# Supplement figures

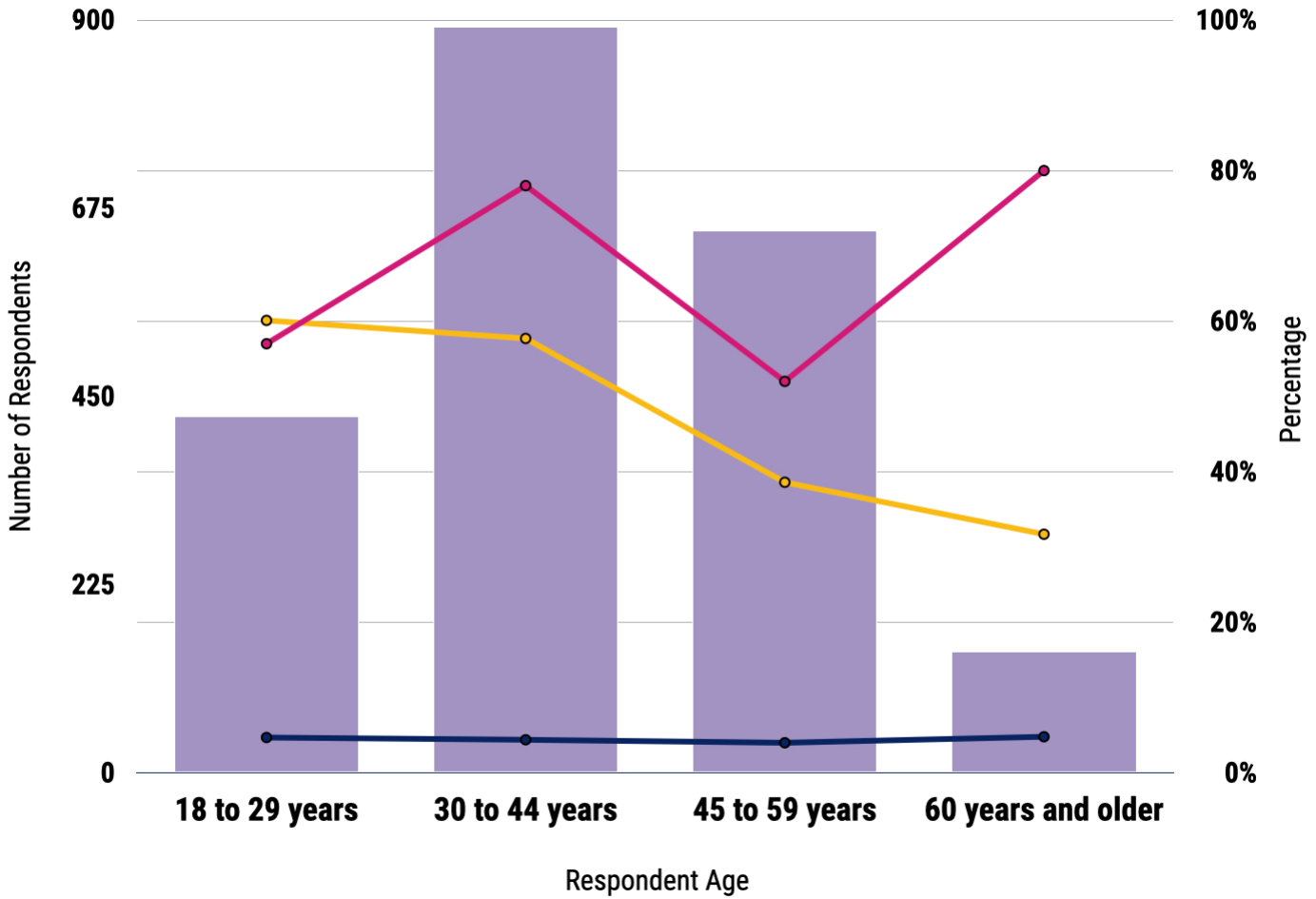



Figure S1: Characteristics of survey respondents by age (violet bar color represents ‘the number of households by respondent age’, red, blue, and yellow lines represents ‘% reporting the respiratory infections and symptoms’, ‘% reporting cold injuries’, and ‘% of female respondent’ respectively.

