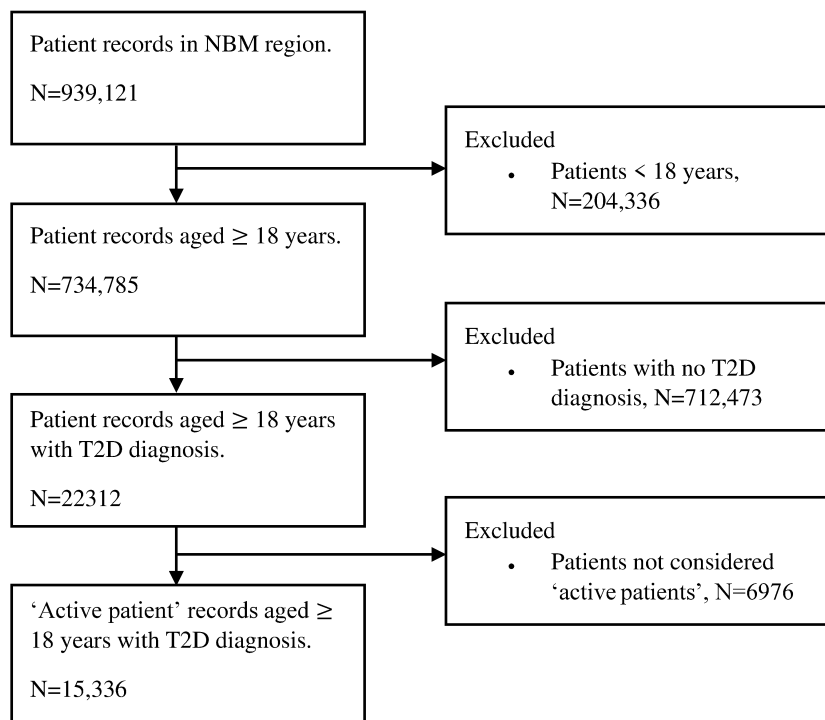


Appendix 1 STROBE Diagram

Figure A1. STROBE diagram depicting patient record inclusion for the final month, June 2022.



Appendix 2 Checking model assumptions

Figures B1 to B10 below show the distribution of residuals and the distribution of residuals over time for each of the regression models reported in Tables 5 and 6.

Each of the scatterplots of residuals by month do, to a lesser or greater extent, display month-to-month correlations in the residuals. That is, when the residual is high in one month, the preceding and following months also tend to have high residuals and when the residual is low in one month, the preceding and following month also tend to have low residuals. That is the independence assumption is violated in these models.

Other patterns, such as the apparent non-linear patterns in the scatterplots and minor departures from normality in the scatterplot may simply be secondary effects of the above violation of the independence assumption.

Table B1 provides comparisons of standard deviations and results of Levene's test for review of the assumption of homoscedasticity for categorical predictor variables. Most analyses passed both checks for homoscedasticity except for Table 5 Model 5 (COVID-19 restrictions as a predictor of Hb1Ac test in the past 15 months) suffering from a more than 2-fold difference in standard deviations but non-significance Levene's test and Table 6 Model 3 (age group as a predictor of in range Hb1AC result) recording a statistically significance Levene's test but less than 2-fold difference in standard deviations.

Figure B1. Residuals from the model of HbA1c tested in previous 15 months, predicted by sex and month (Table 5, Model 1).

