Flu Survey Data

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Household members **48**

HHM1 49

HHM2 54

to-do: 59

```
## Source: local data frame [3 x 2]
##
##        Q1 count
##    (fctr) (int)
## 1      No   488
## 2 Refused    16
## 3     Yes  1664
```

Working analysis

```
# Q1 and Q13: knowing influenza is different from stomach flu; vs. getting the flu vaccine
with(data, table(Q1, Q13))
```

```
##          Q13
## Q1        No, never Refused Yes, every year Yes, some years
##   No            260       4             143              81
##   Refused         2      10               4               0
##   Yes           557       4             761             342
```

```
summary(with(data, table(Q1, Q13)))
```

```
## Number of cases in table: 2168
## Number of factors: 2
## Test for independence of all factors:
##  Chisq = 813.4, df = 6, p-value = 1.981e-172
##  Chi-squared approximation may be incorrect
```

```
# Q1 and Q2: knowing flu and getting flu
with(data, table(Q1, Q2))
```

```
##          Q2
## Q1          No Refused  Yes
##   No       399       3   86
##   Refused    5      11    0
##   Yes     1331       5  328
```

```
summary(with(data, table(Q1, Q2)))
```

```
## Number of cases in table: 2168
## Number of factors: 2
## Test for independence of all factors:
##  Chisq = 856.6, df = 4, p-value = 4.169e-184
##  Chi-squared approximation may be incorrect
```

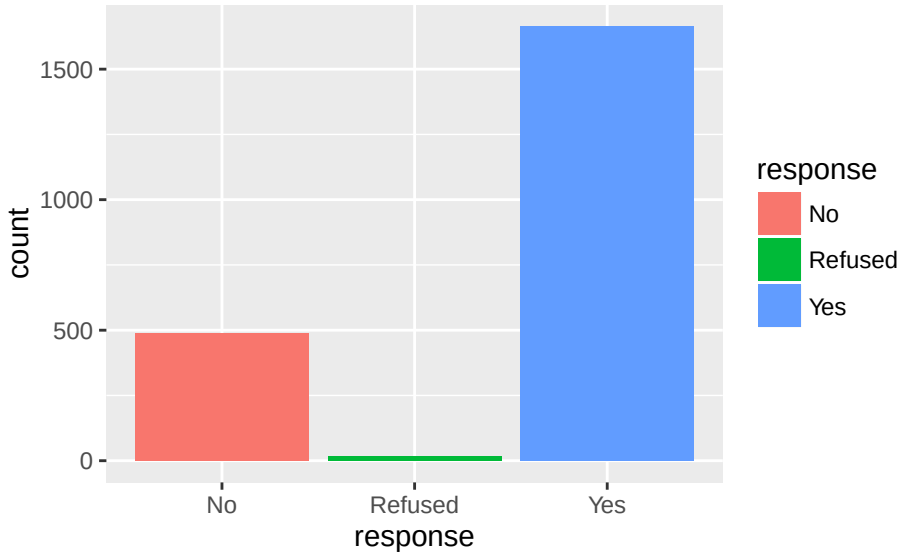
Survey questions

Q1. Before receiving this survey, did you know influenza is different from the stomach flu?

```
summary(q1.df)
```

```
##        Q1
##  No     : 488
##  Refused:  16
##  Yes    :1664
```

```
ggplot(q1) + geom_bar(aes(x=response, fill=response))
```



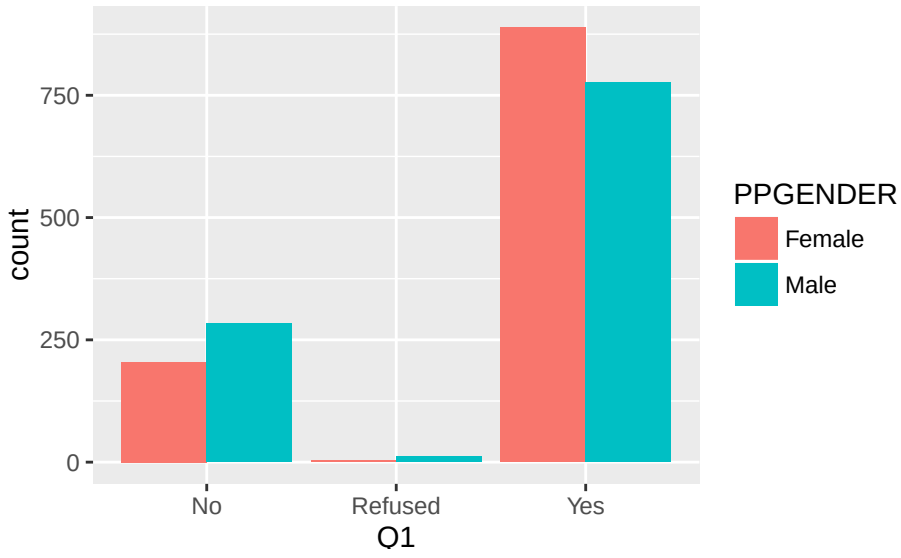

```
# alternatively, summary(q1.df)
data %>%
  group_by(Q1) %>%
  summarise(count = n())
```

```
## Source: local data frame [3 x 2]
##
##        Q1 count
##    (fctr) (int)
## 1      No   488
## 2 Refused    16
## 3     Yes  1664
```

```
# by gender
q1.gen = data %>%
  group_by(Q1, PPGENDER)
q1.gen %>%
  summarise(count = n())
```

```
## Source: local data frame [6 x 3]
## Groups: Q1 [?]
##
##        Q1 PPGENDER count
##    (fctr)   (fctr) (int)
## 1      No   Female   205
## 2      No     Male   283
## 3 Refused   Female     4
## 4 Refused     Male    12
## 5     Yes   Female   888
## 6     Yes     Male   776
```

```
ggplot(q1.gen) + geom_bar(aes(x = Q1, fill = PPGENDER), position = "dodge")
```

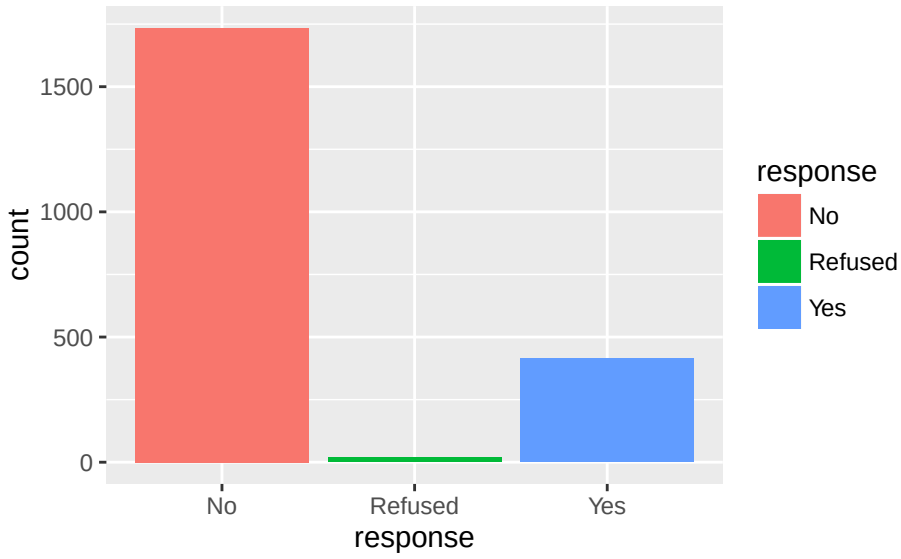


Q2. Have you had an illness with influenza like symptoms since August 2015?

```
summary(q2.df)
```

```
##        Q2
##  No     :1735
##  Refused:  19
##  Yes    : 414
```

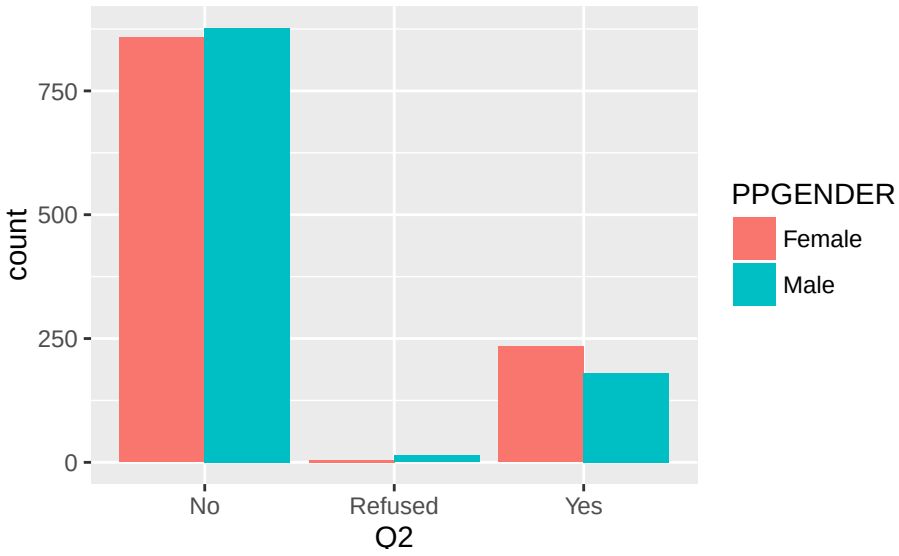
```
ggplot(q2) + geom_bar(aes(x=response, fill=response))
```




```
# by gender
q2.gen = data %>%
  group_by(Q2, PPGENDER)
q2.gen %>%
  summarise(count = n())
```

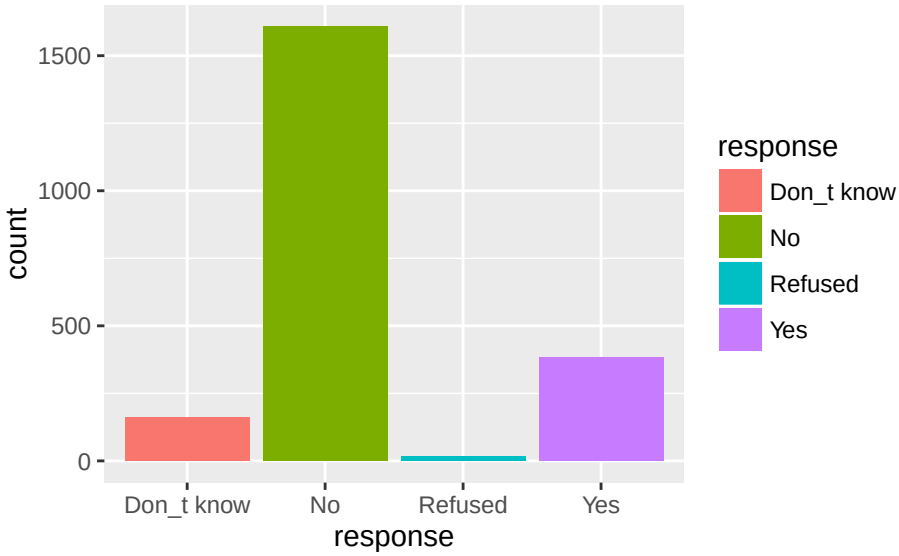
```
## Source: local data frame [6 x 3]
## Groups: Q2 [?]
##
##        Q2 PPGENDER count
##    (fctr)   (fctr) (int)
## 1      No   Female   858
## 2      No     Male   877
## 3 Refused   Female     5
## 4 Refused     Male    14
## 5     Yes   Female   234
## 6     Yes     Male   180
```

```
ggplot(q2.gen) + geom_bar(aes(x = Q2, fill = PPGENDER), position = "dodge")
```



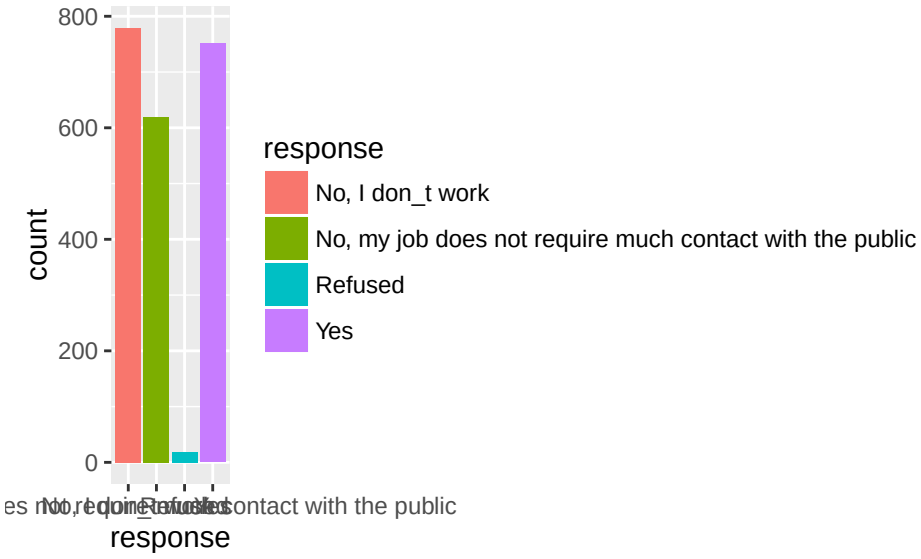
Q3. Has any other person in your household had an illness with influenza like symptoms since August 2015?

```
##           Q3
##  Don_t know: 161
##  No         :1608
##  Refused    :  16
##  Yes        : 383
```



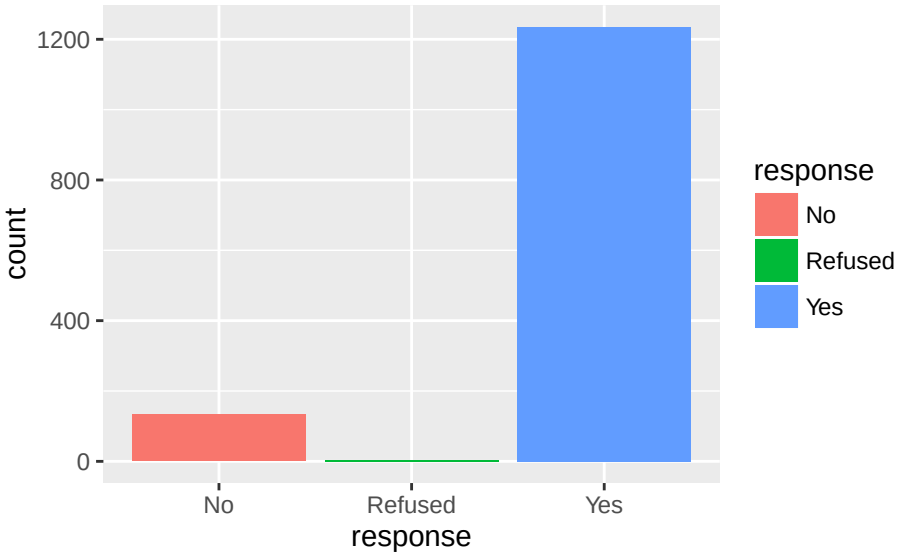
Q4. Does your job require you to have a lot of contact with the public?

```
##                                                          Q4
##  No, I don_t work                                         :779
##  No, my job does not require much contact with the public:620
##  Refused                                                  : 18
##  Yes                                                      :751
```