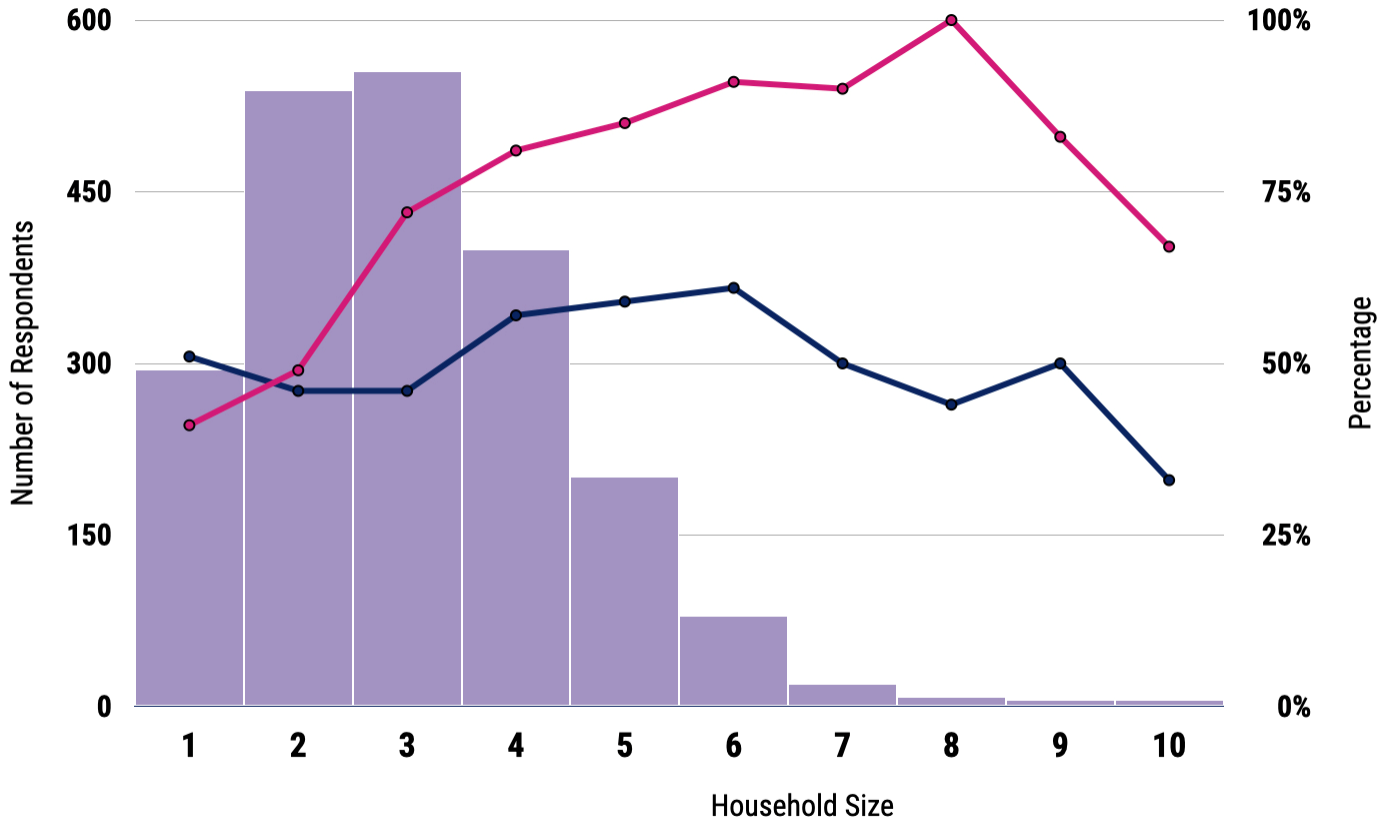
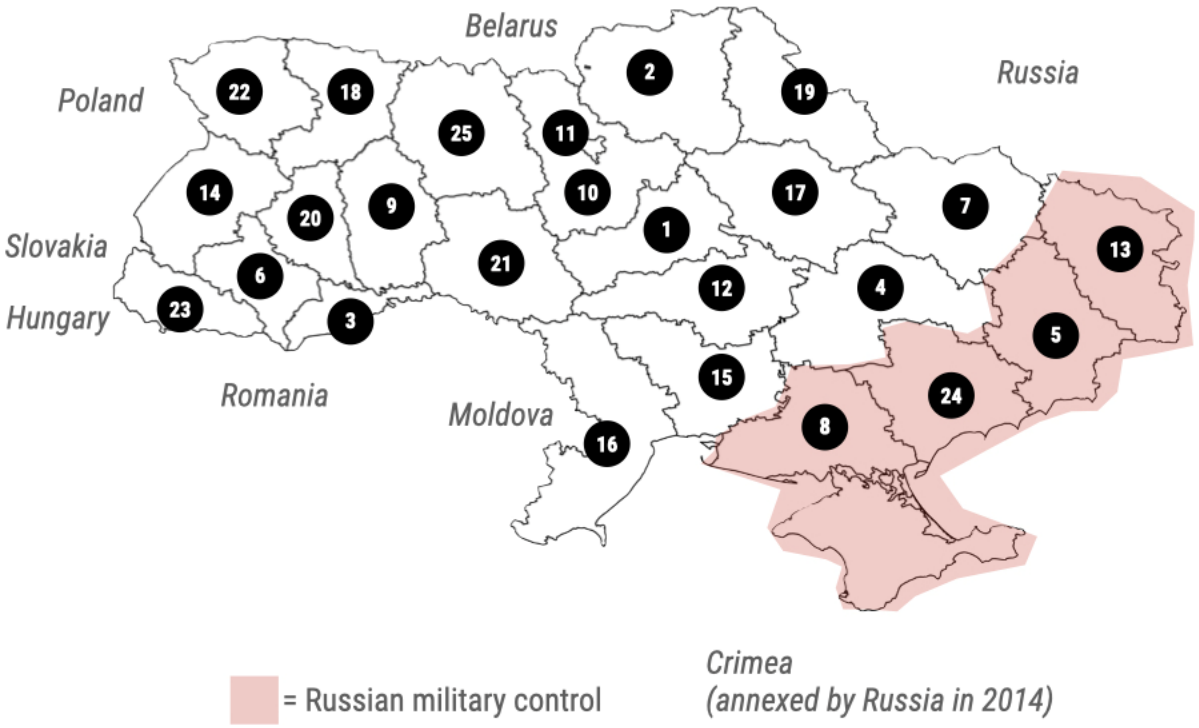