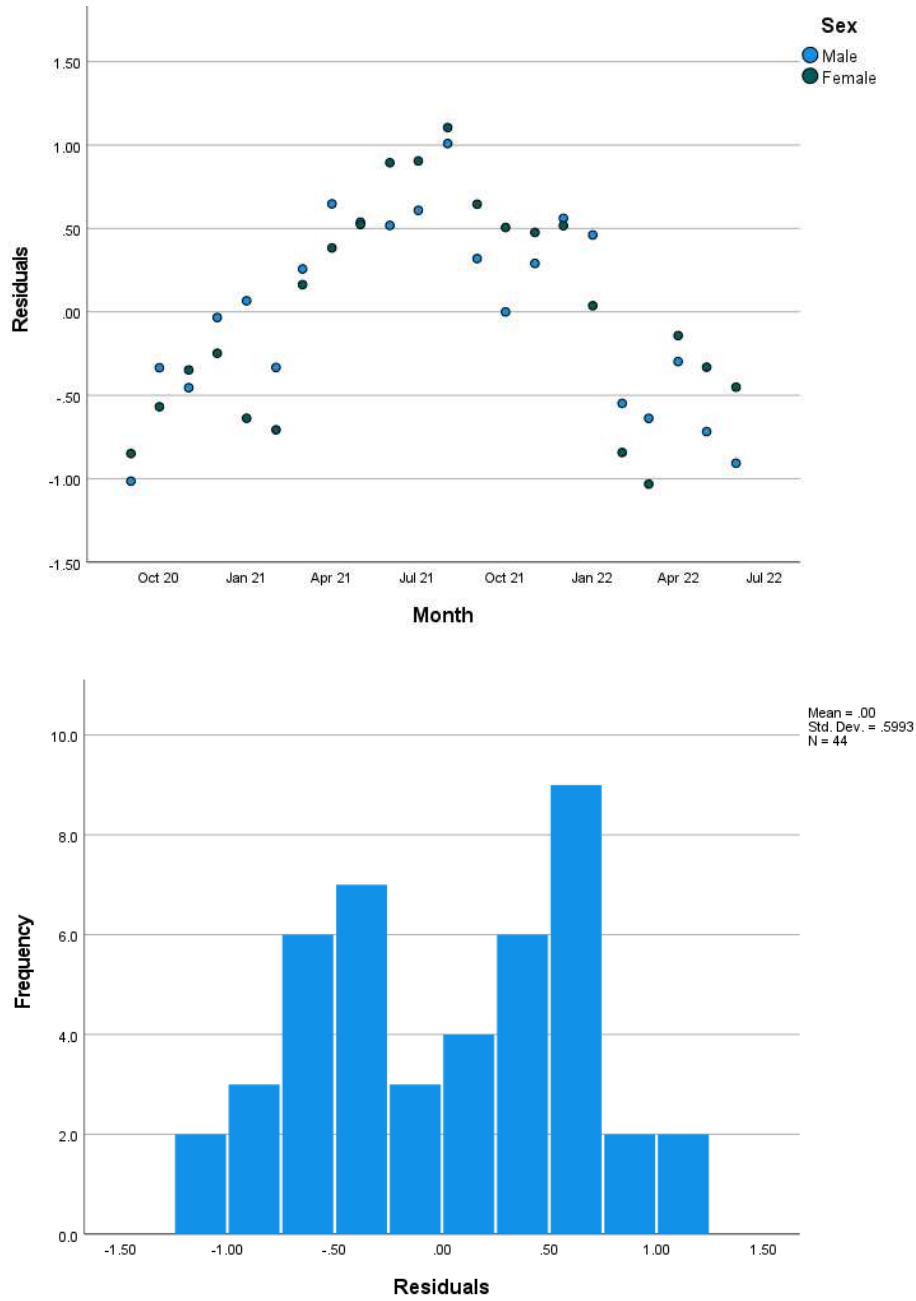


Figure B2. Residuals from the model of HbA1c tested in previous 15 months, predicted by obesity and month (Table 5, Model 2).

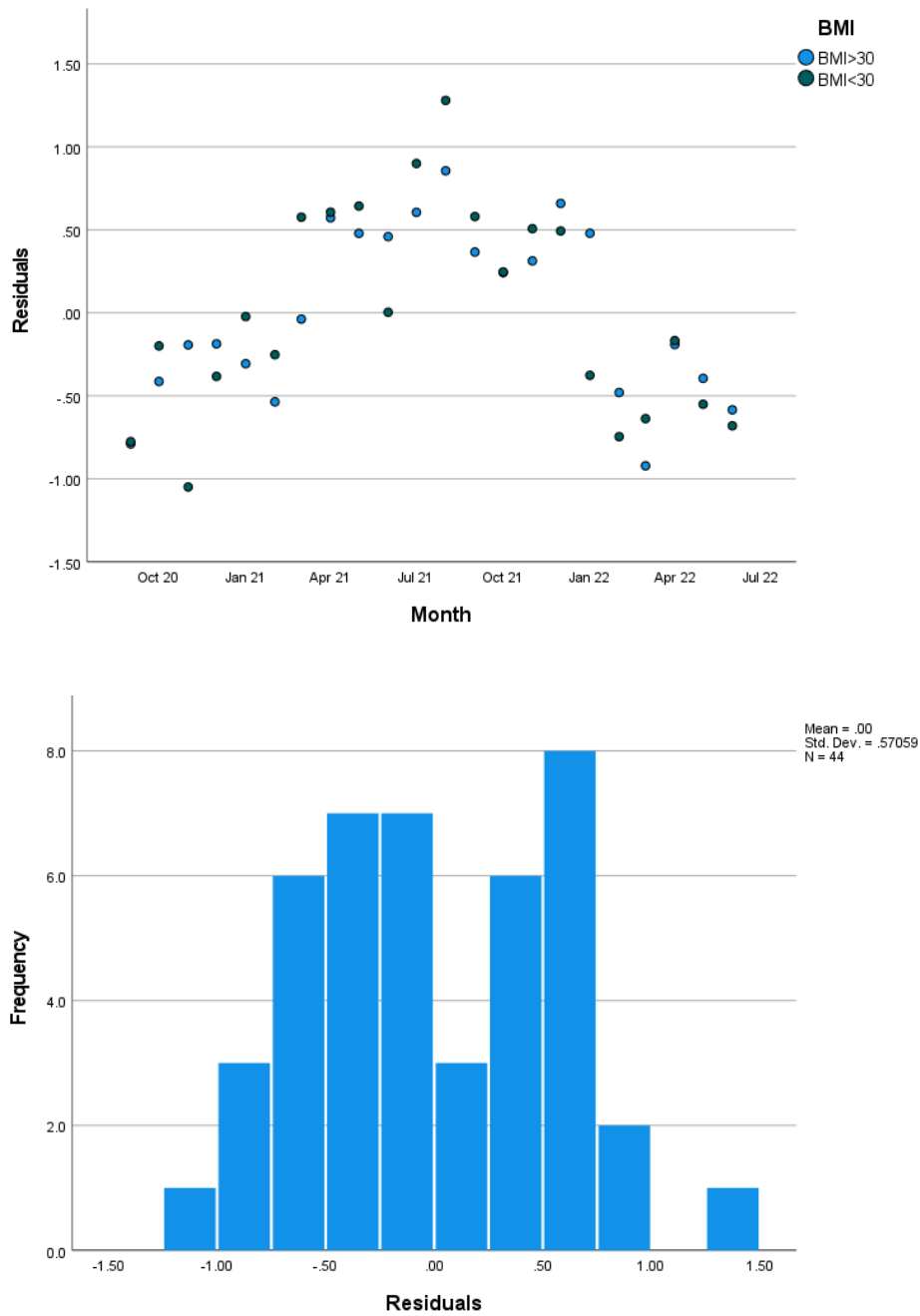


Figure B3. Residuals from the model of HbA1c tested in previous 15 months, predicted by age and month (Table 5, Model 3).