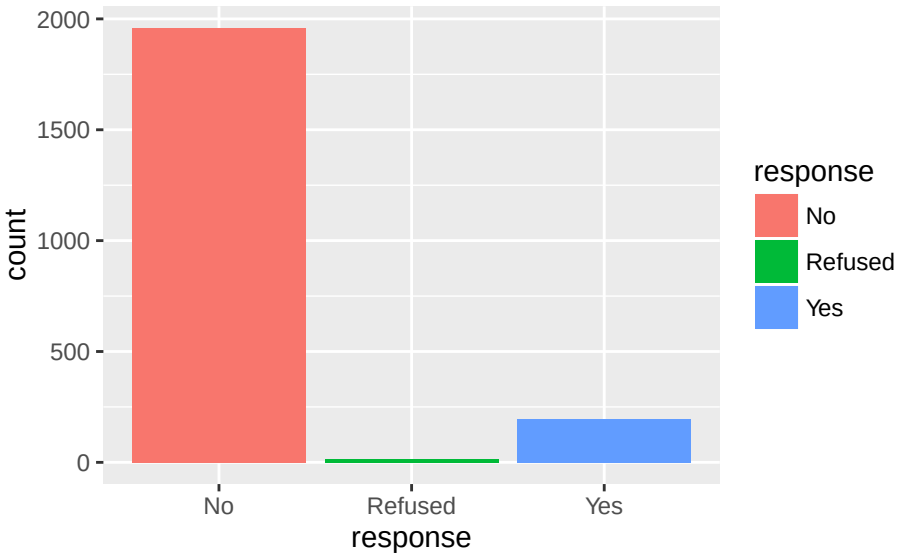
Q5. Do you have a car that you can use to travel to work?

```
##        Q5
##  No     : 133
##  Refused:   3
##  Yes    :1235
##  NA's   : 797
```

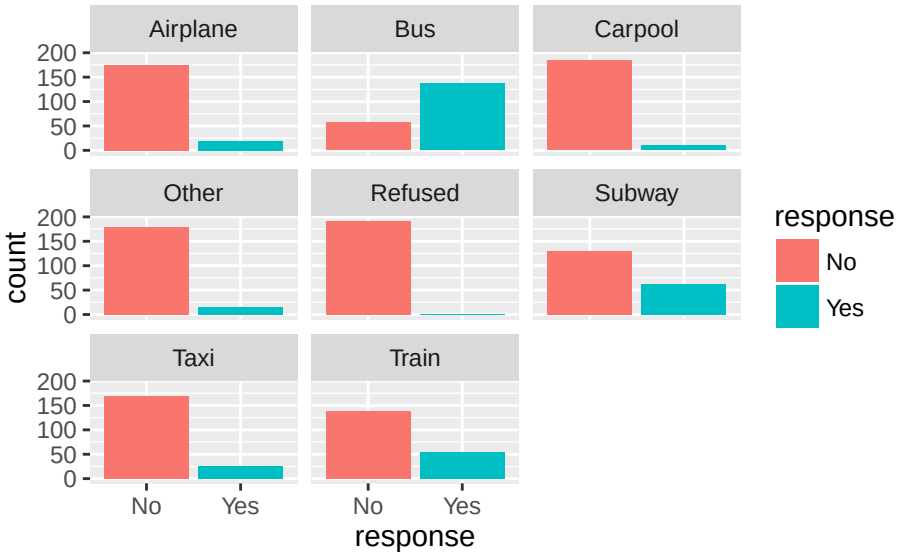


Q6. Do you regularly use public transportation?

```
##        Q6
##  No     :1959
##  Refused:  15
##  Yes    : 194
```



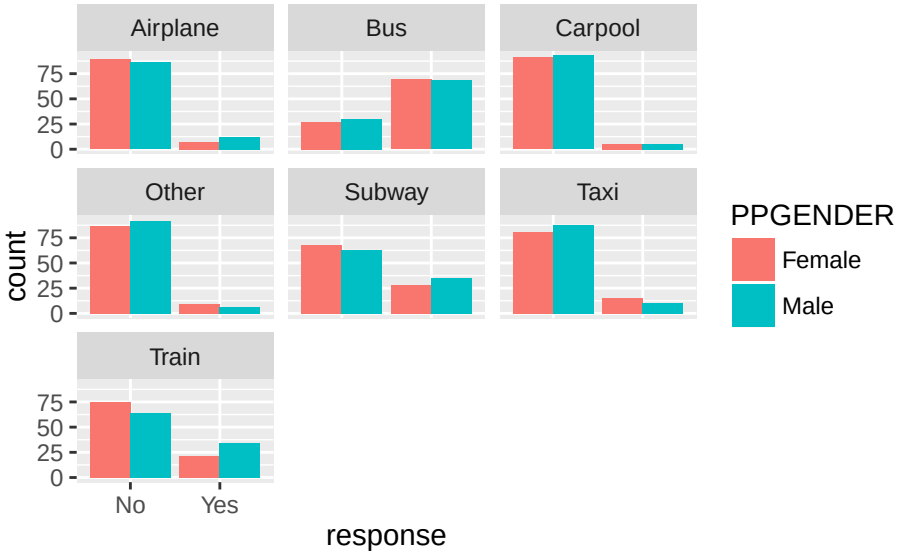
Q7. What types of public transportation do you regularly use?




```
##    Bus          Carpool       Subway       Train          Taxi       Airplane
##  No  :  57   No  : 184   No  : 131   No  : 139   No  : 169   No  : 175
##  Yes : 137   Yes :  10   Yes :  63   Yes :  55   Yes :  25   Yes :  19
##  NA's:1974   NA's:1974   NA's:1974   NA's:1974   NA's:1974   NA's:1974
##
##
##
##
##   Other       Refused          Other text
##  No  : 179   No  : 192            :2153
##  Yes :  15   Yes :   2   bike,walk:   1
##  NA's:1974   NA's:1974   car      :   1
##                          ferry    :   1
##                          Ferry    :   1
```

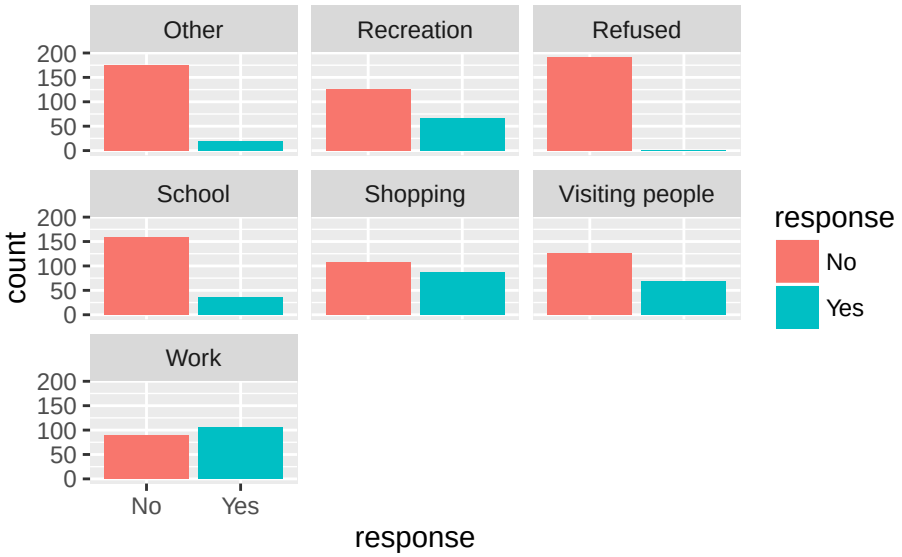
```
##                          Horse    :   1
##                          (Other)  :  10
```

```
## Source: local data frame [15,176 x 5]
## Groups: PPGENDER, option, response [42]
##
##    PPGENDER Refused Other text option response
##      (fctr)  (fctr)     (fctr)  (chr)    (chr)
## 1    Female      No                Bus      Yes
## 2      Male      NA                Bus       NA
## 3    Female      NA                Bus       NA
## 4      Male      No                Bus      Yes
## 5      Male      NA                Bus       NA
## 6      Male      NA                Bus       NA
## 7    Female      NA                Bus       NA
## 8      Male      NA                Bus       NA
## 9    Female      NA                Bus       NA
## 10     Male      NA                Bus       NA
## ..      ...     ...         ...     ...      ...
```



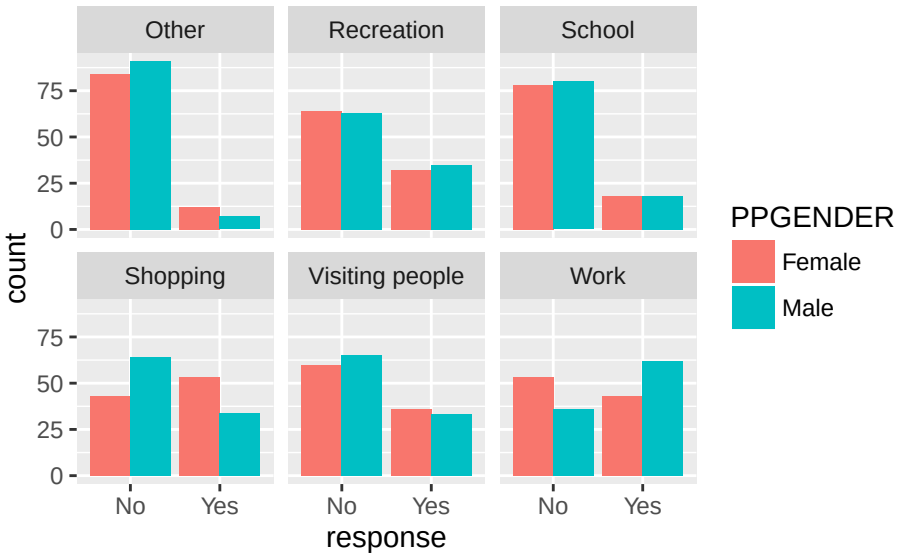

```
## Source: local data frame [42 x 4]
## Groups: PPGENDER, option [?]
##
##    PPGENDER   option response count
##      (fctr)    (chr)    (chr) (int)
## 1    Female Airplane       No    89
## 2    Female Airplane      Yes     7
## 3    Female Airplane       NA  1001
## 4    Female      Bus       No    27
## 5    Female      Bus      Yes    69
## 6    Female      Bus       NA  1001
## 7    Female  Carpool       No    91
## 8    Female  Carpool      Yes     5
## 9    Female  Carpool       NA  1001
## 10   Female    Other       No    87
## ..      ...      ...      ...   ...
```

Q8. For what types of activities do you regularly use public transportation?




```
##    Work       School     Shopping    Visiting people Recreation
##  No  :  89   No  : 158   No  : 107   No  : 125       No  : 127
##  Yes : 105   Yes :  36   Yes :  87   Yes :  69       Yes :  67
##  NA's:1974   NA's:1974   NA's:1974   NA's:1974       NA's:1974
##
##
##
##
##   Other      Refused                      Other text
##  No  : 175   No  : 192                         :2149
##  Yes :  19   Yes :   2   church, adult ed      :   1
##  NA's:1974   NA's:1974   doc. app.            :   1
##                          Doctor               :   1
##                          doctor visits        :   1
##                          Doctor's appointments:   1
##                          (Other)              :  14
```

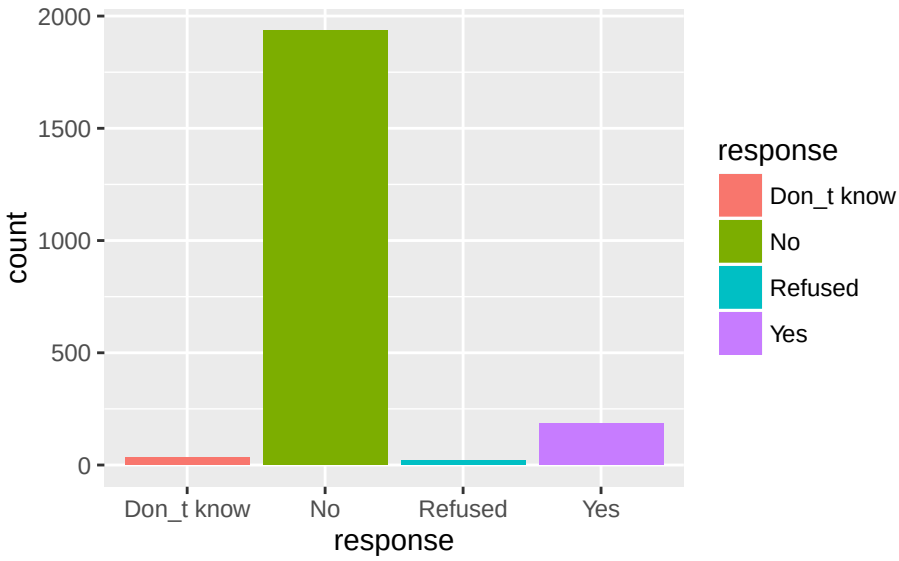
```
## Source: local data frame [13,008 x 5]
## Groups: PPGENDER, option, response [36]
##
##    PPGENDER Refused Other text option response
##      (fctr)  (fctr)     (fctr)  (chr)    (chr)
## 1    Female      No               Work       No
## 2      Male      NA               Work       NA
## 3    Female      NA               Work       NA
## 4      Male      No               Work      Yes
## 5      Male      NA               Work       NA
## 6      Male      NA               Work       NA
## 7    Female      NA               Work       NA
## 8      Male      NA               Work       NA
## 9    Female      NA               Work       NA
## 10     Male      NA               Work       NA
## ..      ...     ...         ...    ...      ...
```



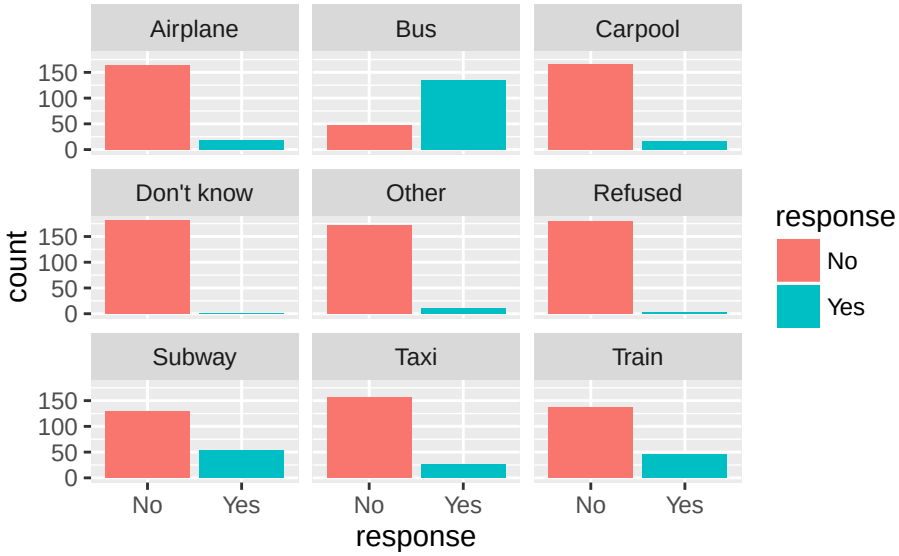

```
## Source: local data frame [36 x 4]
## Groups: PPGENDER, option [?]
##
##    PPGENDER     option response count
##      (fctr)      (chr)    (chr) (int)
## 1    Female      Other       No    84
## 2    Female      Other      Yes    12
## 3    Female      Other       NA  1001
## 4    Female Recreation       No    64
## 5    Female Recreation      Yes    32
## 6    Female Recreation       NA  1001
## 7    Female     School       No    78
## 8    Female     School      Yes    18
## 9    Female     School       NA  1001
## 10   Female   Shopping       No    43
## ..      ...        ...      ...   ...
```

Q9. Do other members of your household regularly use public transportation?

```
##           Q9
##  Don_t know:  32
##  No        :1935
##  Refused   :  18
##  Yes       : 183
```