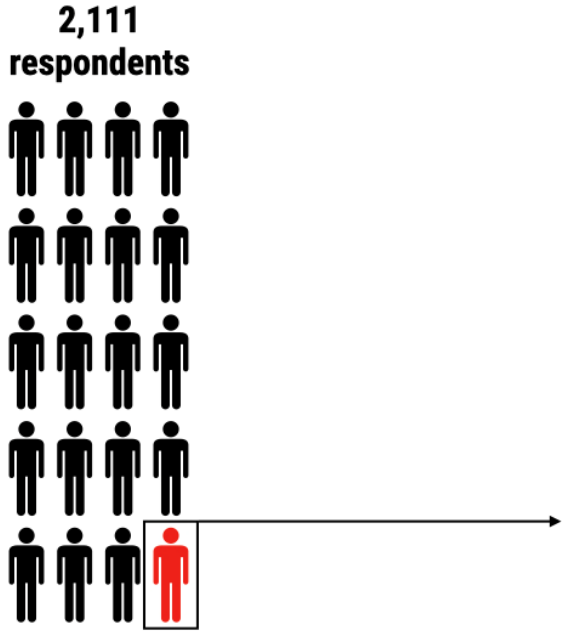

Figure S2: Respiratory infections and symptoms infections increase as household size increases (violet bar color represents ‘the number of respondents by household size. The red and blue lines represent ‘% reporting the respiratory infections and symptoms’, and ‘% of female respondents’, respectively.




| | | Beginning of War | | Current | | | Percent Change from Baseline | |
|---|---|---|---|---|---|---|---|---|
| # | Oblast Name | Housholds | Household Size | Housholds | Household Size | % Common Cold | Households | Household Size |
| 1 | Cherkasy | 71 | 2.9 | 82 | 2.9 | 65.9% | +15.5% | -1.4% |
| 2 | Chernihiv | 73 | 3.3 | 75 | 3.3 | 66.7% | +2.7% | 0.1% |
| 3 | Chernivtsi | 59 | 3.4 | 63 | 3.5 | 73.0% | +6.8% | 2.1% |
| 4 | Dnipropetrovsk | 208 | 2.8 | 223 | 2.7 | 59.6% | +7.2% | -2.9% |
| 5 | Donetsk | 52 | 2.9 | 7 | 3.7 | 57.1% | -86.5% | 28.8% |
| 6 | Ivano-Frankivsk | 88 | 3.5 | 98 | 3.4 | 75.5% | +11.4% | -2.7% |
| 7 | Kharkiv | 212 | 2.9 | 178 | 2.9 | 60.1% | -16.0% | -2.6% |
| 8 | Kherson | 16 | 2.4 | 8 | 2.1 | 62.5% | -50.0% | -12.8% |
| 9 | Khmelnytskyi | 88 | 3.1 | 91 | 3.1 | 58.2% | +3.4% | -0.1% |
| 10 | Kyiv | 59 | 3 | 53 | 3 | 73.6% | -10.2% | -1.2% |
| 11 | M. Kyïv [Kiev City] | 152 | 2.8 | 151 | 2.9 | 58.3% | -0.7% | 3.2% |
| 12 | Kirovohrad | 67 | 2.9 | 70 | 2.9 | 75.7% | +4.5% | 1.7% |
| 13 | Luhansk | 12 | 3.1 | 0 | - | - | -100.0% | - |
| 14 | Lviv | 174 | 3.3 | 183 | 3.3 | 69.9% | +5.2% | -0.4% |
| 15 | Mykolaiv | 74 | 2.8 | 75 | 2.8 | 58.7% | +1.4% | -1.3% |
| 16 | Odessa | 37 | 2.6 | 37 | 2.4 | 51.4% | +0.0% | -11.2% |
| 17 | Poltava | 85 | 2.9 | 100 | 2.9 | 64.0% | +17.6% | -1.1% |
| 18 | Rivne | 76 | 3.4 | 81 | 3.4 | 63.0% | +6.6% | -1.5% |
| 19 | Sumy | 72 | 3 | 73 | 3.1 | 75.3% | +1.4% | 2.8% |
| 20 | Ternopil | 69 | 3.4 | 78 | 3.4 | 76.9% | +13.0% | 0.1% |
| 21 | Vinnytsia | 111 | 3 | 116 | 3 | 62.9% | +4.5% | -1.1% |
| 22 | Volyn | 71 | 3.1 | 78 | 3 | 67.9% | +9.9% | -1.5% |
| 23 | Zakarpattia | 81 | 3.6 | 92 | 3.6 | 81.5% | +13.6% | 1.4% |
| 24 | Zaporizhia | 30 | 3.5 | 14 | 4 | 57.1% | -53.3% | 15.4% |
| 25 | Zhytomyr | 70 | 2.8 | 83 | 3 | 65.1% | +18.6% | 7.1% |
| 28 | Outside of Ukraine | 4 | 3.5 | 2 | 4 | 0.0% | -50.0% | 14.3% |