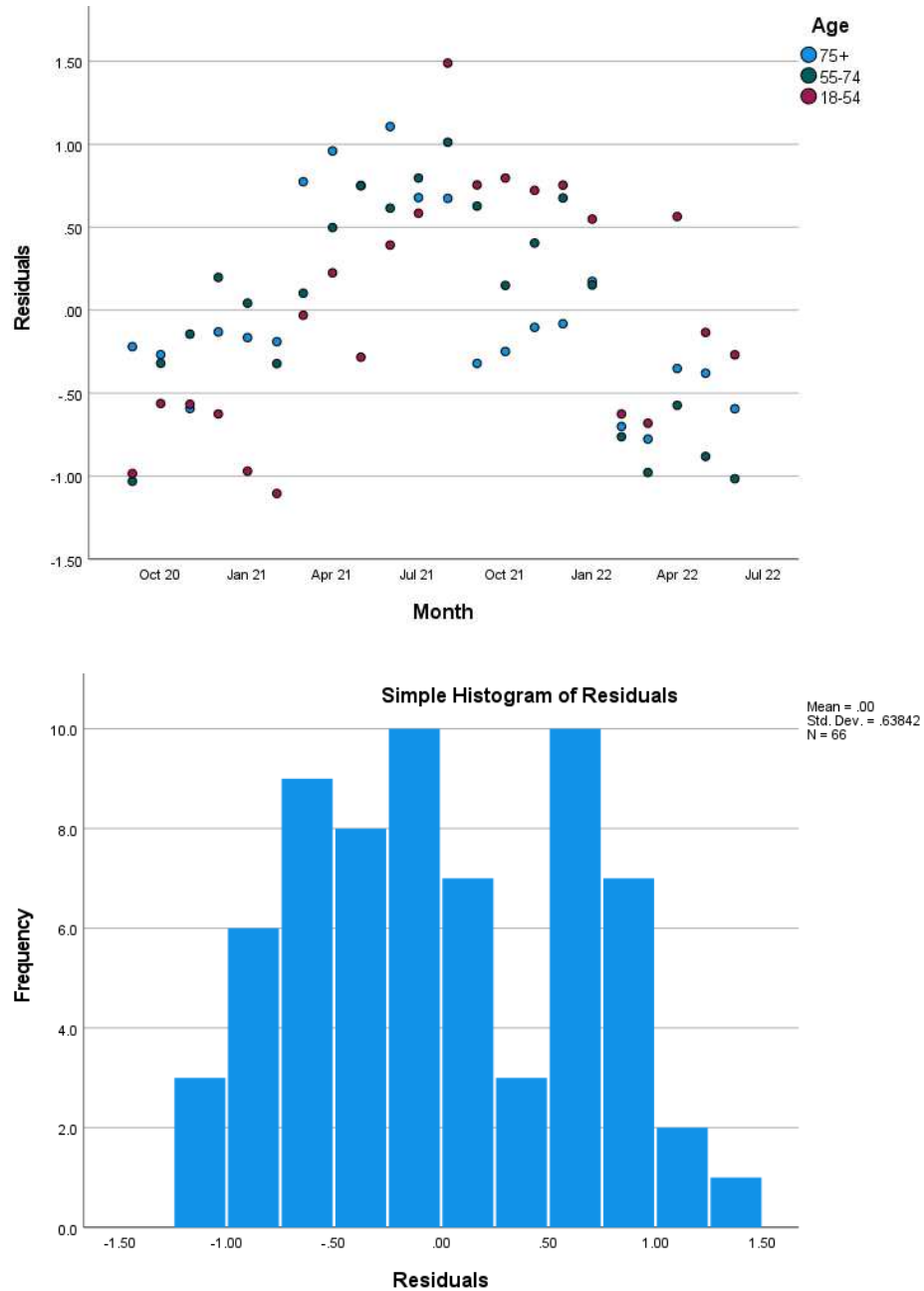


Figure B4. Residuals from the model of HbA1c tested in previous 15 months, predicted by general practice density and month (Table 5, Model 4).