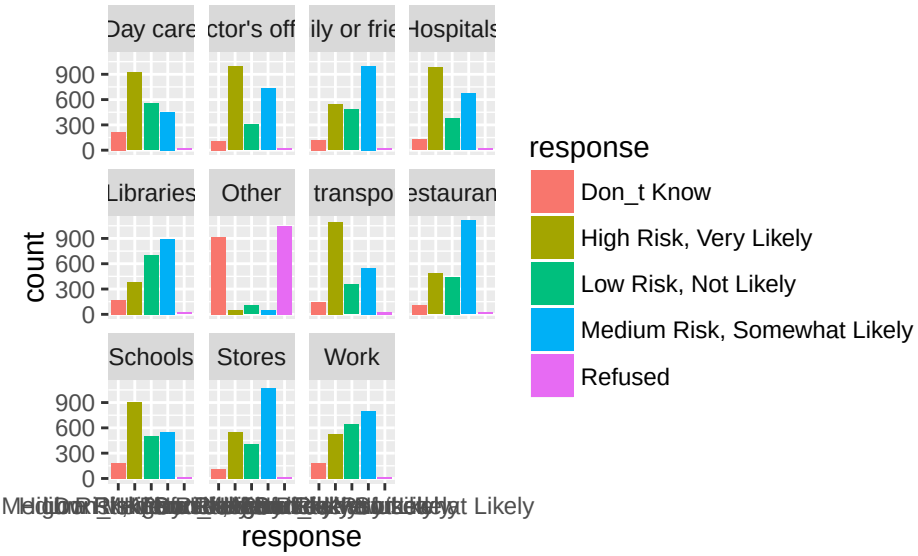
Q10. What types of public transportation do other members of your household regularly use?




```
##    Bus          Carpool       Subway        Train          Taxi       Airplane
##  No  :  48   No  : 166   No  : 130   No  : 137   No  : 157   No  : 164
##  Yes : 135   Yes :  17   Yes :  53   Yes :  46   Yes :  26   Yes :  19
##  NA's:1985   NA's:1985   NA's:1985   NA's:1985   NA's:1985   NA's:1985
##
##
##
##
##  Don't know    Other       Refused       Other text
##  No  : 182   No  : 172   No  : 180          :2157
##  Yes :   1   Yes :  11   Yes :   3   None   :   2
##  NA's:1985   NA's:1985   NA's:1985   car    :   1
##                                      ferry  :   1
##                                      Ferry  :   1
```

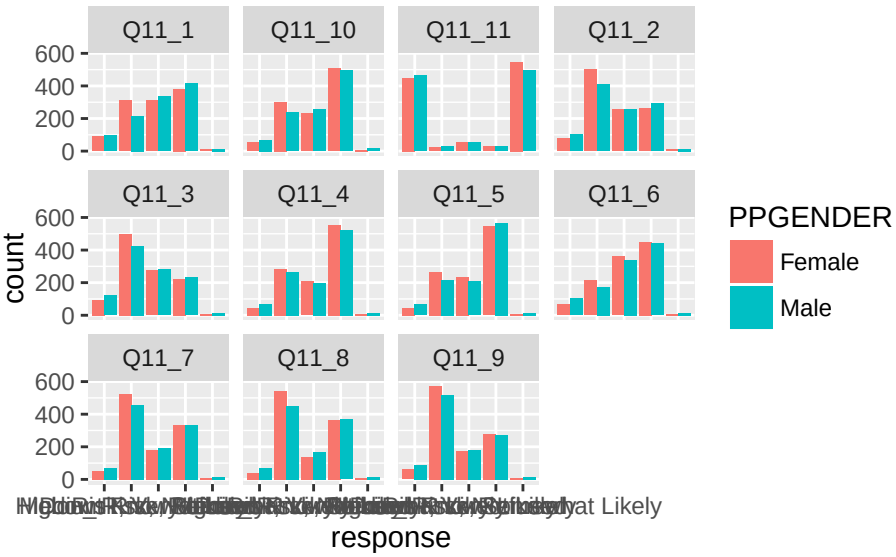
```
##                                    Horse   :   1
##                                    (Other):   5
```

Q11. How do you rate your risk of getting influenza if you visited each of the following locations?




```
##                                Work                                Schools
##  Don_t Know                   :185   Don_t Know                   :178
##  High Risk, Very Likely       :524   High Risk, Very Likely       :909
##  Low Risk, Not Likely         :643   Low Risk, Not Likely         :508
##  Medium Risk, Somewhat Likely:795   Medium Risk, Somewhat Likely:551
##  Refused                      : 21   Refused                      : 22
##
##
##                             Day care                             Stores
##  Don_t Know                   :214   Don_t Know                   : 115
##  High Risk, Very Likely       :924   High Risk, Very Likely       : 551
##  Low Risk, Not Likely         :554   Low Risk, Not Likely         : 405
##  Medium Risk, Somewhat Likely:454   Medium Risk, Somewhat Likely:1076
##  Refused                      : 22   Refused                      :  21
##
##
##                           Restaurants                           Libraries
##  Don_t Know                   : 111   Don_t Know                   :169
##  High Risk, Very Likely       : 483   High Risk, Very Likely       :386
##  Low Risk, Not Likely         : 442   Low Risk, Not Likely         :700
##  Medium Risk, Somewhat Likely:1111   Medium Risk, Somewhat Likely:890
##  Refused                      :  21   Refused                      : 23
##
##
##                            Hospitals                        Doctor's office
##  Don_t Know                   :123   Don_t Know                   :110
##  High Risk, Very Likely       :982   High Risk, Very Likely       :994
##  Low Risk, Not Likely         :374   Low Risk, Not Likely         :308
##  Medium Risk, Somewhat Likely:669   Medium Risk, Somewhat Likely:733
```

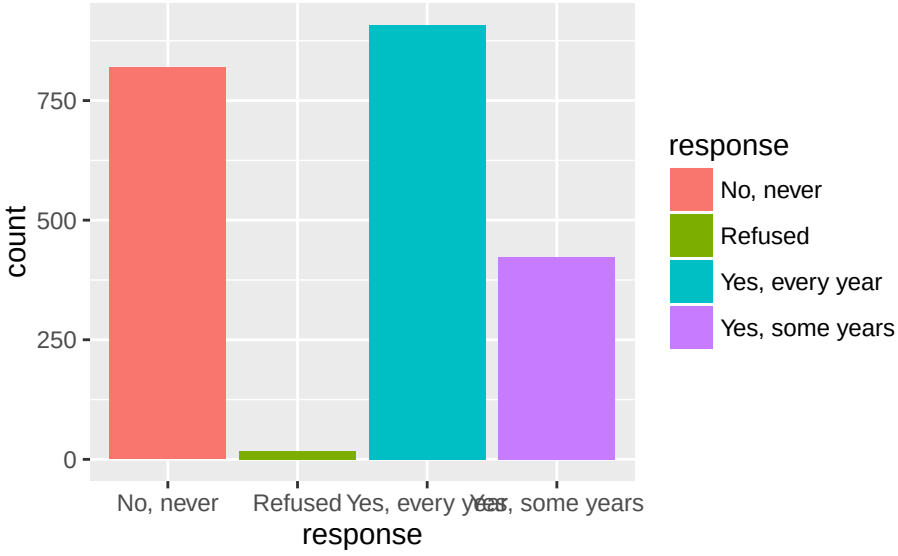
```
##  Refused                     : 20   Refused                     : 23
##
##
##                   Public transportation
##  Don_t Know                  : 147
##  High Risk, Very Likely      :1093
##  Low Risk, Not Likely        : 353
##  Medium Risk, Somewhat Likely: 551
##  Refused                     :  24
##
##
##                      Family or friends                            Other
##  Don_t Know                  : 121    Don_t Know                   : 915
##  High Risk, Very Likely      : 541    High Risk, Very Likely       :  51
##  Low Risk, Not Likely        : 485    Low Risk, Not Likely         : 104
##  Medium Risk, Somewhat Likely:1000    Medium Risk, Somewhat Likely:  54
##  Refused                     :  21    Refused                      :1044
##
##
##    Other text
##         :1997
##  church :  13
##  Church :  13
##  none   :   8
##  gym    :   7
##  n/a    :   4
##  (Other): 126

## Source: local data frame [23,848 x 3]
## Groups: PPGENDER, option, response [110]
##
##    PPGENDER option                     response
##      (fctr)  (chr)                        (chr)
## 1    Female  Q11_1       High Risk, Very Likely
## 2      Male  Q11_1                      Refused
## 3    Female  Q11_1 Medium Risk, Somewhat Likely
## 4      Male  Q11_1       High Risk, Very Likely
## 5      Male  Q11_1       High Risk, Very Likely
## 6      Male  Q11_1 Medium Risk, Somewhat Likely
## 7    Female  Q11_1         Low Risk, Not Likely
## 8      Male  Q11_1         Low Risk, Not Likely
## 9    Female  Q11_1         Low Risk, Not Likely
## 10     Male  Q11_1         Low Risk, Not Likely
## ..      ...    ...                          ...
```



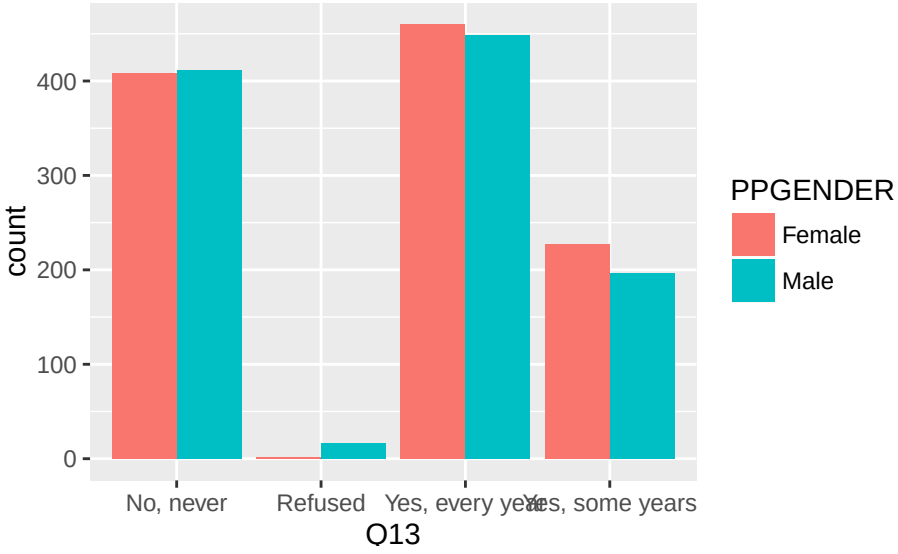

```
## Source: local data frame [110 x 4]
## Groups: PPGENDER, option [?]
##
##    PPGENDER option                     response count
##      (fctr)  (chr)                        (chr) (int)
## 1    Female  Q11_1                   Don_t Know    89
## 2    Female  Q11_1       High Risk, Very Likely   309
## 3    Female  Q11_1         Low Risk, Not Likely   310
## 4    Female  Q11_1 Medium Risk, Somewhat Likely   381
## 5    Female  Q11_1                      Refused     8
## 6    Female Q11_10                   Don_t Know    53
## 7    Female Q11_10       High Risk, Very Likely   302
## 8    Female Q11_10         Low Risk, Not Likely   229
## 9    Female Q11_10 Medium Risk, Somewhat Likely   506
## 10   Female Q11_10                      Refused     7
## ..      ...    ...                          ...   ...
```

Q13. Do you get the flu vaccine?

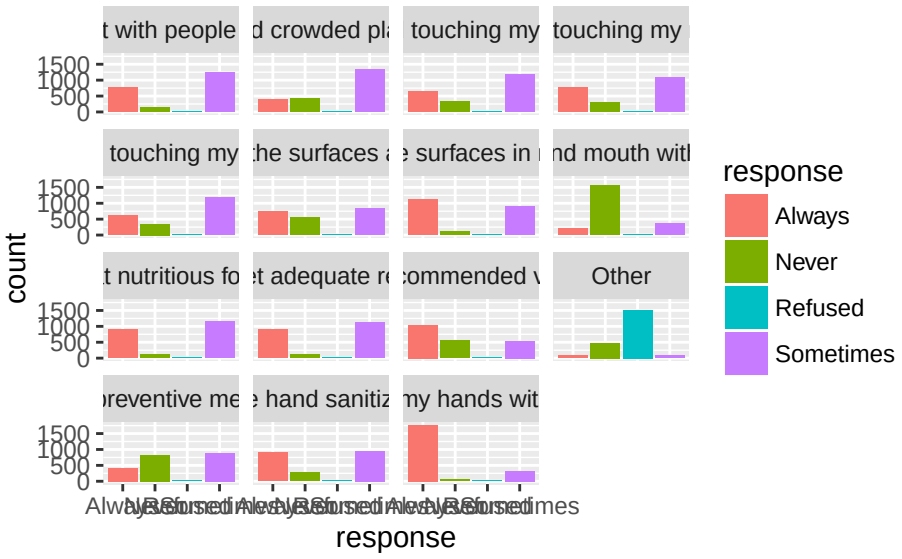
```
##                Q13
##  No, never      :819
##  Refused        : 18
##  Yes, every year:908
##  Yes, some years:423
```




```
## Source: local data frame [8 x 3]
## Groups: Q13 [?]
##
##                Q13 PPGENDER count
##             (fctr)   (fctr) (int)
## 1       No, never   Female   408
## 2       No, never     Male   411
## 3         Refused   Female     2
## 4         Refused     Male    16
## 5 Yes, every year   Female   460
## 6 Yes, every year     Male   448
## 7 Yes, some years   Female   227
## 8 Yes, some years     Male   196
```

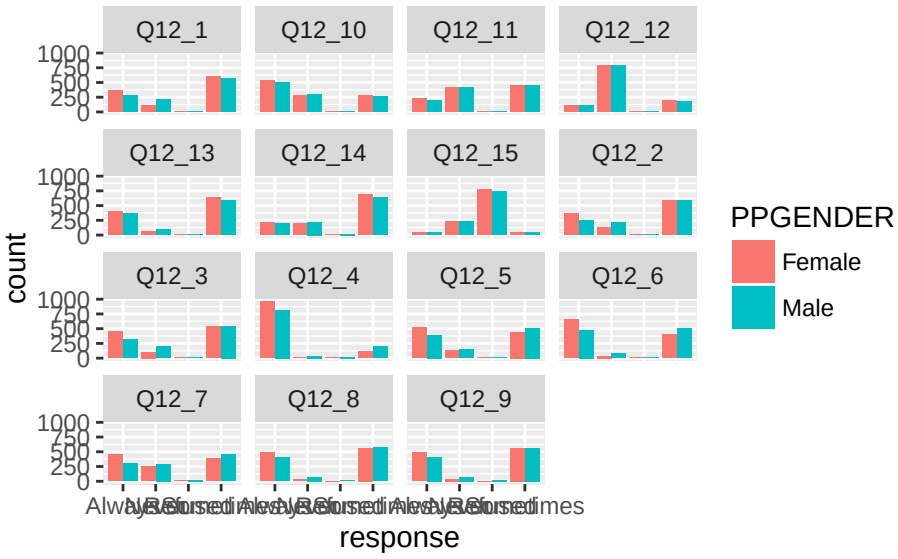


Q12. Which of the following actions do you take to avoid getting sick?




```
##  Avoid touching my eyes Avoid touching my nose Avoid touching my mouth
##  Always   : 653         Always   : 613         Always   : 758
##  Never    : 324         Never    : 349         Never    : 300
##  Refused  :  23         Refused  :  23         Refused  :  25
##  Sometimes:1168         Sometimes:1183         Sometimes:1085
##
##
##
##  Wash my hands with soap Use hand sanitizers Clean the surfaces in my home
##  Always   :1774          Always   :911       Always   :1132
##  Never    :  52          Never    :278       Never    : 115
##  Refused  :  25          Refused  : 22       Refused  :  22
##  Sometimes: 317          Sometimes:957       Sometimes: 899
##
##
##
##  Clean the surfaces at work Eat nutritious food Get adequate rest
##  Always   :752              Always   : 895      Always   : 899
##  Never    :544              Never    : 107      Never    : 114
##  Refused  : 30              Refused  :  22      Refused  :  25
##  Sometimes:842              Sometimes:1144      Sometimes:1130
##
##
##
##  Get recommended vaccine Take preventive medicine
##  Always   :1041          Always   :425
##  Never    : 564          Never    :831
##  Refused  :  23          Refused  : 22
##  Sometimes: 540          Sometimes:890
##
##
##
##  Cover my nose and mouth with a surgical mask
##  Always   : 218
##  Never    :1568
##  Refused  :  24
```