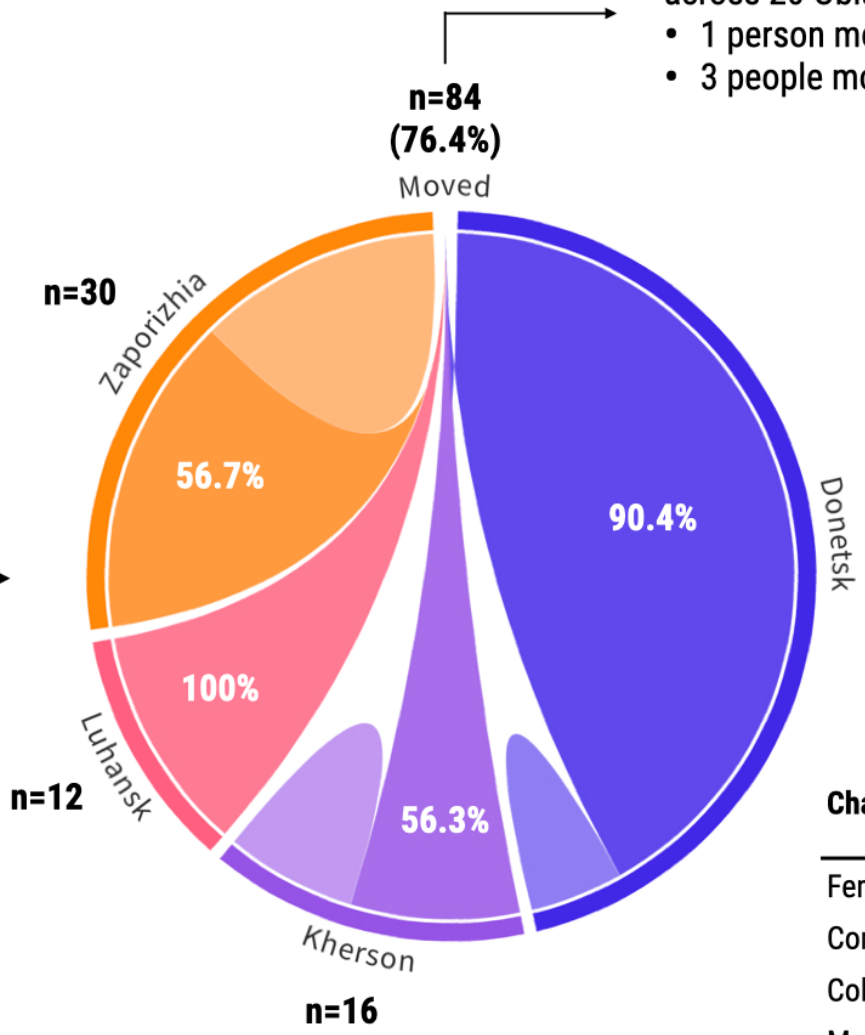
Figure S3: Respiratory infections and symptoms infections and household size change.

*Data was not available




**110 (5.2%)** reported living in 1 of 4 Oblasts under Russian military control at the start of the war:

- Donetsk
- Kherson
- Luhansk
- Zaporizhia




**21.4%** ended up in Dnipropetrovsk, the rest spread across 20 Oblasts

- 1 person moved from Donetsk to Zaporizhia
- 3 people moved to this region after the war started


| Characteristic | Russian Controlled | Not Russian Controlled | *p* value |
|---|---|---|---|
| Female Sex, n (%) | 53 (48) | 1014 (51) | 0.611 |
| Common Cold, n (%) | 66 (60) | 1324 (66) | 0.184 |
| Cold Injury, n (%) | 9 (8) | 83 (4) | *0.044* |
| Moved, n (%) | 85 (77) | 140 (7) | *<0.001* |
| Age, average | 43 | 40.2 | *0.02* |
| Household Size, average | 3 | 3.1 | 0.692 |

Figure S4: Characteristics of survey respondents who lived in Oblasts under Russian military control.