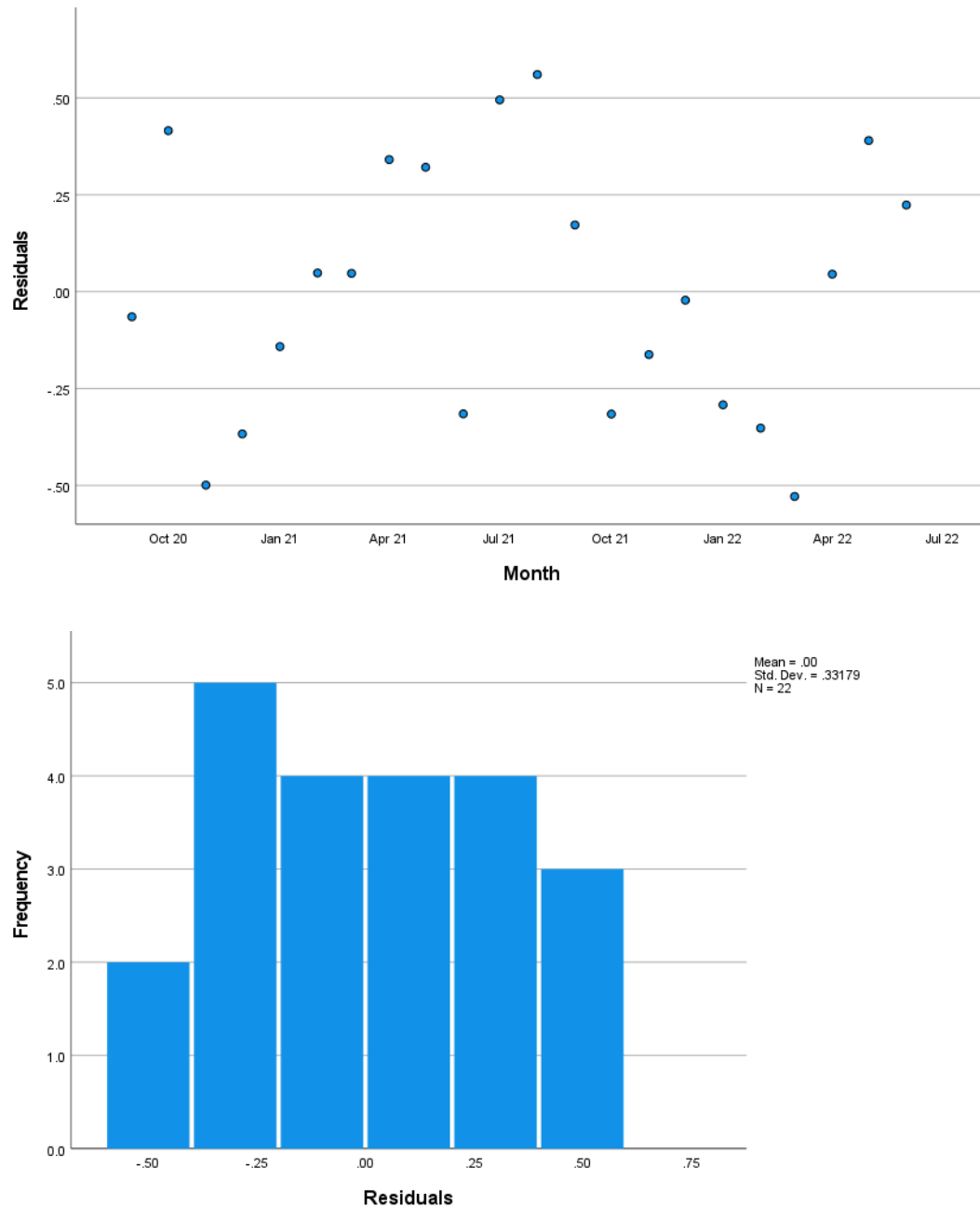


Figure B5. Residuals from the model of HbA1c tested in previous 15 months, predicted by COVID restrictions and month (Table 5, Model 5).

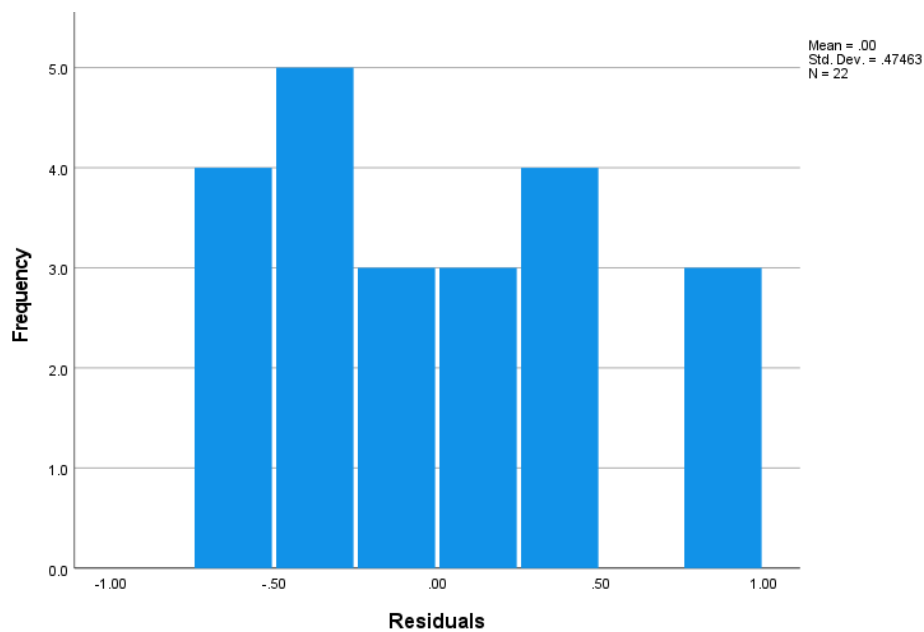
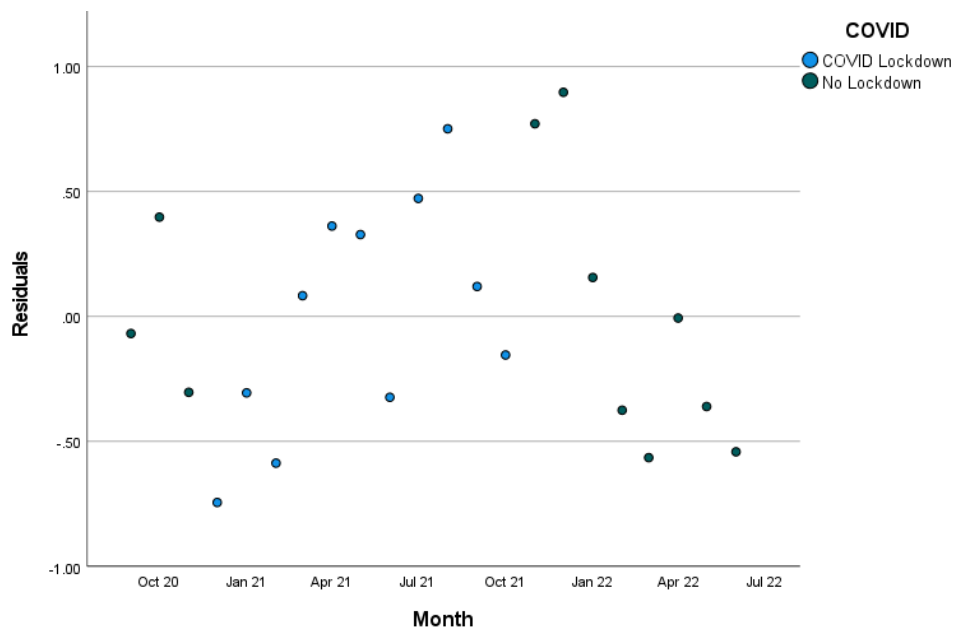