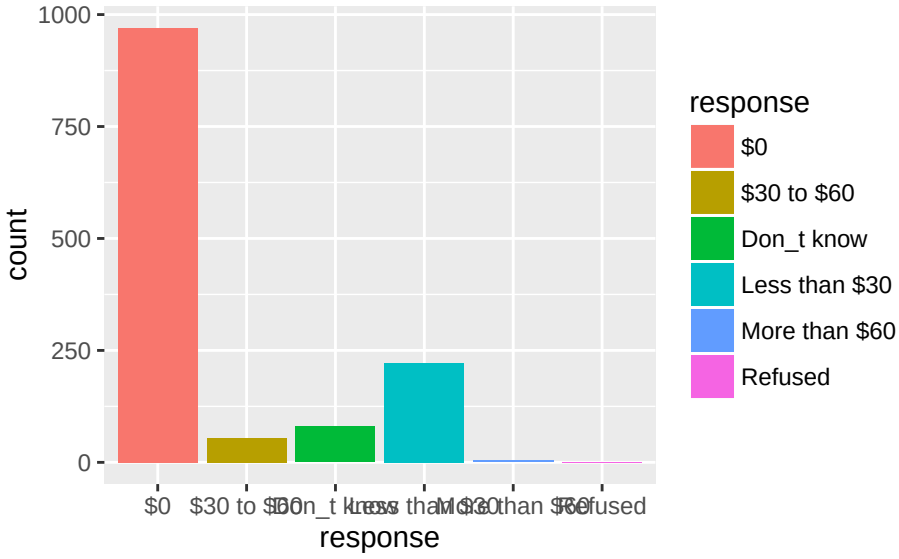
```
##  Sometimes: 358
##
##
##
##  Avoid contact with people who are sick Avoid crowded places
##  Always   : 765                         Always   : 406
##  Never    : 153                         Never    : 413
##  Refused  :  22                         Refused  :  27
##  Sometimes:1228                         Sometimes:1322
##
##
##
##        Other                  Other text
##  Always   :  91                     :2022
##  Never    : 472   none              :   7
##  Refused  :1518   stay home         :   4
##  Sometimes:  87   avoid sick people:   3
##                   N/A               :   3
##                   nothing           :   3
##                   (Other)           : 126

## Source: local data frame [32,520 x 3]
## Groups: PPGENDER, option, response [120]
##
##    PPGENDER option  response
##      (fctr)  (chr)     (chr)
## 1    Female  Q12_1 Sometimes
## 2      Male  Q12_1   Refused
## 3    Female  Q12_1    Always
## 4      Male  Q12_1 Sometimes
## 5      Male  Q12_1 Sometimes
## 6      Male  Q12_1 Sometimes
## 7    Female  Q12_1 Sometimes
## 8      Male  Q12_1     Never
## 9    Female  Q12_1    Always
## 10     Male  Q12_1 Sometimes
## ..      ...    ...       ...
```




```
## Source: local data frame [120 x 4]
## Groups: PPGENDER, option [?]
##
##    PPGENDER option  response count
##      (fctr)  (chr)     (chr) (int)
## 1    Female  Q12_1    Always   367
## 2    Female  Q12_1     Never   118
## 3    Female  Q12_1   Refused     9
## 4    Female  Q12_1 Sometimes   603
## 5    Female Q12_10    Always   540
## 6    Female Q12_10     Never   275
## 7    Female Q12_10   Refused     9
## 8    Female Q12_10 Sometimes   273
## 9    Female Q12_11    Always   223
## 10   Female Q12_11     Never   419
## ..      ...    ...       ...   ...
```

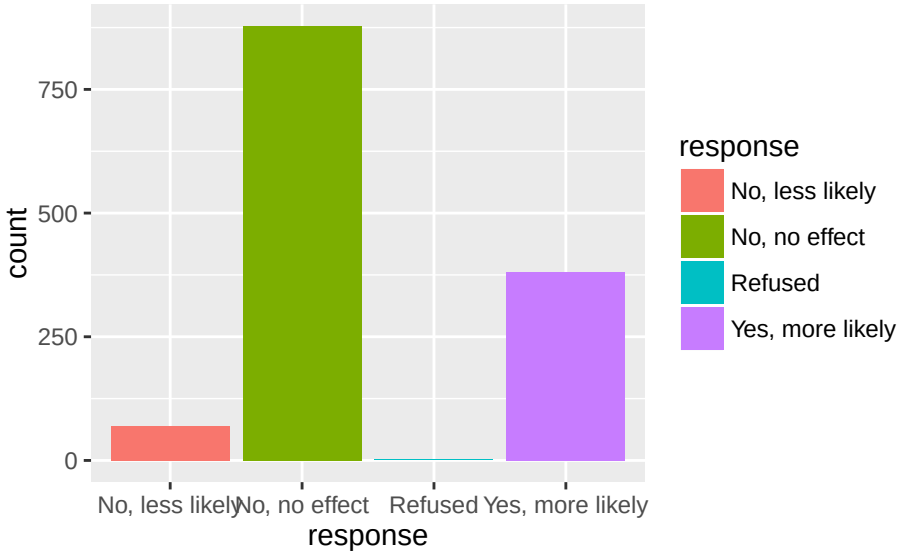
Q14. How much do you pay to get an influenza vaccine?

```
##              Q14
##  $0           :970
##  $30 to $60   : 54
##  Don_t know   : 80
##  Less than $30:222
##  More than $60:  4
##  Refused      :  1
##  NA's         :837
```



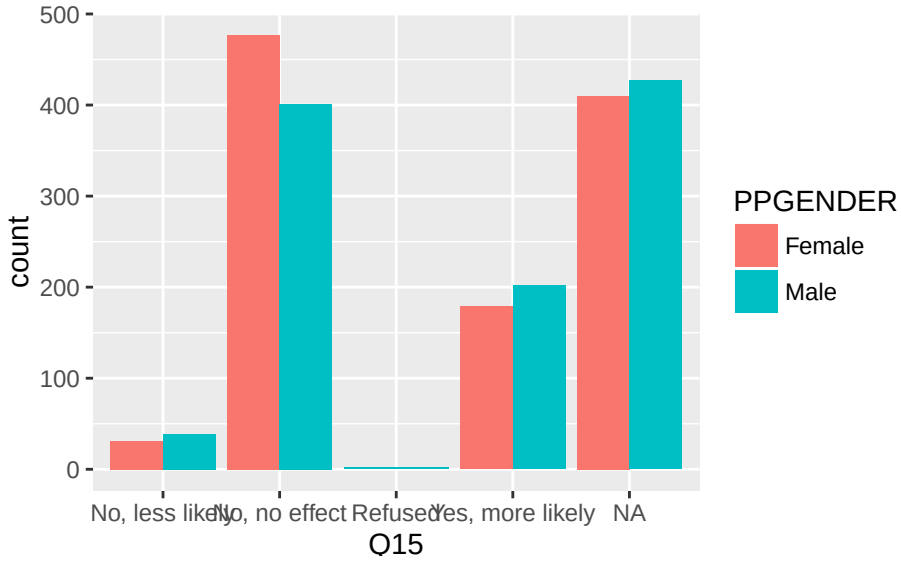
Q15. Are you more likely to get a vaccine if others around you get a vaccine?

```
##                Q15
##  No, less likely : 70
##  No, no effect   :878
##  Refused         :  2
##  Yes, more likely:381
##  NA's            :837
```



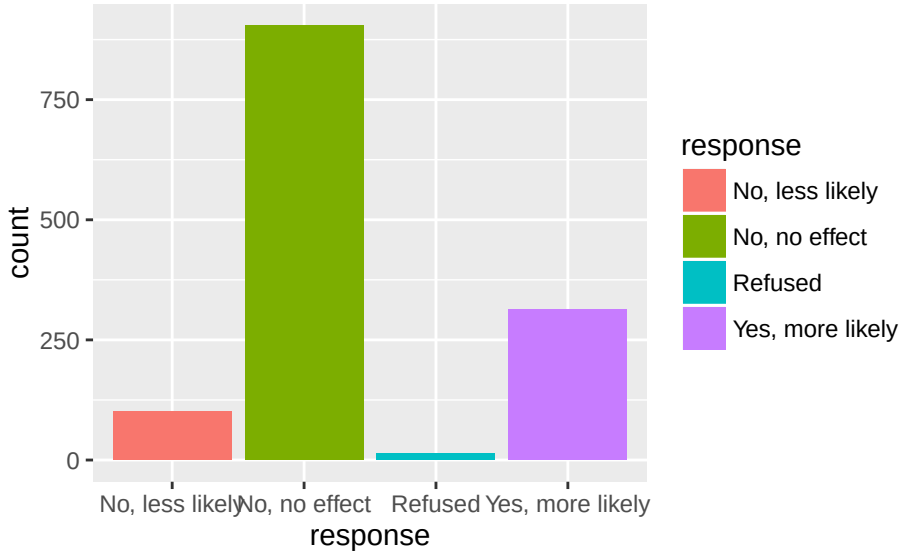

```
## Source: local data frame [9 x 3]
## Groups: Q15 [?]
##
##                Q15 PPGENDER count
##             (fctr)   (fctr) (int)
## 1  No, less likely   Female    31
## 2  No, less likely     Male    39
```

```
## 3    No, no effect   Female   477
## 4    No, no effect     Male   401
## 5          Refused     Male     2
## 6 Yes, more likely   Female   179
## 7 Yes, more likely     Male   202
## 8               NA   Female   410
## 9               NA     Male   427
```

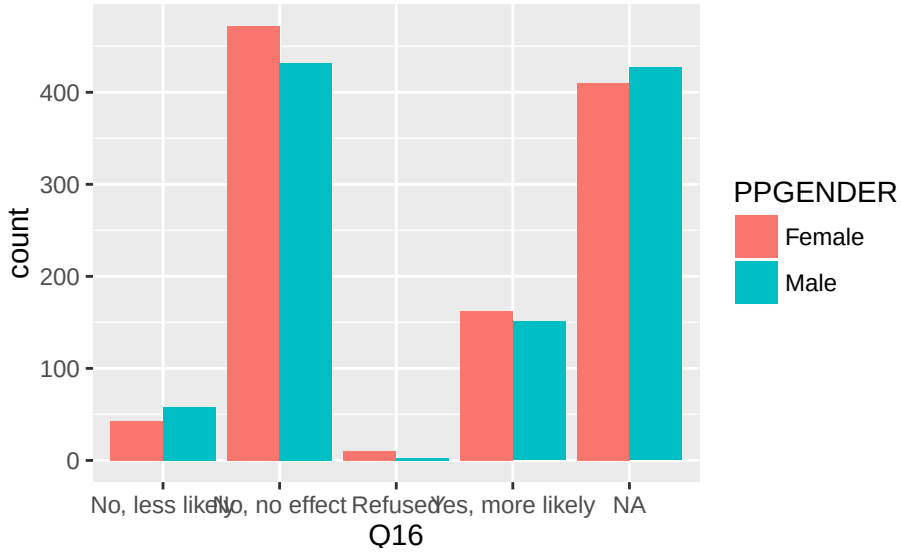


Q16. Are you more likely to get a vaccine if others around you do not get a vaccine?

```
##                Q16
##  No, less likely :101
##  No, no effect   :904
##  Refused         : 13
##  Yes, more likely:313
##  NA's            :837
```

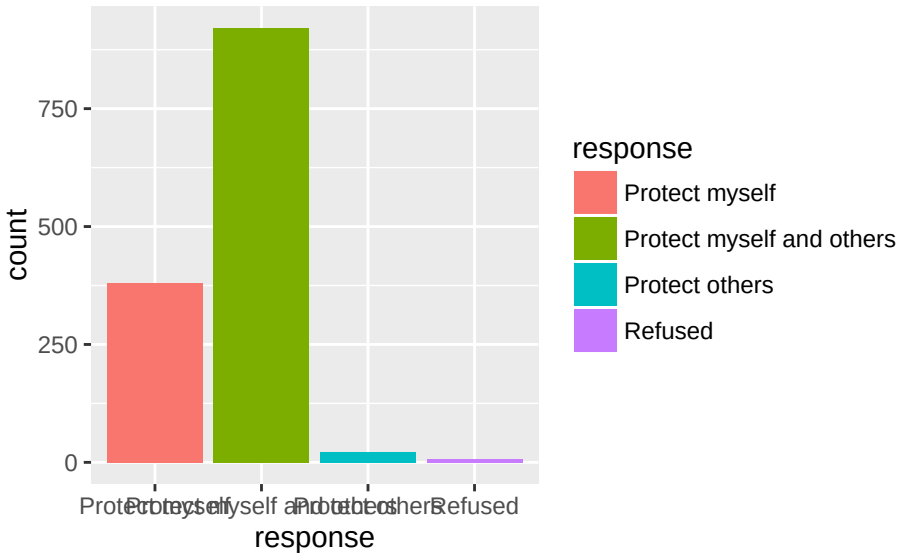


```
## Source: local data frame [10 x 3]
## Groups: Q16 [?]
##
##                 Q16 PPGENDER count
##              (fctr)   (fctr) (int)
## 1   No, less likely   Female    43
## 2   No, less likely     Male    58
## 3     No, no effect   Female   472
## 4     No, no effect     Male   432
## 5           Refused   Female    10
## 6           Refused     Male     3
## 7  Yes, more likely   Female   162
## 8  Yes, more likely     Male   151
## 9                NA   Female   410
## 10               NA     Male   427
```

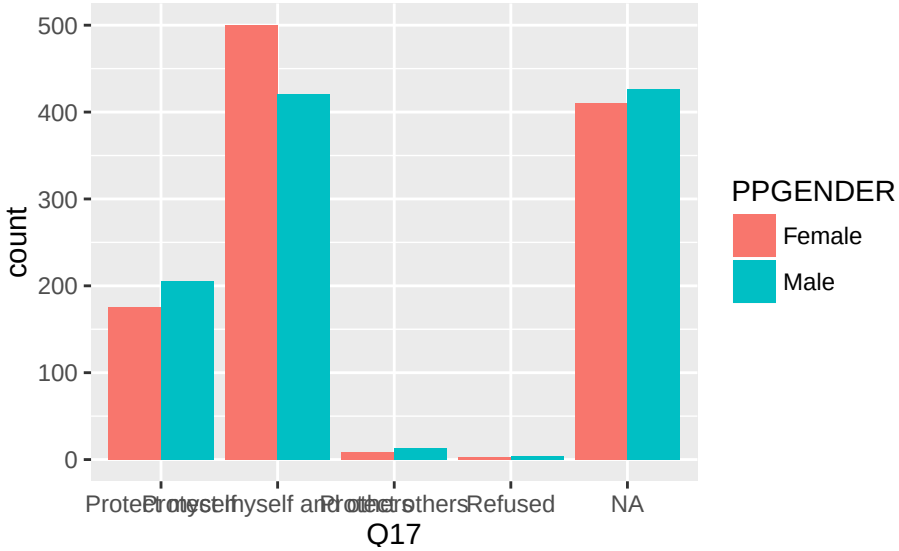


Q17. Do you get a vaccine to protect yourself, protect others, or protect yourself and others?