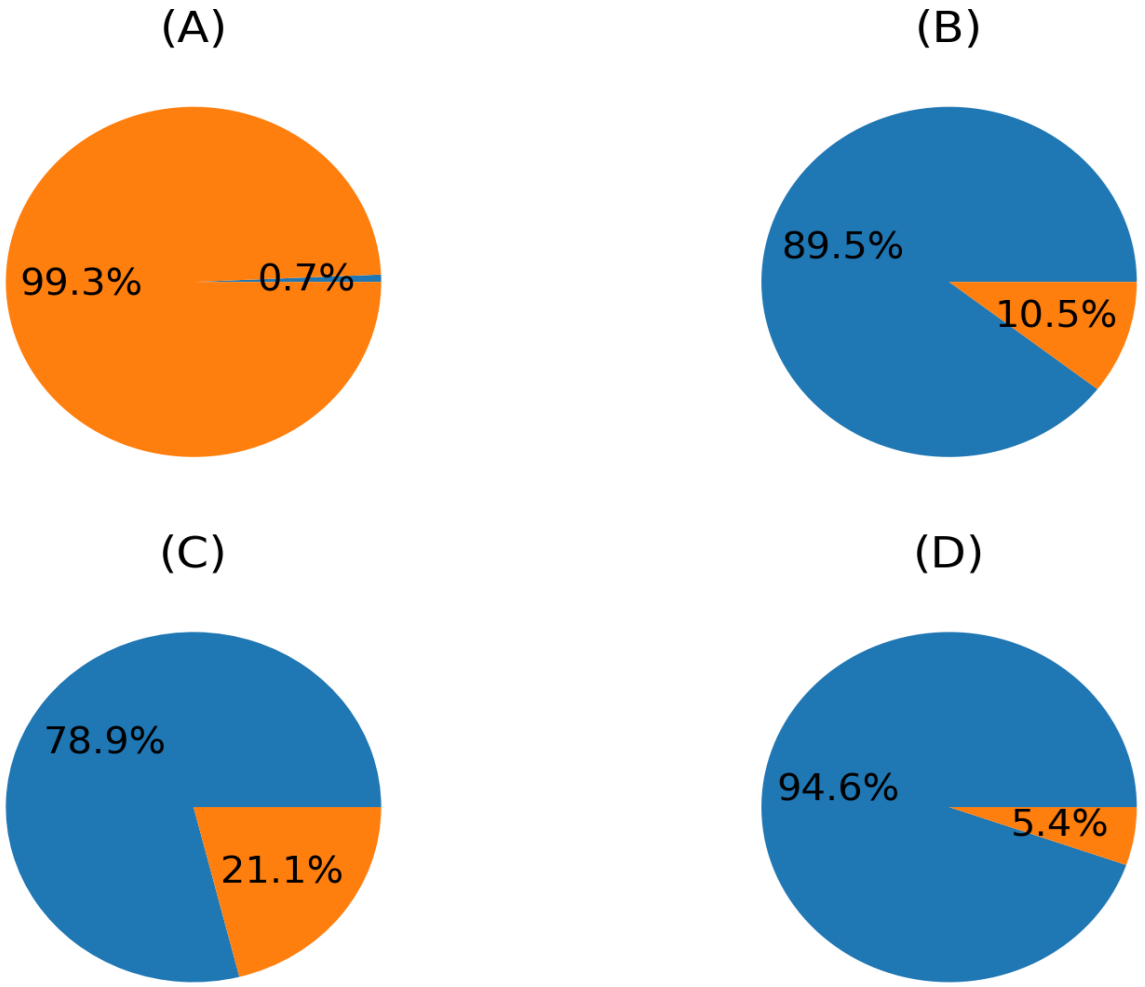



Figure S5: Prevalence of respiratory infections and symptoms among different household types with and without children or elderly individuals in the household (blue color indicates households with respiratory infections and symptoms and orange color indicates households without respiratory infections and symptoms). (A) Households with neither children nor elderly members. (B) Households with children. (C) Households with elderly. (D) Households with both children and elderly members.

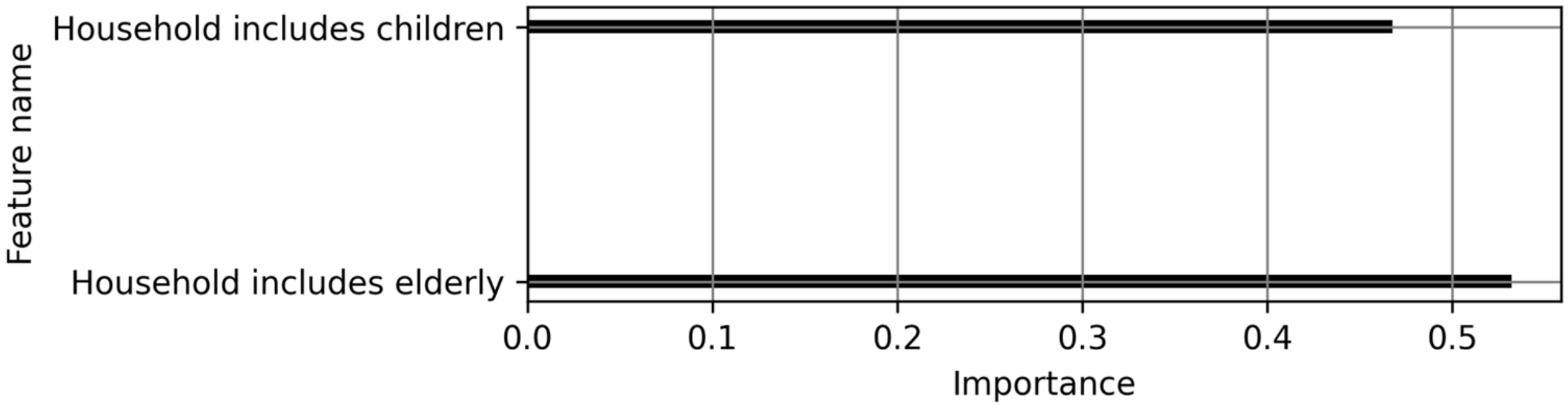



Figure S6: Feature importance of classification of respiratory infections and symptoms at the household level (all population) based on children and elderly in the household.