Figure B6. Residuals from the model of HbA1c tested in previous 15 months, predicted by sex and month (Table 6, Model 1).

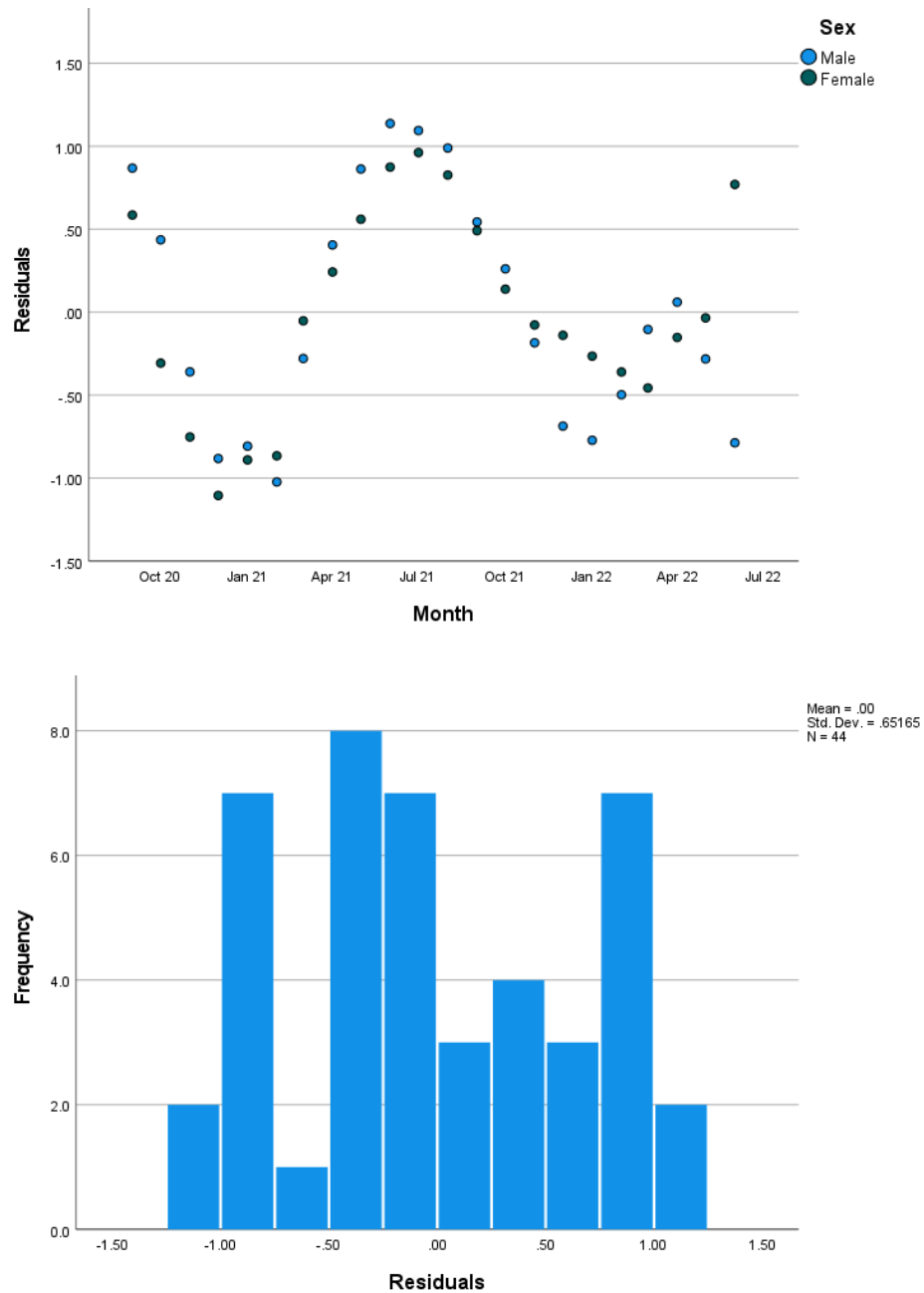


Figure B7. Residuals from the model of HbA1c tested in previous 15 months, predicted by obesity and month (Table 6, Model 6).