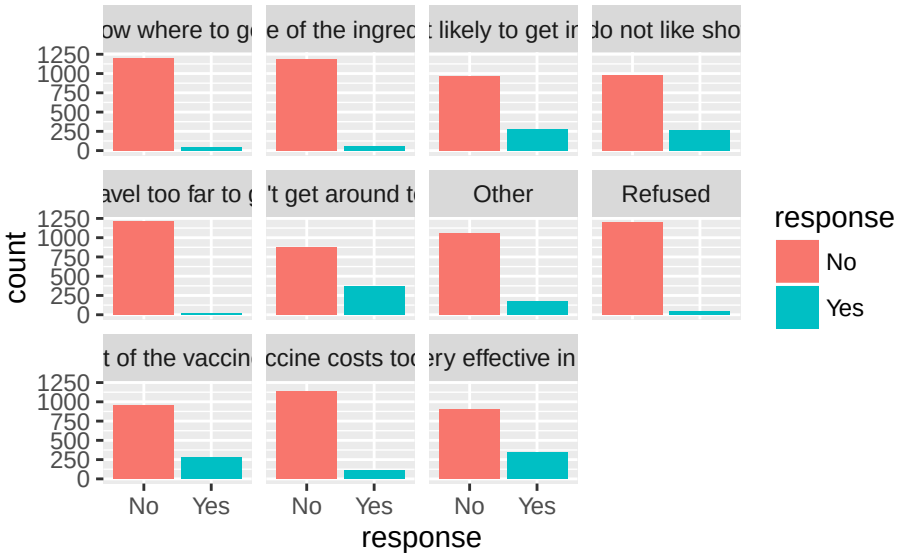
```
##                          Q17
##  Protect myself           :381
##  Protect myself and others:921
##  Protect others           : 22
##  Refused                  :  7
##  NA's                     :837
```




```
## Source: local data frame [10 x 3]
## Groups: Q17 [?]
##
##                          Q17 PPGENDER count
##                       (fctr)   (fctr) (int)
## 1             Protect myself   Female   175
## 2             Protect myself     Male   206
## 3  Protect myself and others   Female   500
## 4  Protect myself and others     Male   421
## 5             Protect others   Female     9
## 6             Protect others     Male    13
## 7                    Refused   Female     3
## 8                    Refused     Male     4
## 9                         NA   Female   410
## 10                        NA     Male   427
```

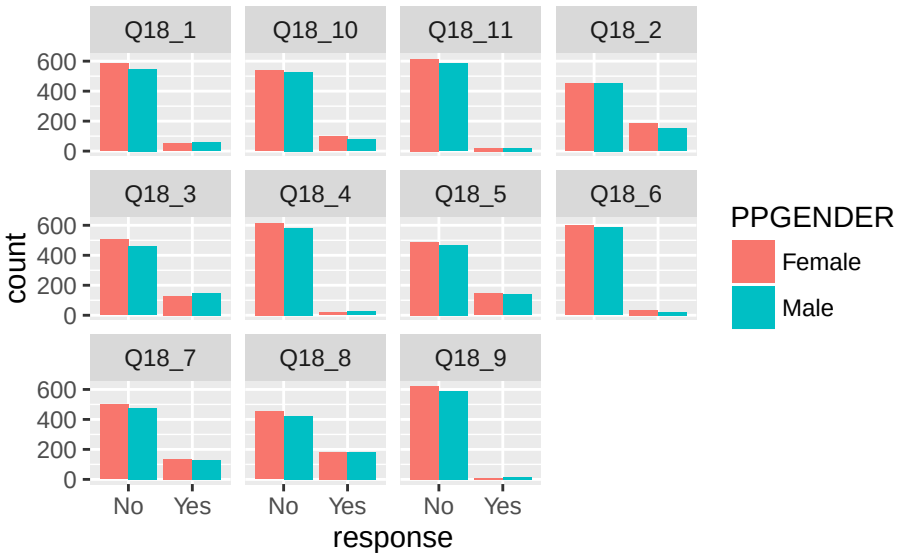


Q18. What are the reasons you would not get an influenza vaccine?




```
##  The vaccine costs too much
##  No  :1132
##  Yes : 110
##  NA's: 926
##
##
##
##
##  The vaccine is not very effective in preventing influenza
##  No  :903
##  Yes :339
##  NA's:926
##
##
##
##
##  I am not likely to get influenza Do not know where to get vaccine
##  No  :964                         No  :1199
##  Yes :278                         Yes :  43
##  NA's:926                         NA's: 926
##
##
##
##
##  The side effect of the vaccine are too risky
##  No  :958
##  Yes :284
##  NA's:926
##
##
##
##
##  I am allergic to some of the ingredients in the vaccine
```

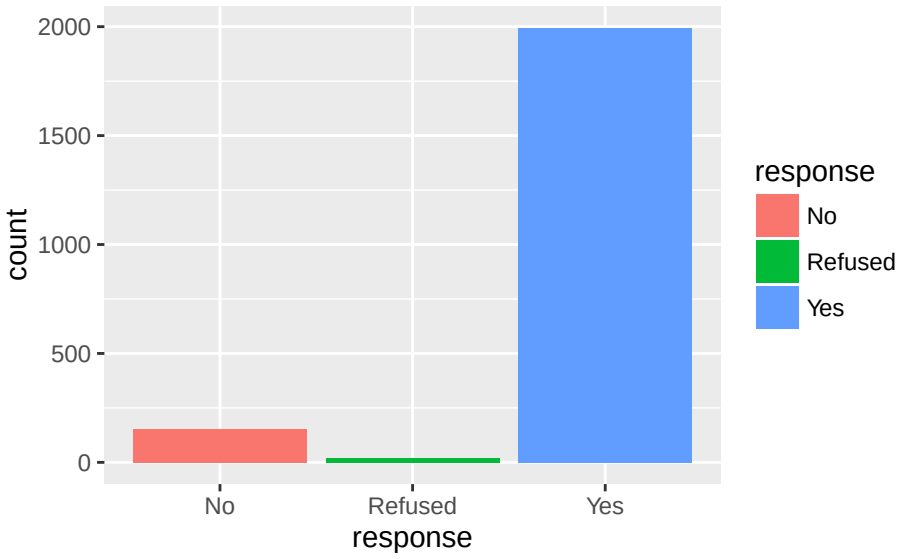
```
##  No  :1184
##  Yes :  58
##  NA's: 926
##
##
##
##
##  I do not like shots I just don't get around to doing it
##  No  :976            No  :878
##  Yes :266            Yes :364
##  NA's:926            NA's:926
##
##
##
##
##  I have to travel too far to get vaccine  Other      Refused
##  No  :1216                                No  :1064   No  :1200
##  Yes :  26                                Yes : 178   Yes :  42
##  NA's: 926                                NA's: 926   NA's: 926
##
##
##
##
##                                                                  Other text
##                                                                       :1991
##  no need                                                              :   3
##  70's swine flu vacc                                                  :   1
##  Always get sick when I get the shot                                  :   1
##  because                                                              :   1
##  because i get treatments to lower and over active immune system.:   1
##  (Other)                                                              : 170

## Source: local data frame [23,848 x 3]
## Groups: PPGENDER, option, response [66]
##
##    PPGENDER option response
##      (fctr)  (chr)    (chr)
## 1    Female  Q18_1       NA
## 2      Male  Q18_1       NA
## 3    Female  Q18_1       NA
## 4      Male  Q18_1       No
## 5      Male  Q18_1       NA
## 6      Male  Q18_1       No
## 7    Female  Q18_1       No
## 8      Male  Q18_1       NA
## 9    Female  Q18_1       No
## 10     Male  Q18_1       No
## ..      ...    ...      ...
```



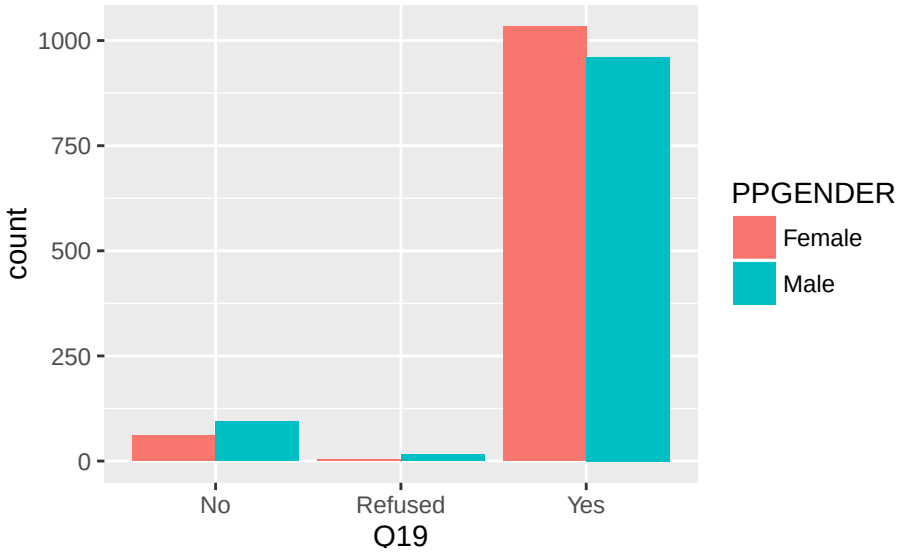

```
## Source: local data frame [66 x 4]
## Groups: PPGENDER, option [?]
##
##    PPGENDER option response count
##      (fctr)  (chr)    (chr) (int)
## 1    Female  Q18_1       No   584
## 2    Female  Q18_1      Yes    51
## 3    Female  Q18_1       NA   462
## 4    Female Q18_10       No   537
## 5    Female Q18_10      Yes    98
## 6    Female Q18_10       NA   462
## 7    Female Q18_11       No   614
## 8    Female Q18_11      Yes    21
## 9    Female Q18_11       NA   462
## 10   Female  Q18_2       No   449
## ..      ...    ...      ...   ...
```

Q19. Do you have health insurance?

```
##       Q19
##  No     : 154
##  Refused:  20
##  Yes    :1994
```



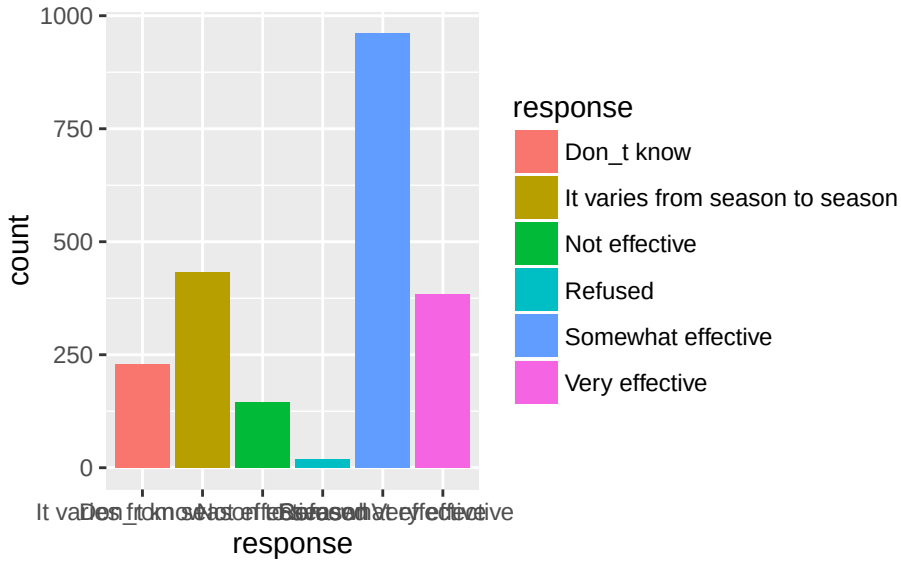

```
## Source: local data frame [6 x 3]
## Groups: Q19 [?]
##
##       Q19 PPGENDER count
##    (fctr)   (fctr) (int)
## 1      No   Female    60
## 2      No     Male    94
## 3 Refused   Female     4
## 4 Refused     Male    16
## 5     Yes   Female  1033
## 6     Yes     Male   961
```



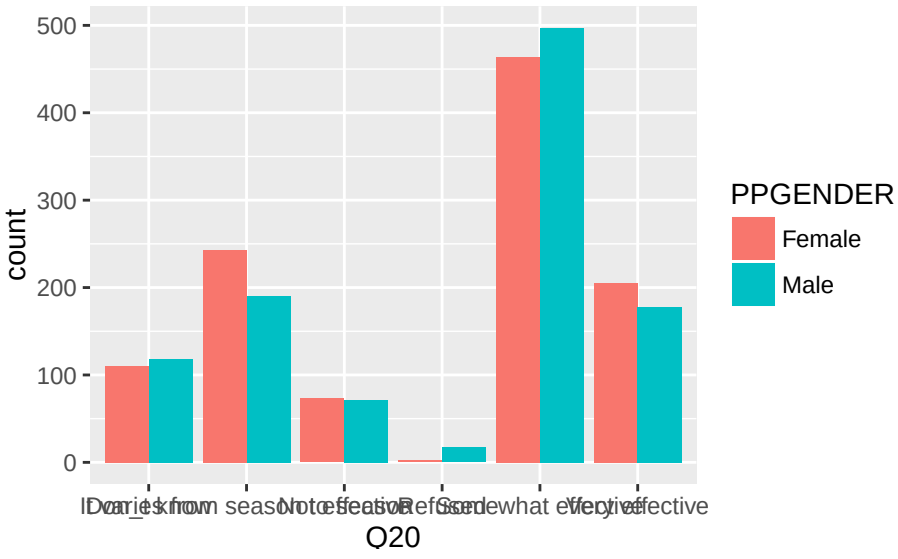
Q20. How effective do you think the influenza vaccine is in protecting people from becoming sick with influenza?

```
##                                Q20
```

```
##  Don_t know                       :228
##  It varies from season to season:433
##  Not effective                    :144
##  Refused                          : 19
##  Somewhat effective               :961
##  Very effective                   :383
```

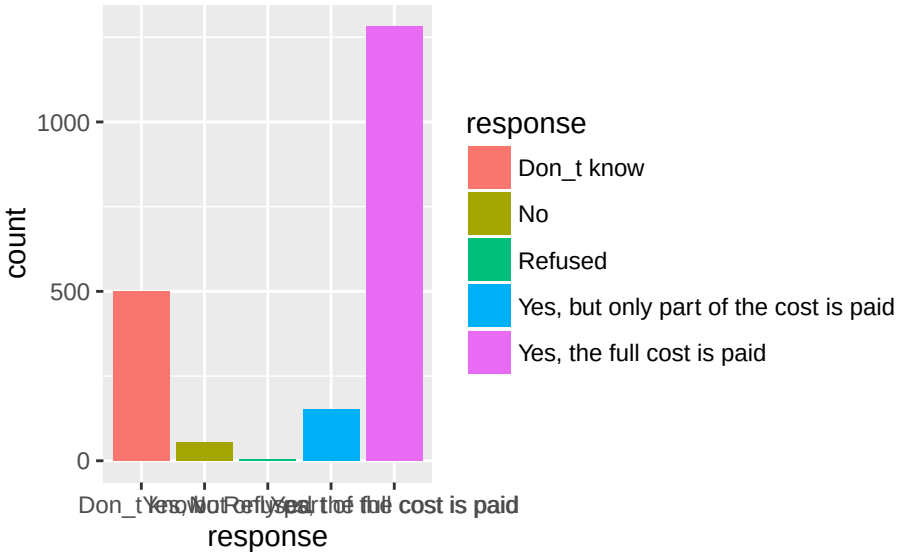



```
## Source: local data frame [12 x 3]
## Groups: Q20 [?]
##
##                                Q20 PPGENDER count
##                             (fctr)   (fctr) (int)
## 1                       Don_t know   Female   110
## 2                       Don_t know     Male   118
## 3  It varies from season to season   Female   243
## 4  It varies from season to season     Male   190
## 5                     Not effective   Female    73
## 6                     Not effective     Male    71
## 7                           Refused   Female     2
## 8                           Refused     Male    17
## 9               Somewhat effective   Female   464
## 10              Somewhat effective     Male   497
## 11                  Very effective   Female   205
## 12                  Very effective     Male   178
```