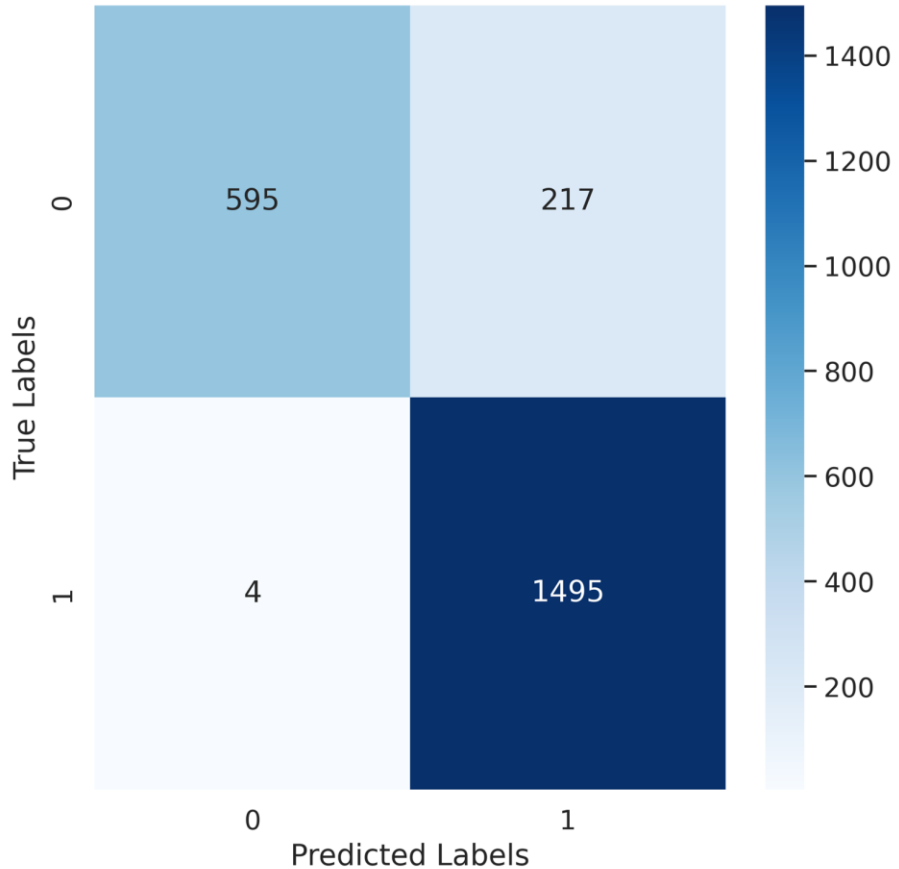



Figure S7: Confusion matrix for classification of respiratory infections and symptoms at the household level (all population) based on children and elderly in the household.