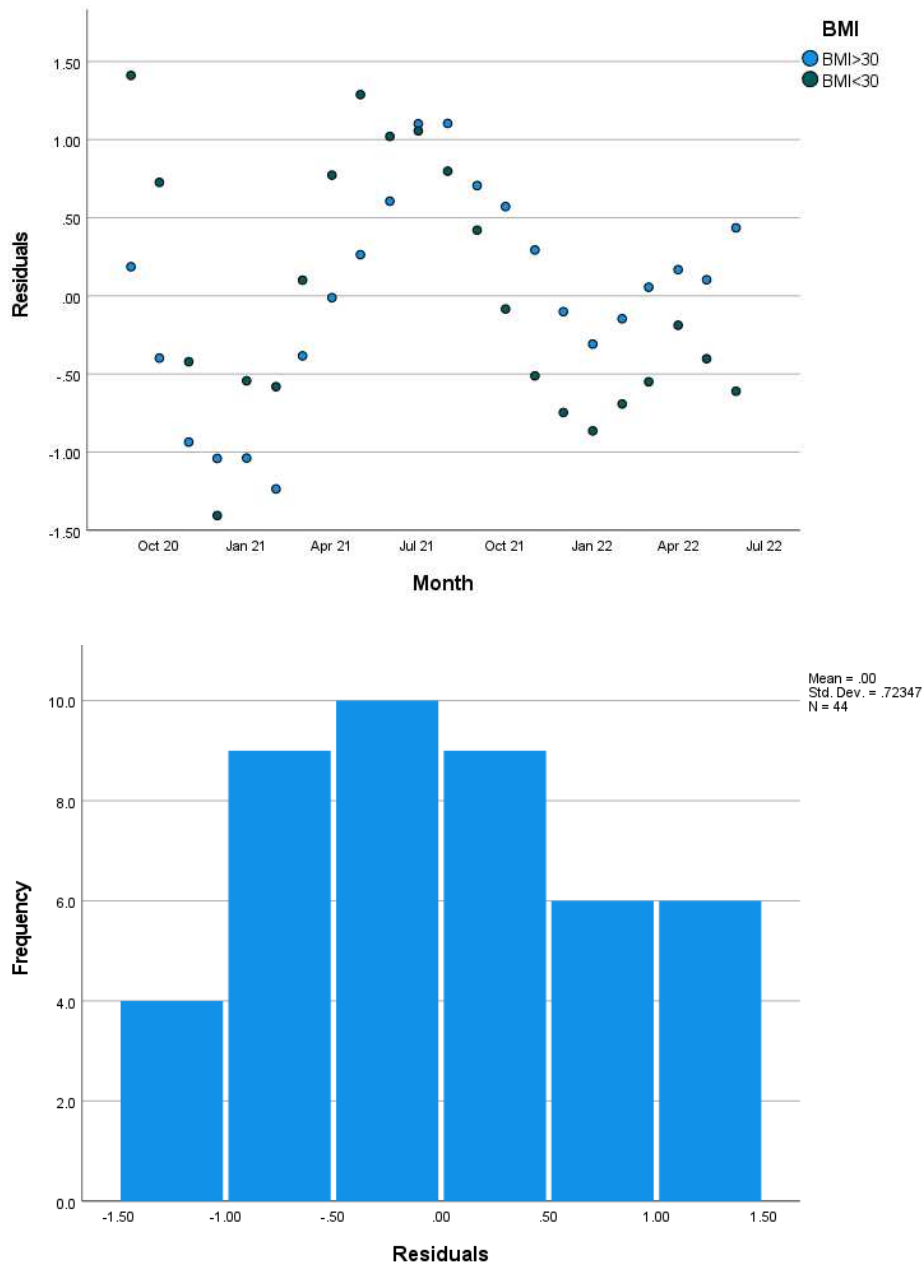


Figure B8. Residuals from the model of HbA1c tested in previous 15 months, predicted by age and month (Table 6, Model 3).