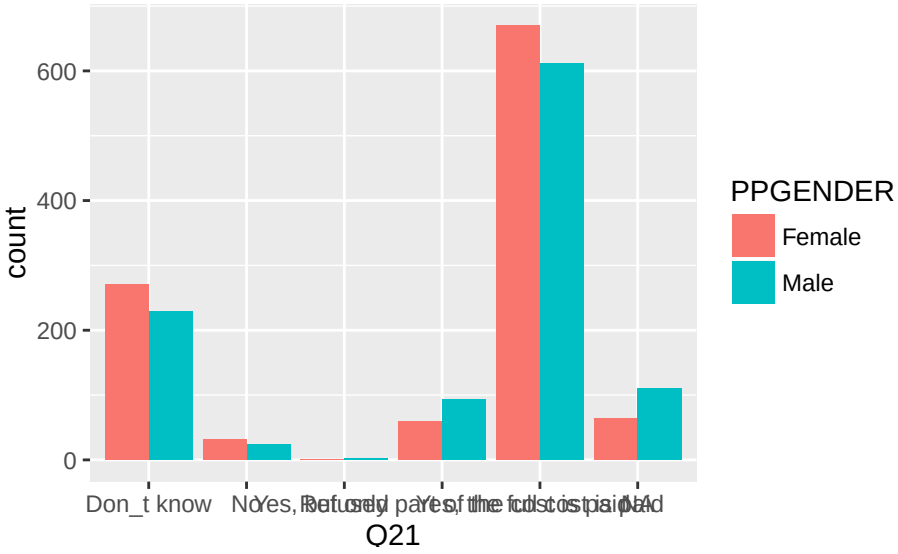
Q21. Are influenza vaccines covered by your health insurance?

```
##                                          Q21
##  Don_t know                                : 500
##  No                                        :  55
##  Refused                                   :   4
##  Yes, but only part of the cost is paid: 153
##  Yes, the full cost is paid               :1282
##  NA's                                      : 174
```

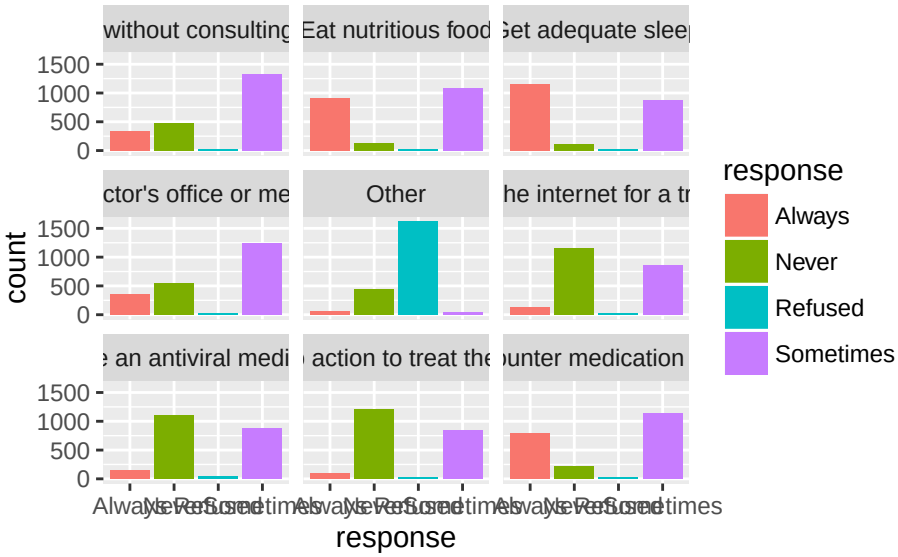



```
## Source: local data frame [12 x 3]
## Groups: Q21 [?]
##
##                                     Q21 PPGENDER count
##                                  (fctr)   (fctr) (int)
## 1                            Don_t know   Female   271
```

```
## 2                                Don_t know     Male   229
## 3                                        No   Female    31
## 4                                        No     Male    24
## 5                                   Refused   Female     1
## 6                                   Refused     Male     3
## 7  Yes, but only part of the cost is paid   Female    60
## 8  Yes, but only part of the cost is paid     Male    93
## 9              Yes, the full cost is paid   Female   670
## 10             Yes, the full cost is paid     Male   612
## 11                                       NA   Female    64
## 12                                       NA     Male   110
```



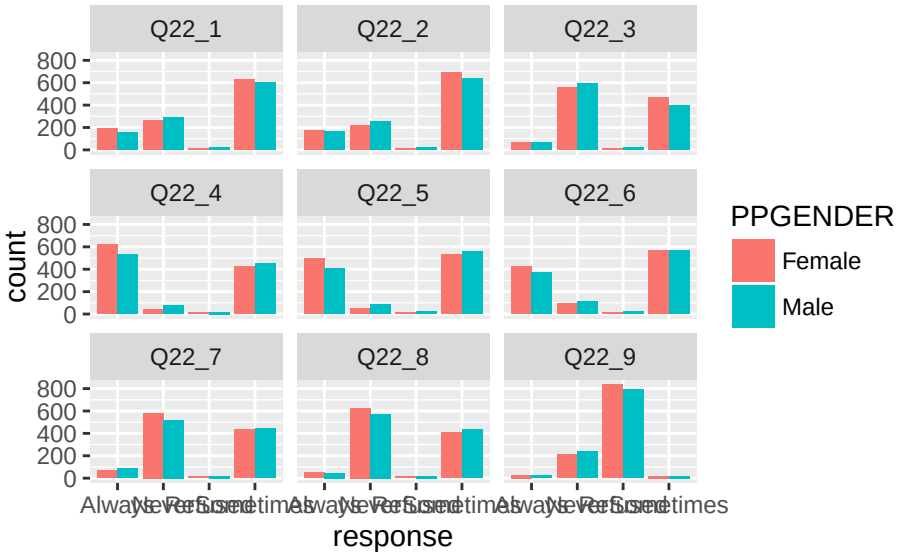
Q22. Do you do any of the following when you have influenza symptoms?




```
##  Go to a doctor's office or medical clinic
##  Always   : 349
```

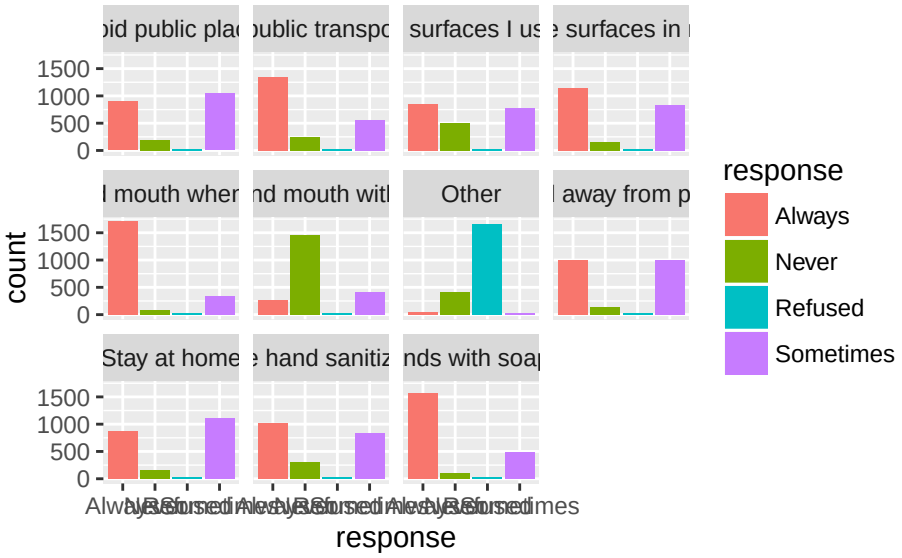
```
##  Never    : 552
##  Refused  :  32
##  Sometimes:1235
##
##
##
##  Decide on treatment without consulting a health practitioner
##  Always   : 335
##  Never    : 473
##  Refused  :  31
##  Sometimes:1329
##
##
##
##  Search the internet for a treatment Get adequate sleep
##  Always   : 126                      Always   :1147
##  Never    :1148                      Never    : 115
##  Refused  :  33                      Refused  :  31
##  Sometimes: 861                      Sometimes: 875
##
##
##
##  Eat nutritious food Take-over-counter medication for symptoms
##  Always   : 909      Always   : 796
##  Never    : 135      Never    : 210
##  Refused  :  33      Refused  :  32
##  Sometimes:1091      Sometimes:1130
##
##
##
##  Take an antiviral medicine Take no action to treat the illness
##  Always   : 153             Always   :  96
##  Never    :1103             Never    :1199
##  Refused  :  35             Refused  :  34
##  Sometimes: 877             Sometimes: 839
##
##
##
##        Other                         Other text
##  Always   :  54                           :2046
##  Never    : 448   none                    :   6
##  Refused  :1628   dont know               :   2
##  Sometimes:  38   drink lots of fluids    :   2
##                   eat chicken noodle soup:   2
##                   n/a                     :   2
##                   (Other)                 : 108

## Source: local data frame [19,512 x 3]
## Groups: PPGENDER, option, response [72]
##
##    PPGENDER option  response
##      (fctr)  (chr)     (chr)
## 1    Female  Q22_1 Sometimes
## 2      Male  Q22_1   Refused
```

```
## 3    Female  Q22_1    Always
## 4      Male  Q22_1 Sometimes
## 5      Male  Q22_1 Sometimes
## 6      Male  Q22_1     Never
## 7    Female  Q22_1 Sometimes
## 8      Male  Q22_1     Never
## 9    Female  Q22_1     Never
## 10     Male  Q22_1     Never
## ..      ...    ...       ...
```




```
## Source: local data frame [72 x 4]
## Groups: PPGENDER, option [?]
##
##    PPGENDER option  response count
##      (fctr)  (chr)     (chr) (int)
## 1    Female  Q22_1    Always   189
## 2    Female  Q22_1     Never   265
## 3    Female  Q22_1   Refused    13
## 4    Female  Q22_1 Sometimes   630
## 5    Female  Q22_2    Always   171
## 6    Female  Q22_2     Never   220
## 7    Female  Q22_2   Refused    12
## 8    Female  Q22_2 Sometimes   694
## 9    Female  Q22_3    Always    63
## 10   Female  Q22_3     Never   554
## ..      ...    ...       ...   ...
```

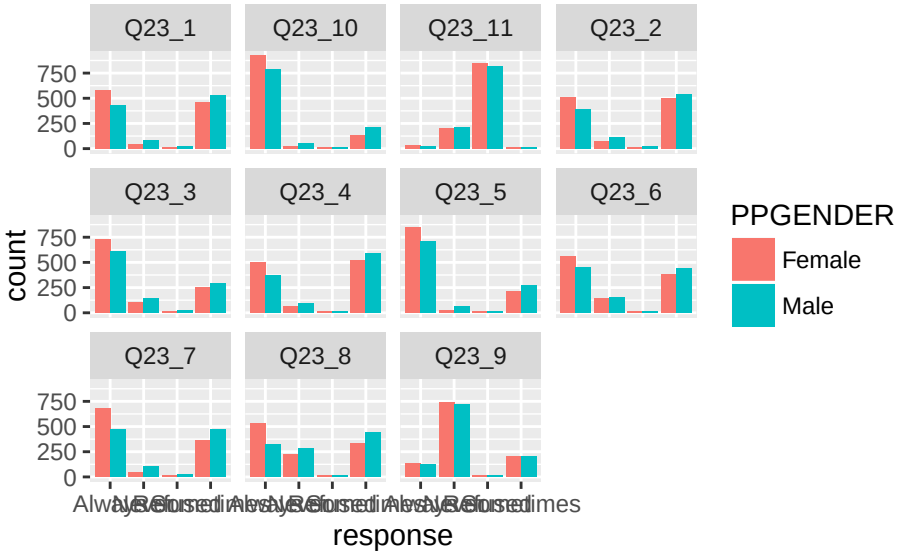
Q23. Which of the following actions do you take when you have influenza symptoms to avoid someone else from getting sick?




```
##  Stand away from people Avoid public places Avoid public transportation
##  Always   :1006         Always   : 897      Always   :1342
##  Never    : 135         Never    : 196      Never    : 245
##  Refused  :  31         Refused  :  31      Refused  :  31
##  Sometimes: 996         Sometimes:1044      Sometimes: 550
##
##
##
##    Stay at home  Wash my hands with soap more often Use hand sanitizers
##  Always   : 869   Always   :1559                    Always   :1014
##  Never    : 163   Never    :  92                    Never    : 299
##  Refused  :  30   Refused  :  29                    Refused  :  30
##  Sometimes:1106   Sometimes: 488                    Sometimes: 825
##
##
##
##  Clean the surfaces in my home Clean the surfaces I use at work
##  Always   :1151                Always   :856
##  Never    : 153                Never    :508
##  Refused  :  32                Refused  : 32
##  Sometimes: 832                Sometimes:772
##
##
##
##  Cover my nose and mouth with a surgical mask
##  Always   : 267
##  Never    :1463
##  Refused  :  29
##  Sometimes: 409
##
##
##
```

```
##  Cover my nose and mouth when I sneeze or cough       Other
##  Always   :1717                                    Always   :  54
##  Never    :  81                                    Never    : 421
##  Refused  :  29                                    Refused  :1665
##  Sometimes: 341                                    Sometimes:  28
##
##
##
##        Other text
##             :2078
##  none       :   6
##  stay in bed:   3
##  dont know  :   2
##  na         :   2
##  never had  :   2
##  (Other)    :  75
```

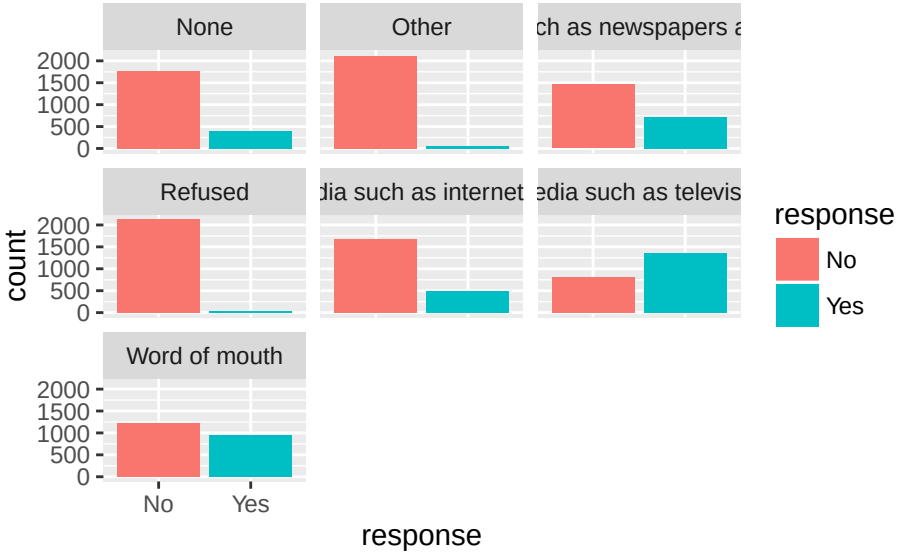
```
## Source: local data frame [23,848 x 3]
## Groups: PPGENDER, option, response [88]
##
##    PPGENDER option  response
##      (fctr)  (chr)     (chr)
## 1    Female  Q23_1 Sometimes
## 2      Male  Q23_1   Refused
## 3    Female  Q23_1    Always
## 4      Male  Q23_1 Sometimes
## 5      Male  Q23_1    Always
## 6      Male  Q23_1 Sometimes
## 7    Female  Q23_1 Sometimes
## 8      Male  Q23_1 Sometimes
## 9    Female  Q23_1    Always
## 10     Male  Q23_1    Always
## ..      ...    ...       ...
```




```
## Source: local data frame [88 x 4]
```

```
## Groups: PPGENDER, option [?]
##
##    PPGENDER option  response count
##      (fctr)  (chr)     (chr) (int)
## 1    Female  Q23_1    Always   579
## 2    Female  Q23_1     Never    46
## 3    Female  Q23_1   Refused    11
## 4    Female  Q23_1 Sometimes   461
## 5    Female Q23_10    Always   930
## 6    Female Q23_10     Never    25
## 7    Female Q23_10   Refused    10
## 8    Female Q23_10 Sometimes   132
## 9    Female Q23_11    Always    32
## 10   Female Q23_11     Never   203
## ..      ...    ...       ...   ...
```

Q24. What sources of information do you recall hearing or seeing about influenza outbreaks?