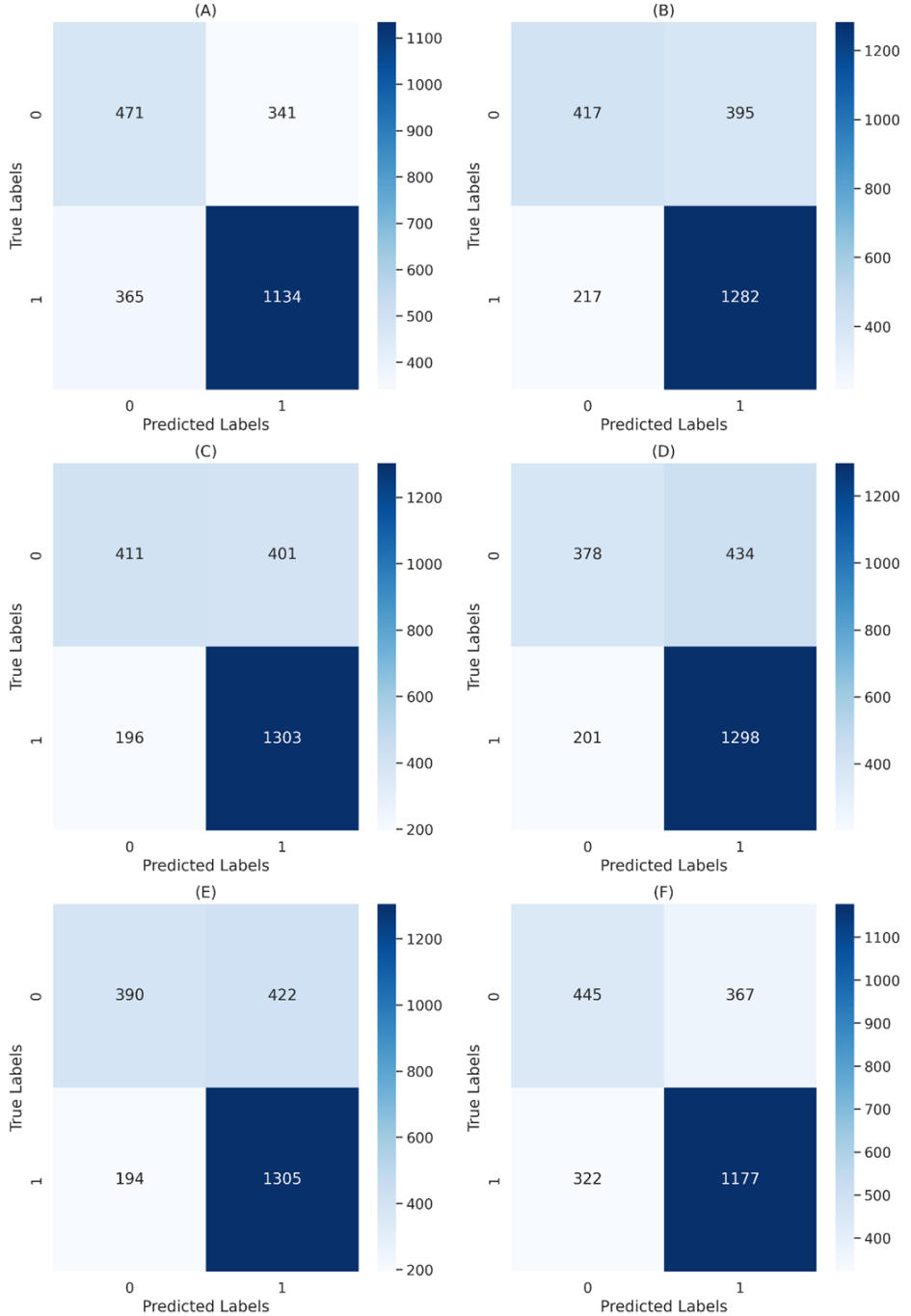



Figure S8: Confusion matrices for ML algorithms on respiratory infections and symptoms at the household level (all population) (A) Decision tree, (B) Random forest, (C) XGBoost, (D) Adaboost, (E) SVM and (F) Multilayer Perceptron.