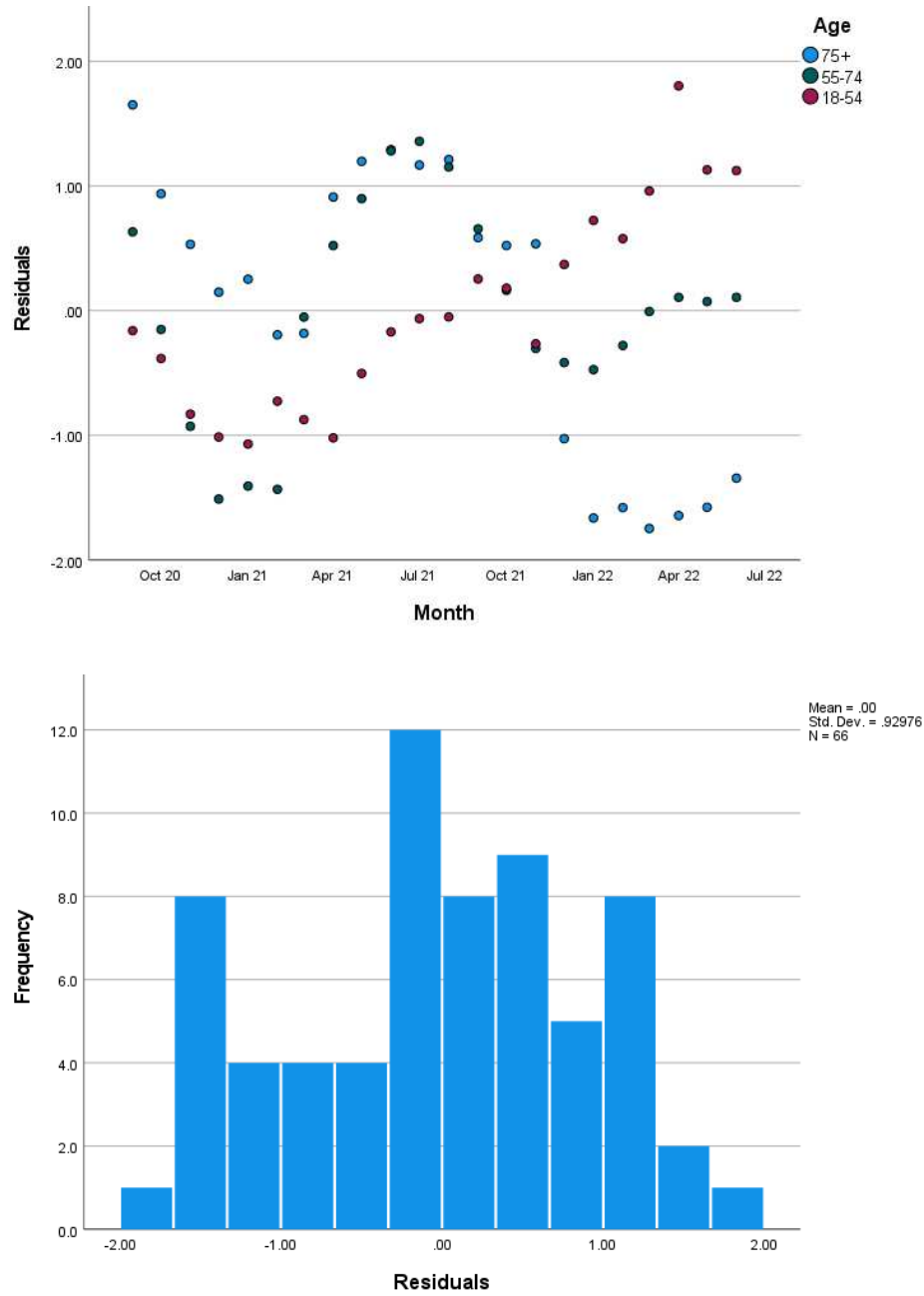


Figure B9. Residuals from the model of HbA1c tested in previous 15 months, predicted by general practice density and month (Table 6, Model 4).

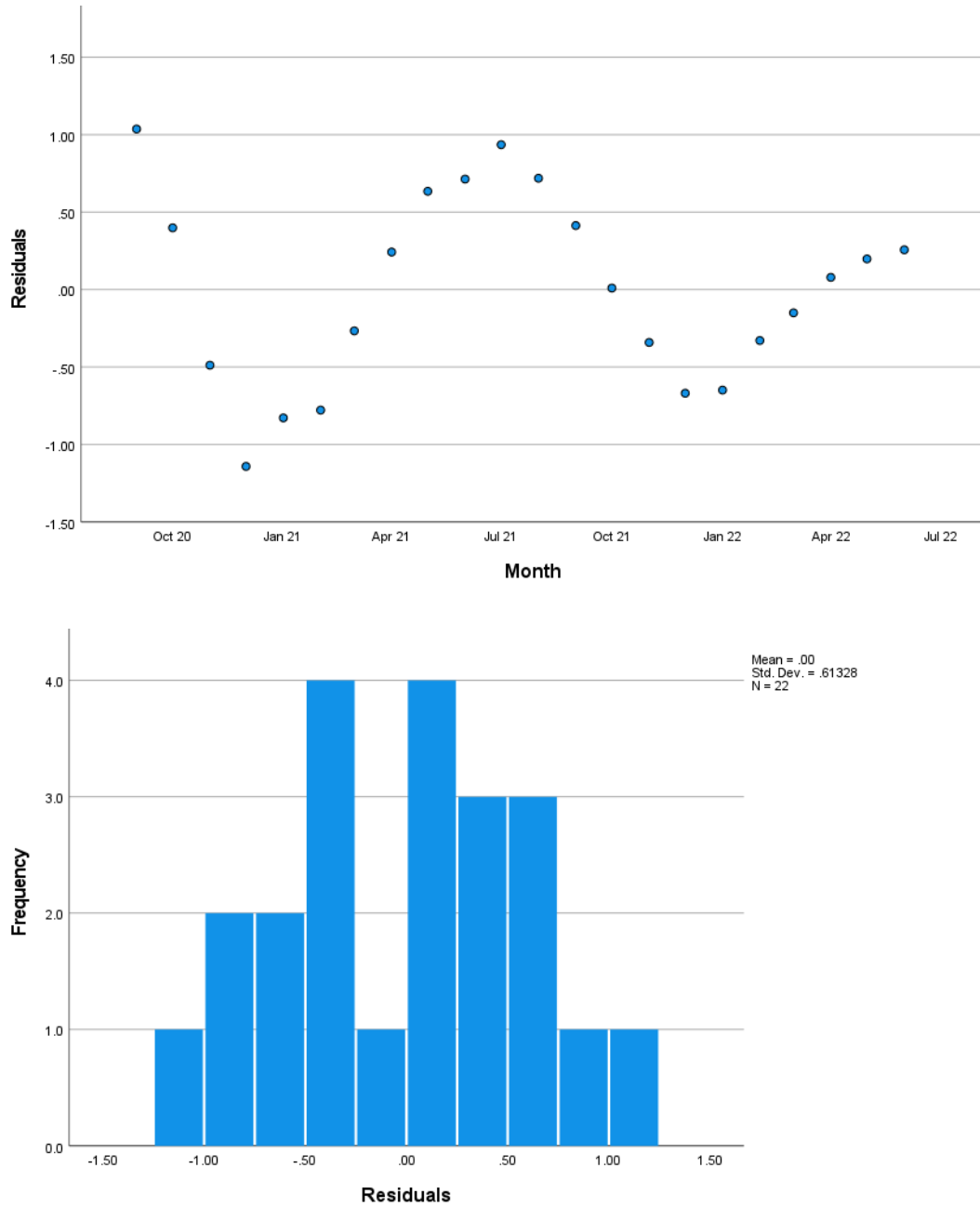


Figure B10. Residuals from the model of HbA1c tested in previous 15 months, predicted by COVID restrictions and month (Table 6, Model 5).