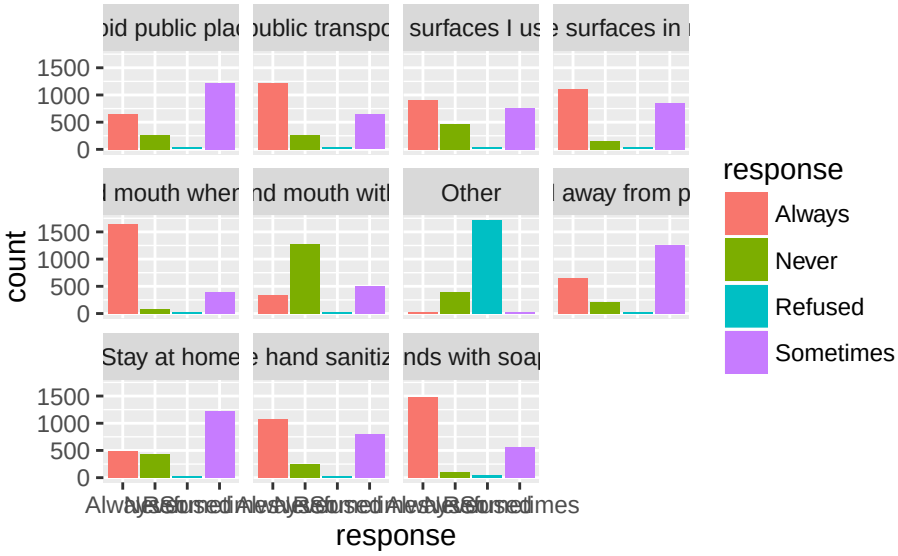

```
##  Print media such as newspapers and magazines
##  No :1460
##  Yes: 708
##
##
##
##
##
##  Traditional media such as television and radio
##  No : 811
##  Yes:1357
##
##
##
##
##
```

```
##  Social media such as internet and blogs Word of mouth  None
##  No :1680                                No :1213      No :1764
##  Yes: 488                                Yes: 955      Yes: 404
##
##
##
##
##
##  Other      Refused          Other text
##  No :2114   No :2138              :2114
##  Yes:  54   Yes:  30   CDC        :   2
##                        doctor     :   2
##                        Internet   :   2
##                        Online news:   2
##                        work       :   2
##                        (Other)    :  44
```

Q25. If you received information from the news, internet or other public media that there was an influenza outbreak in your community would you do any of the following?

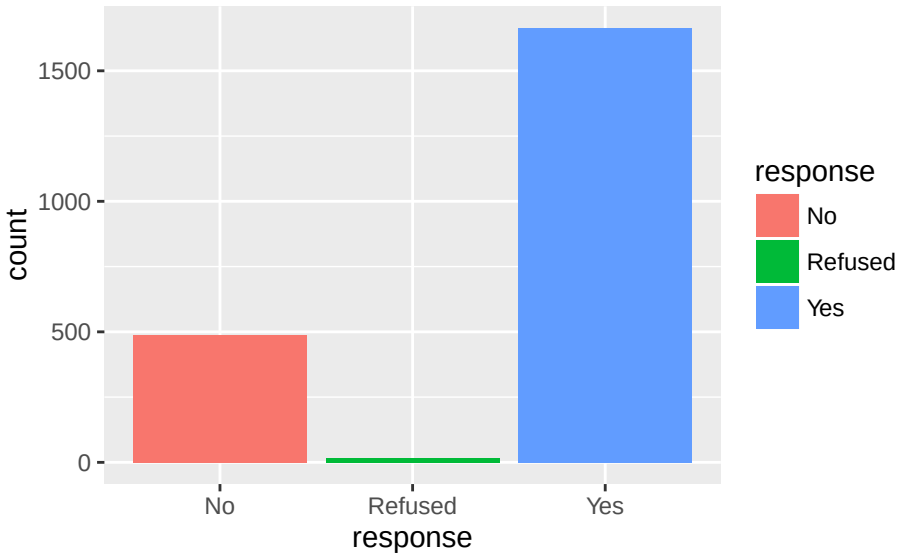
```
##  Stand away from people Avoid public places Avoid public transportation
##  Always   : 649         Always   : 648      Always   :1221
##  Never    : 217         Never    : 270      Never    : 268
##  Refused  :  34         Refused  :  33      Refused  :  36
##  Sometimes:1268         Sometimes:1217      Sometimes: 643
##
##
##
##     Stay at home  Wash my hands with soap more often Use hand sanitizers
##  Always   : 484   Always   :1477                     Always   :1077
##  Never    : 429   Never    :  99                     Never    : 257
##  Refused  :  33   Refused  :  38                     Refused  :  35
##  Sometimes:1222   Sometimes: 554                     Sometimes: 799
##
##
##
##  Clean the surfaces in my home Clean the surfaces I use at work
##  Always   :1116                Always   :902
##  Never    : 160                Never    :464
##  Refused  :  35                Refused  : 36
##  Sometimes: 857                Sometimes:766
##
##
##
##  Cover my nose and mouth with a surgical mask
##  Always   : 343
##  Never    :1286
##  Refused  :  34
##  Sometimes: 505
##
##
##
##  Cover my nose and mouth when I sneeze or cough       Other
```

```
##  Always   :1643                                  Always   :  32
##  Never    :  90                                  Never    : 393
##  Refused  :  36                                  Refused  :1722
##  Sometimes: 399                                 Sometimes:  21
##
##
##
##      Other text
##            :2100
##  none      :   9
##  nothing   :   3
##  n/a       :   2
##  stay home:    2
##  -         :   1
##  (Other)   :  51
```



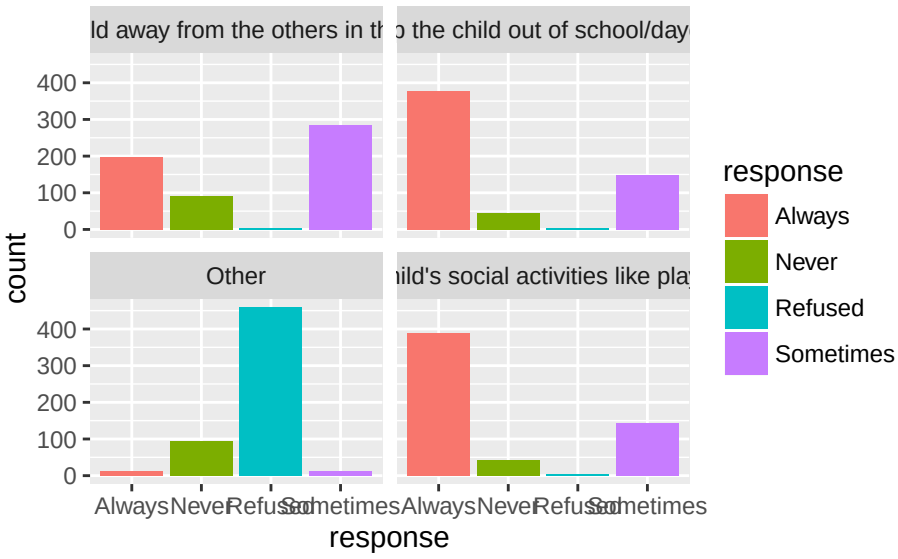
Q26. Does your household have children?

```
##       Q26
##  No     :1570
##  Refused:  22
##  Yes    : 576
```

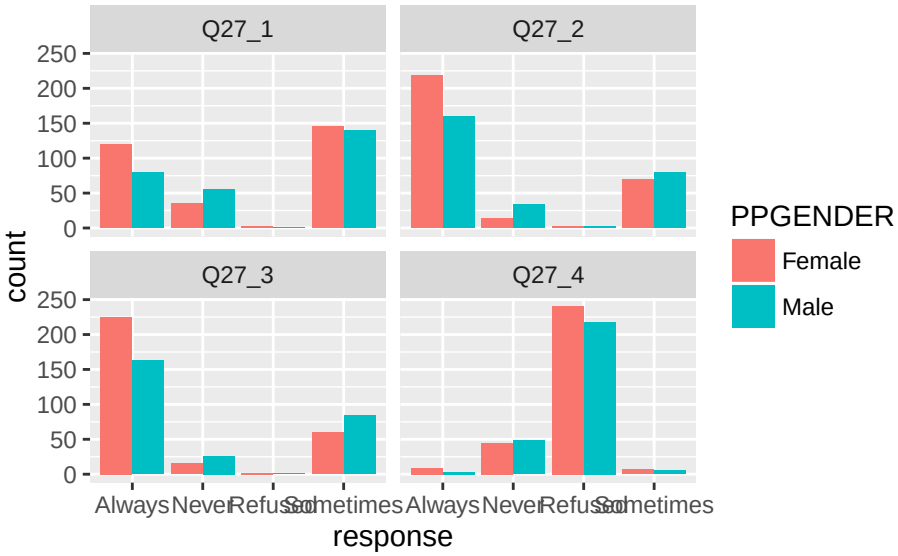


Q27. What actions do you take when a child in your household has influenza symptoms?

```
##  Keep the child away from the others in the residence
##  Always   : 198
##  Never    :  90
##  Refused  :   3
##  Sometimes: 285
##  NA's     :1592
##
##
##  Keep the child out of school/daycare
##  Always   : 377
##  Never    :  46
##  Refused  :   4
##  Sometimes: 149
##  NA's     :1592
##
##
##  Stop child's social activities like play dates       Other
##  Always   : 388                                  Always   :  12
##  Never    :  41                                  Never    :  93
##  Refused  :   3                                  Refused  : 459
##  Sometimes: 144                                  Sometimes:  12
##  NA's     :1592                                  NA's     :1592
##
##
##                                                                 Other text
##                                                                      :2147
##  Consult with the child's doctors.                                   :   1
##  crawling on floor                                                   :   1
##  Depending on symptoms id have him wear a mask to help us not get it:   1
##  doctor visit                                                        :   1
##  give supplements & herbs                                            :   1
##  (Other)                                                             :  16
```




```
## Source: local data frame [8,672 x 3]
## Groups: PPGENDER, option, response [40]
##
##    PPGENDER option  response
##      (fctr)  (chr)     (chr)
## 1    Female  Q27_1 Sometimes
## 2      Male  Q27_1        NA
## 3    Female  Q27_1    Always
## 4      Male  Q27_1     Never
## 5      Male  Q27_1        NA
## 6      Male  Q27_1     Never
## 7    Female  Q27_1        NA
## 8      Male  Q27_1        NA
## 9    Female  Q27_1        NA
## 10     Male  Q27_1        NA
## ..      ...    ...       ...
```

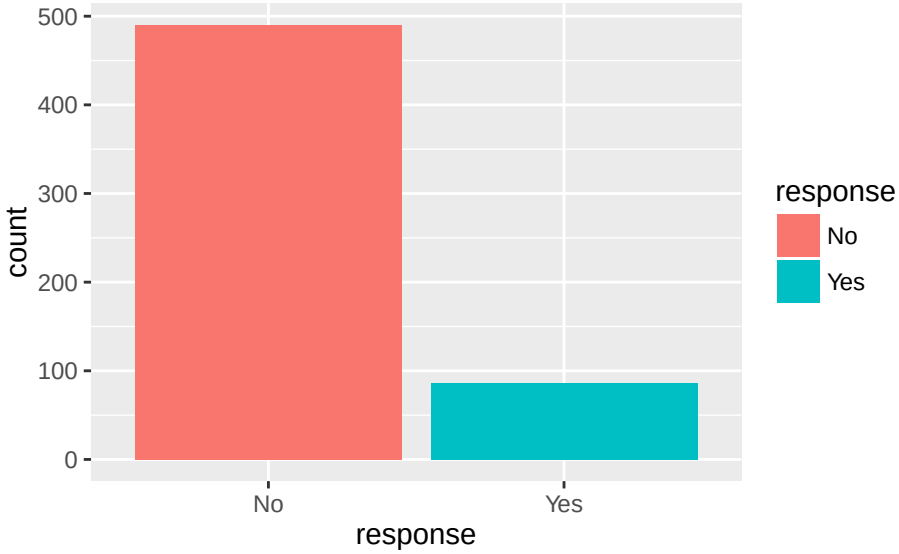



```
## Source: local data frame [40 x 4]
```

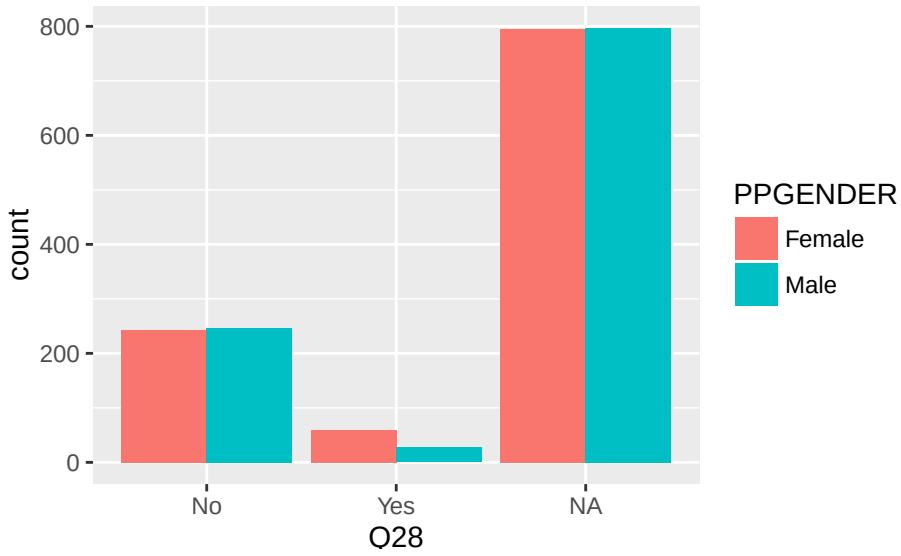
```
## Groups: PPGENDER, option [?]
##
##    PPGENDER option  response count
##      (fctr)  (chr)     (chr) (int)
## 1    Female  Q27_1    Always   119
## 2    Female  Q27_1     Never    35
## 3    Female  Q27_1   Refused     2
## 4    Female  Q27_1 Sometimes   146
## 5    Female  Q27_1        NA   795
## 6    Female  Q27_2    Always   218
## 7    Female  Q27_2     Never    13
## 8    Female  Q27_2   Refused     2
## 9    Female  Q27_2 Sometimes    69
## 10   Female  Q27_2        NA   795
## ..      ...    ...       ...   ...
```

Q28. Are you a single parent?

```
##    Q28
##  No  : 490
##  Yes :  86
##  NA's:1592
```

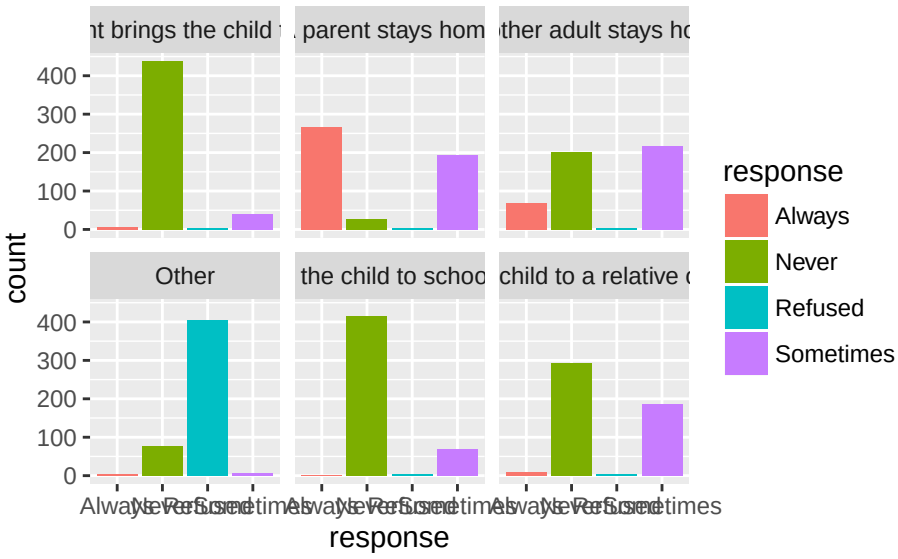



```
## Source: local data frame [6 x 3]
## Groups: Q28 [?]
##
##      Q28 PPGENDER count
##   (fctr)   (fctr) (int)
## 1     No   Female   243
## 2     No     Male   247
## 3    Yes   Female    59
## 4    Yes     Male    27
## 5     NA   Female   795
## 6     NA     Male   797
```