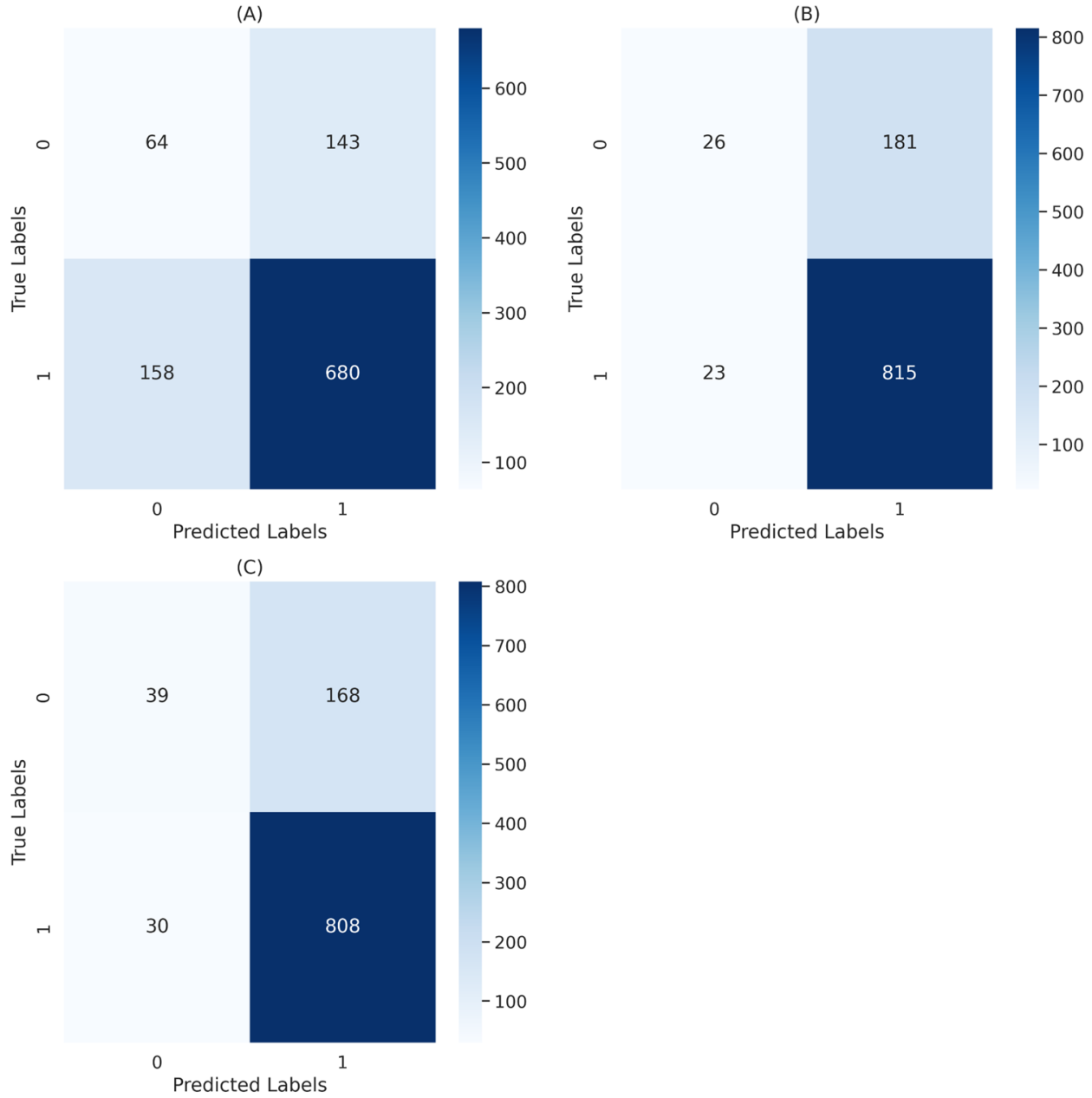



Figure S9: Confusion matrices of classification of various ML algorithms on respiratory infections and symptoms among the elderly population. (A) Decision tree, (B) Random forest, (C) XGBoost.

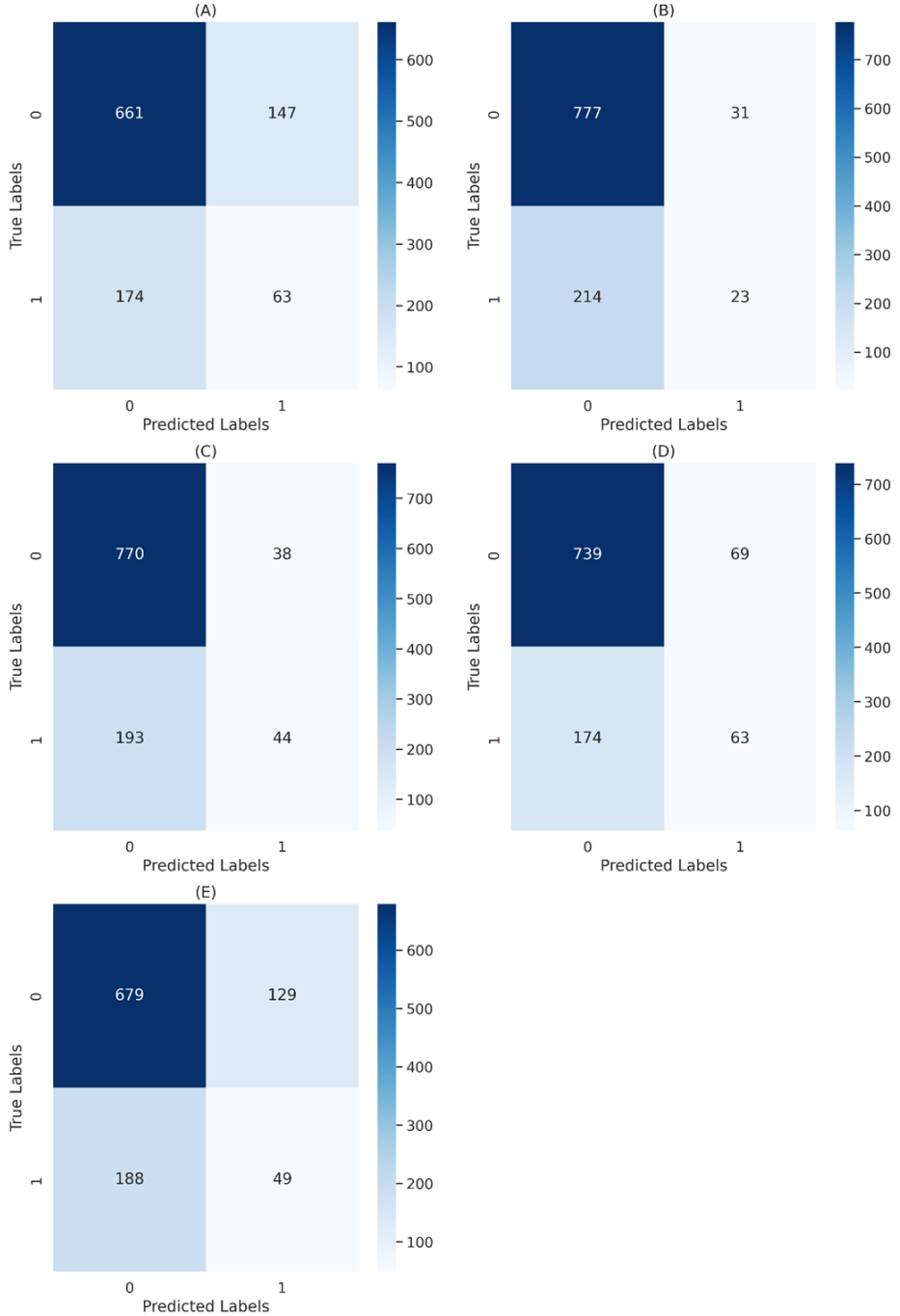



Figure S10: Confusion Matrices for ML algorithms on cold injuries among the elderly (>60 years old) population. (A) Decision tree, (B) Random forest, (C) XGBoost, (D) Adaboost, (E) Multi-layer Perceptron.