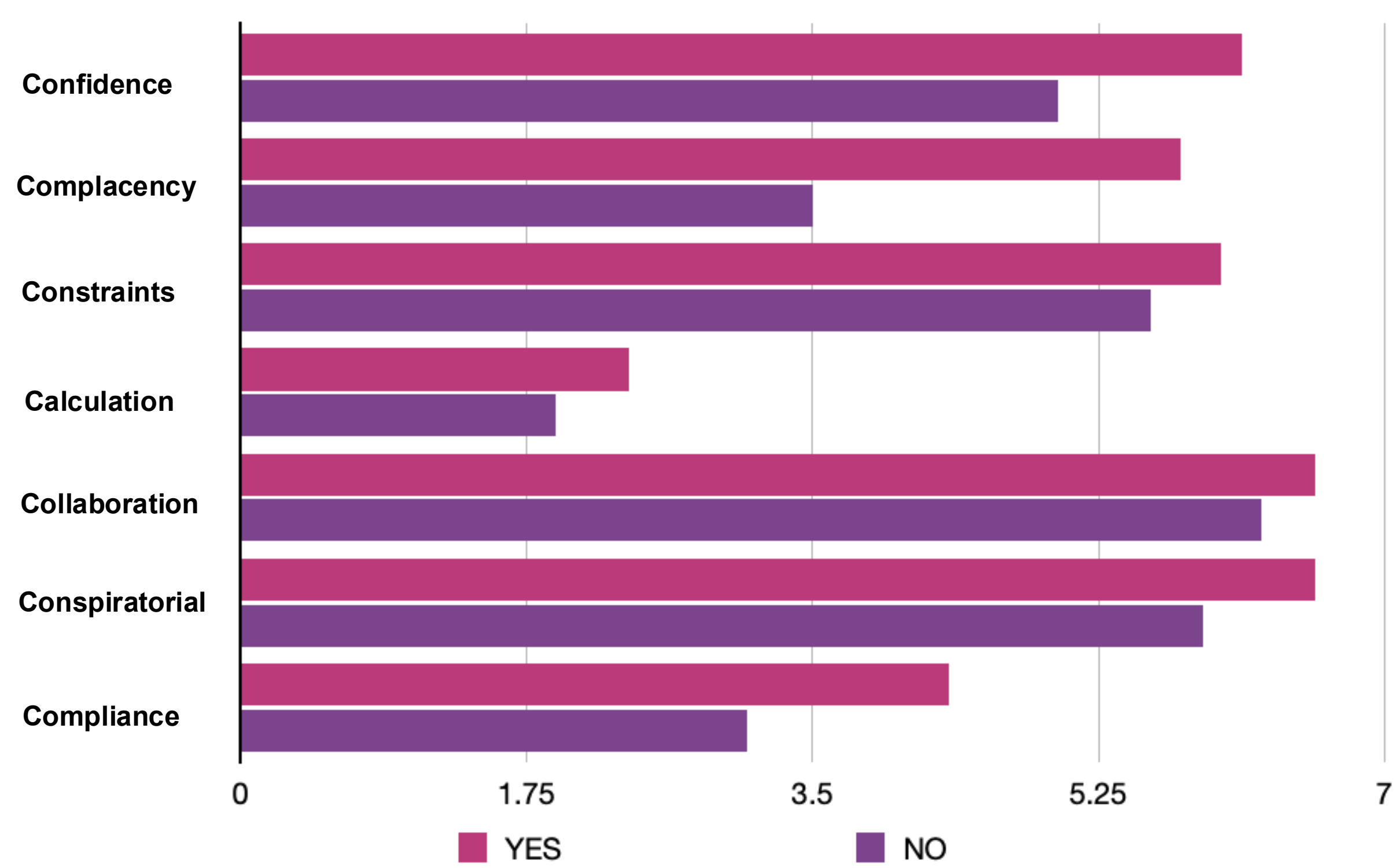
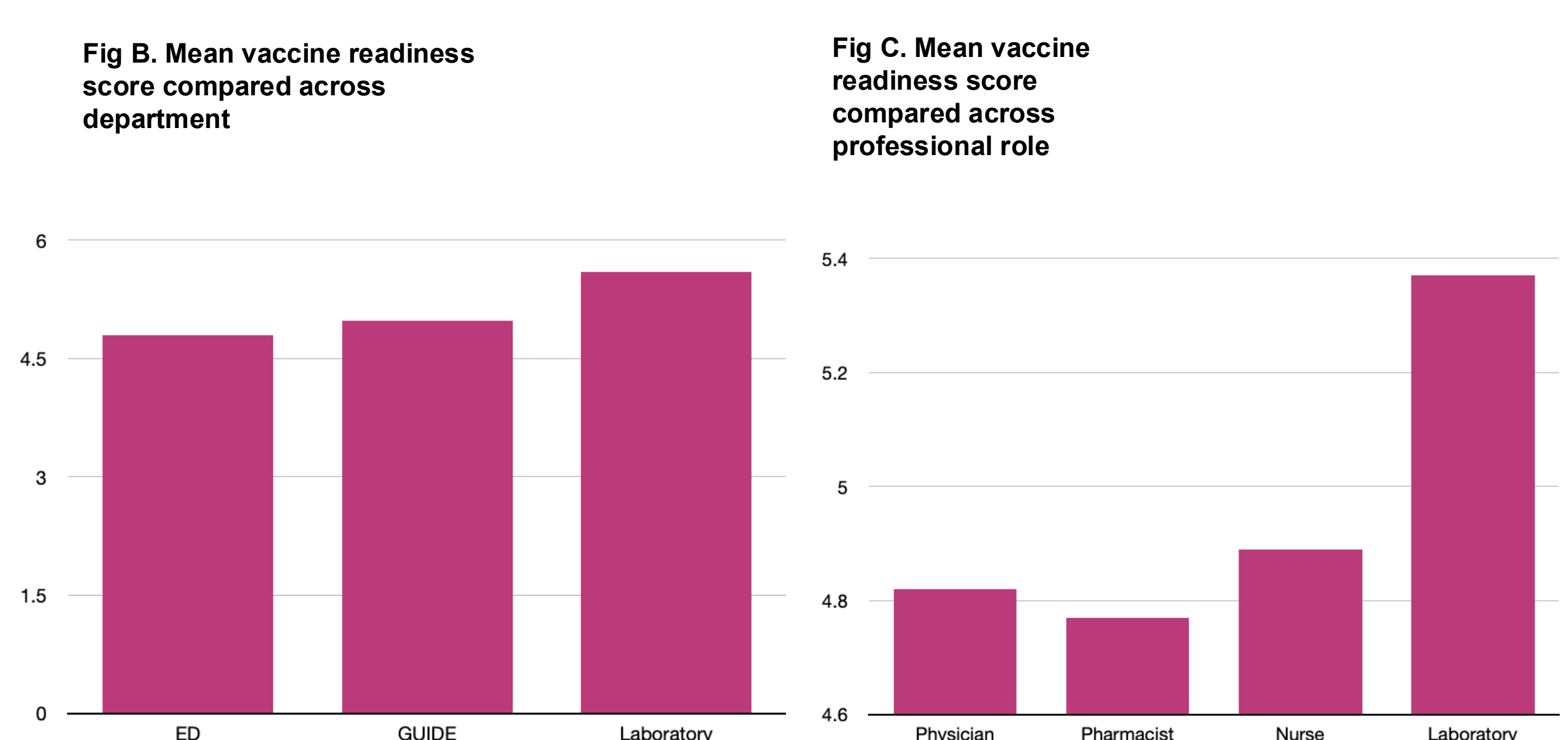


Fig A. Mean vaccine readiness score compared across intentionality



Results

24 participants (46.2%) of all groups reported they would take a vaccine today if offered to them.

The mean vaccine readiness score across all groups was measured at 4.9. Participants who would not receive a vaccine scored on average 4.45 vs 5.39 in those who would receive a vaccine, with the first group demonstrating lower complacency scores as well (3.5 vs 5.75). Overall scores were similar between professional groups. Complacency scores were lower in the pharmacist group which likely reflects level of patient contact. Confidence scores were slightly higher and complacency scores lower in the ID and GUM services compared to the emergency services. Mean vaccine readiness was measured at 4.79 in ED staff and 4.97 in ID and GUM staff.