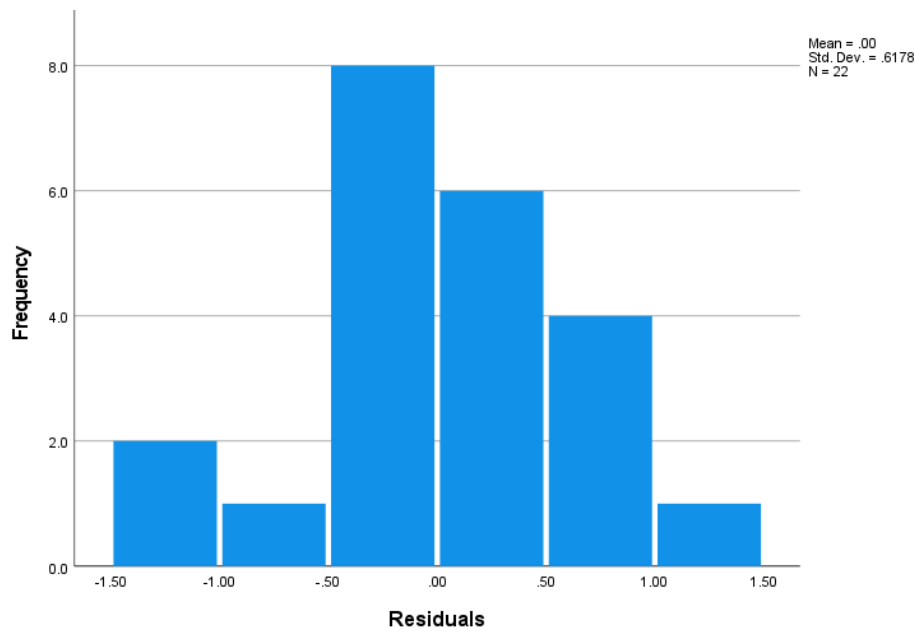
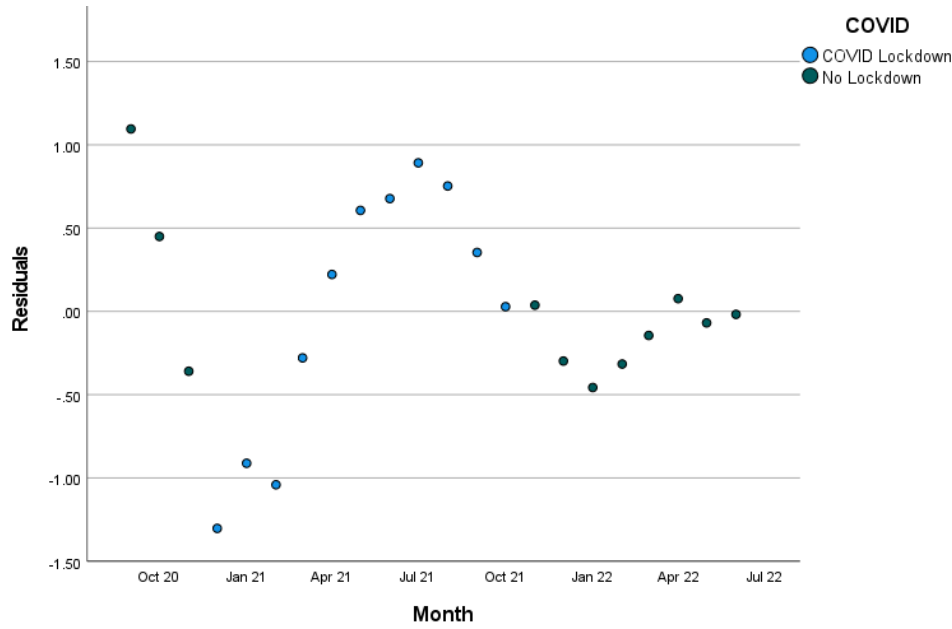


Table B1. Two-fold standard deviation rule of thumb test and Levene's test of equality of variance.

Model	HbA1c recorded		Target level for HbA1c	
	Standard Deviation	Levene's Test P Value	Standard Deviation	Levene's Test P Value
Sex				
Male	1.0	0.36	0.84	0.3
Female	0.97		0.94	
BMI				
BMI<30	1.01	0.4	0.82	0.1
BMI≥30	0.91		1.08	
Age				
18-54	0.78	0.3	1.3	0.03
55-74	1.08		1.08	
75+	1.05		0.84	
COVID-19				
No COVID-19 lockdown	0.94	0.86	0.71	0.34
COVID-19 lockdown	0.38		1.07	

Notes: BMI, Body Mass Index. Rule of thumb; standard deviations less than two-fold difference (Swinscow T. The t tests. In: Campbell M, editor. Statistics at Square One. 9th ed: The BMJ; 1995).