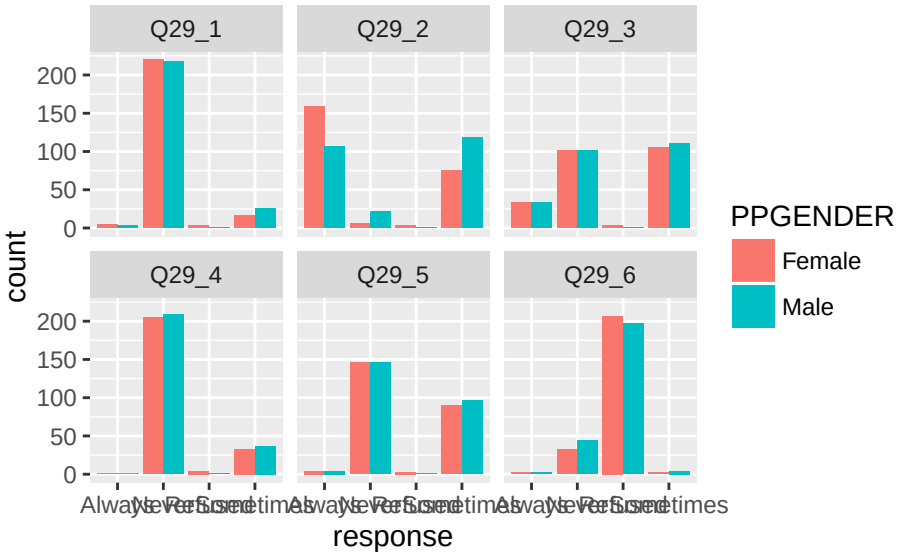


Q29. How do you care for a sick child?

```
##  A parent brings the child to work A parent stays home
##  Always   :   7                   Always   : 266
##  Never    : 438                   Never    :  27
##  Refused  :   4                   Refused  :   4
##  Sometimes:  41                   Sometimes: 193
##  NA's     :1678                   NA's     :1678
##
##
##  Another adult stays home Send the child to school sick
##  Always   :  68           Always   :   1
##  Never    : 202           Never    : 414
##  Refused  :   4           Refused  :   5
##  Sometimes: 216           Sometimes:  70
##  NA's     :1678           NA's     :1678
##
##
##  Take the child to a relative or friends       Other
##  Always   :   8                          Always   :   4
##  Never    : 292                          Never    :  76
##  Refused  :   4                          Refused  : 404
##  Sometimes: 186                          Sometimes:   6
##  NA's     :1678                          NA's     :1678
##
##
##                                                                                Other text
##                                                                                    :2157
##  Because of proper diets and physical training my family stays healthy the year round:   1
##  Child stays home alone                                                          :   1
##  child stays home alone, old enough to take care of himself                      :   1
##  drive to school                                                                 :   1
##  Have the student sleep more and work less (on school stuff).                    :   1
##  (Other)                                                                         :   6
```




```
## Source: local data frame [13,008 x 3]
## Groups: PPGENDER, option, response [59]
##
##    PPGENDER option response
##      (fctr)  (chr)    (chr)
## 1    Female  Q29_1    Never
## 2      Male  Q29_1       NA
## 3    Female  Q29_1    Never
## 4      Male  Q29_1    Never
## 5      Male  Q29_1       NA
## 6      Male  Q29_1    Never
## 7    Female  Q29_1       NA
## 8      Male  Q29_1       NA
## 9    Female  Q29_1       NA
## 10     Male  Q29_1       NA
## ..      ...    ...      ...
```

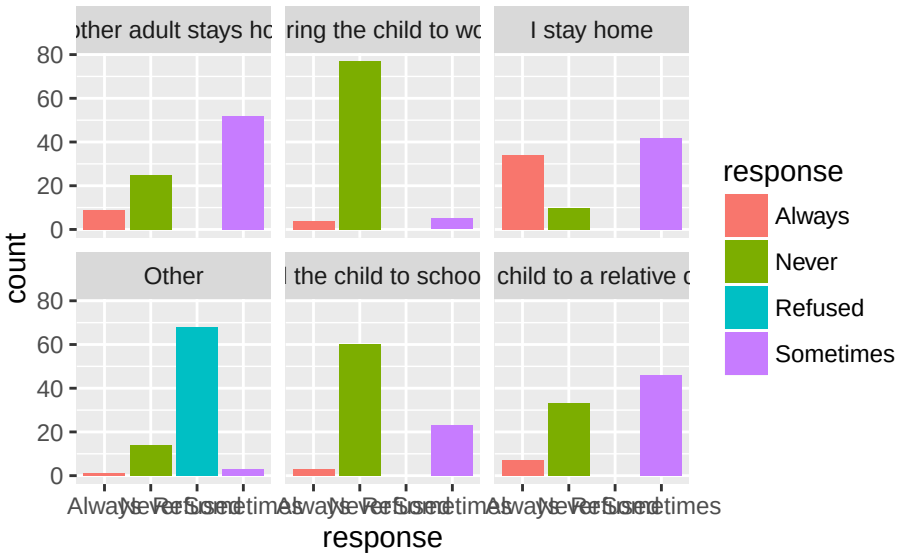



```
## Source: local data frame [59 x 4]
```

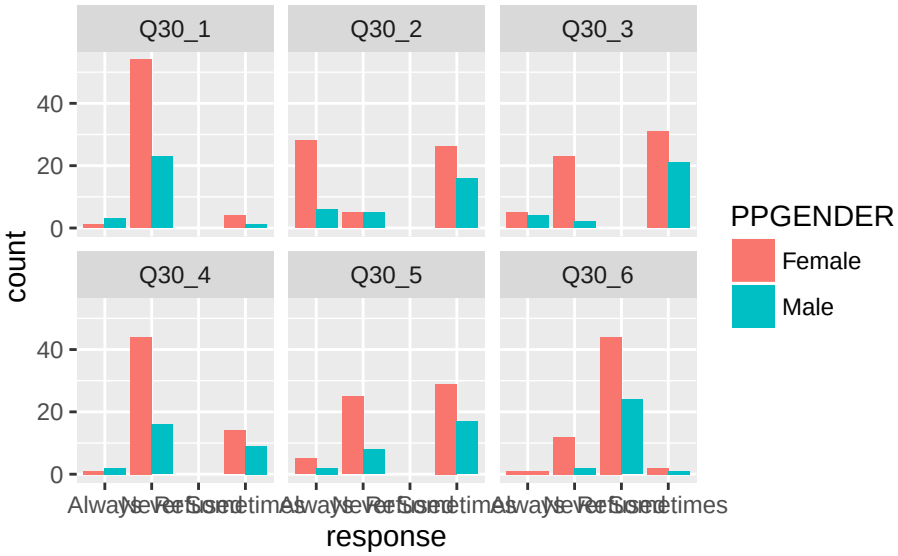
```
## Groups: PPGENDER, option [?]
##
##    PPGENDER option  response count
##      (fctr)  (chr)     (chr) (int)
## 1    Female  Q29_1    Always     4
## 2    Female  Q29_1     Never   220
## 3    Female  Q29_1   Refused     3
## 4    Female  Q29_1 Sometimes    16
## 5    Female  Q29_1        NA   854
## 6    Female  Q29_2    Always   159
## 7    Female  Q29_2     Never     6
## 8    Female  Q29_2   Refused     3
## 9    Female  Q29_2 Sometimes    75
## 10   Female  Q29_2        NA   854
## ..      ...    ...       ...   ...
```

Q30. How do you care for a sick child?

```
##  I bring the child to work    I stay home   Another adult stays home
##  Always   :   4            Always   :  34   Always   :   9
##  Never    :  77            Never    :  10   Never    :  25
##  Sometimes:   5            Sometimes:  42   Sometimes:  52
##  NA's     :2082            NA's     :2082   NA's     :2082
##
##  Send the child to school sick Take the child to a relative or friends
##  Always   :   3                Always   :   7
##  Never    :  60                Never    :  33
##  Sometimes:  23                Sometimes:  46
##  NA's     :2082                NA's     :2082
##
##        Other                              Other text
##  Always   :   1                                :2165
##  Never    :  14   adult child                  :   1
##  Refused  :  68   Hes old enough to stay alone:   1
##  Sometimes:   3   my children are grown        :   1
##  NA's     :2082
```




```
## Source: local data frame [13,008 x 3]
## Groups: PPGENDER, option, response [49]
##
##    PPGENDER option response
##      (fctr)  (chr)    (chr)
## 1    Female  Q30_1       NA
## 2      Male  Q30_1       NA
## 3    Female  Q30_1       NA
## 4      Male  Q30_1       NA
## 5      Male  Q30_1       NA
## 6      Male  Q30_1       NA
## 7    Female  Q30_1       NA
## 8      Male  Q30_1       NA
## 9    Female  Q30_1       NA
## 10     Male  Q30_1       NA
## ..      ...    ...      ...
```

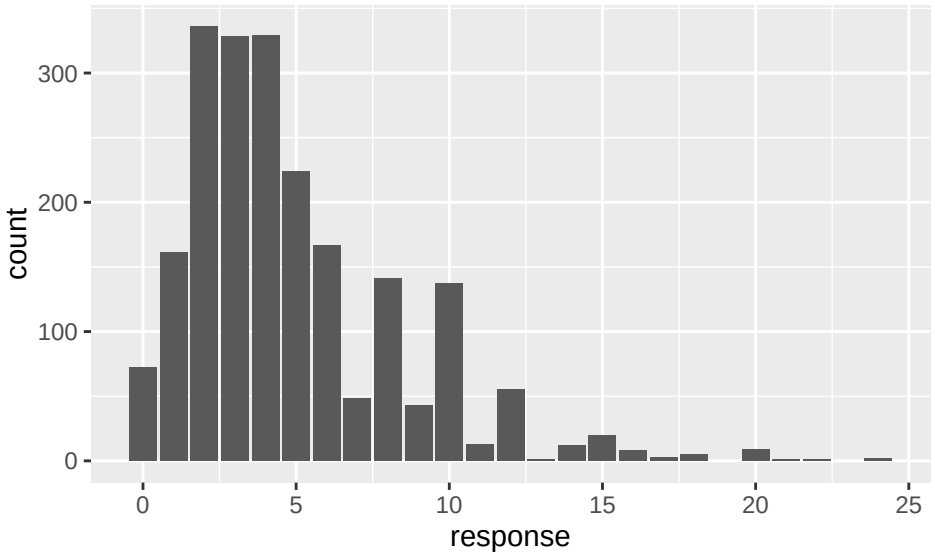



```
## Source: local data frame [49 x 4]
```

```
## Groups: PPGENDER, option [?]
##
##    PPGENDER option  response count
##      (fctr)  (chr)     (chr) (int)
## 1    Female  Q30_1    Always     1
## 2    Female  Q30_1     Never    54
## 3    Female  Q30_1 Sometimes     4
## 4    Female  Q30_1        NA  1038
## 5    Female  Q30_2    Always    28
## 6    Female  Q30_2     Never     5
## 7    Female  Q30_2 Sometimes    26
## 8    Female  Q30_2        NA  1038
## 9    Female  Q30_3    Always     5
## 10   Female  Q30_3     Never    23
## ..      ...    ...       ...   ...
```

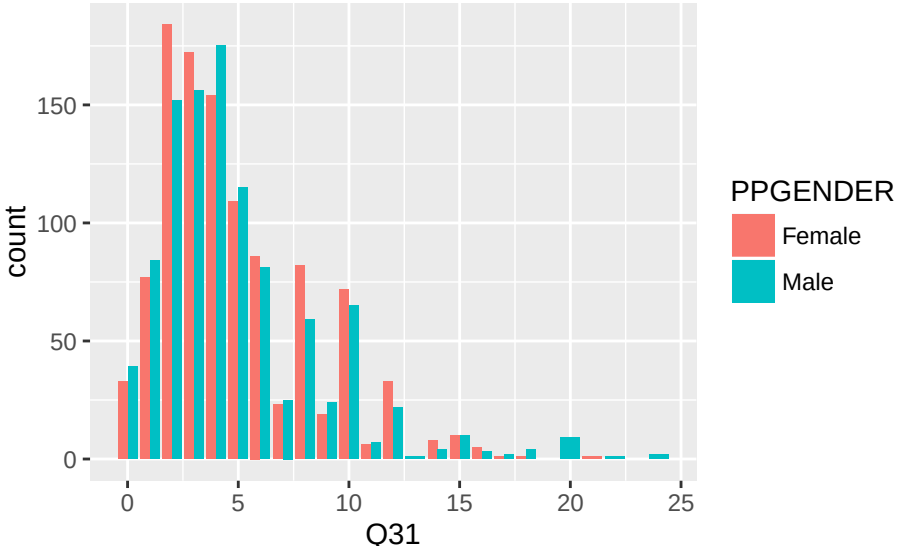
Q31. How many hours of screen time (time spent watching television, a computer, smartphone, iPad, etc.) do you spend each day on average when you are not sick? Enter 0 if none

```
##       Q31           Q31_Codes
##  Min.   : 0.000   Refused:  52
##  1st Qu.: 2.000   NA's   :2116
##  Median : 4.000
##  Mean   : 4.868
##  3rd Qu.: 6.000
##  Max.   :24.000
##  NA's   :52
```



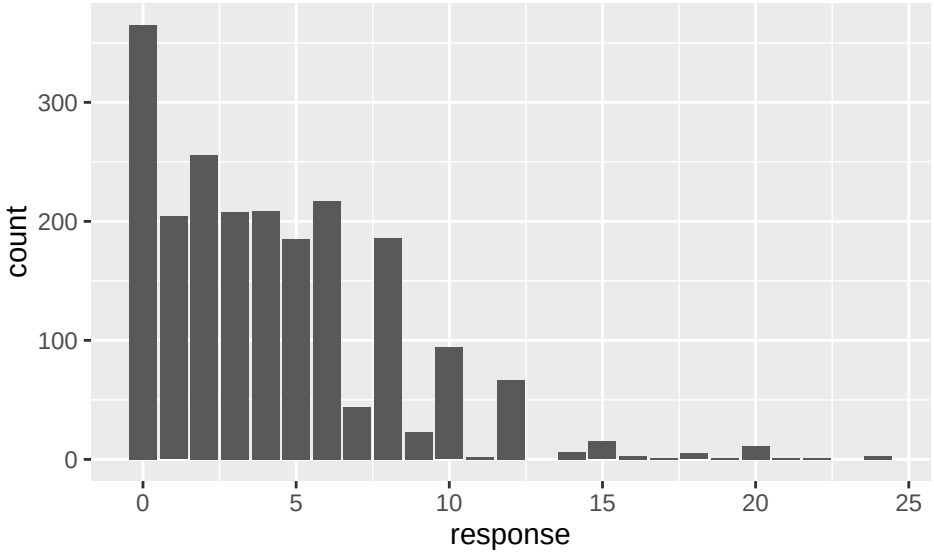

```
## Source: local data frame [43 x 3]
## Groups: Q31 [?]
##
##      Q31 PPGENDER count
##    (int)   (fctr) (int)
## 1      0   Female    33
```

```
## 2      0     Male    39
## 3      1   Female    77
## 4      1     Male    84
## 5      2   Female   184
## 6      2     Male   152
## 7      3   Female   172
## 8      3     Male   156
## 9      4   Female   154
## 10     4     Male   175
## ..   ...      ...   ...
```

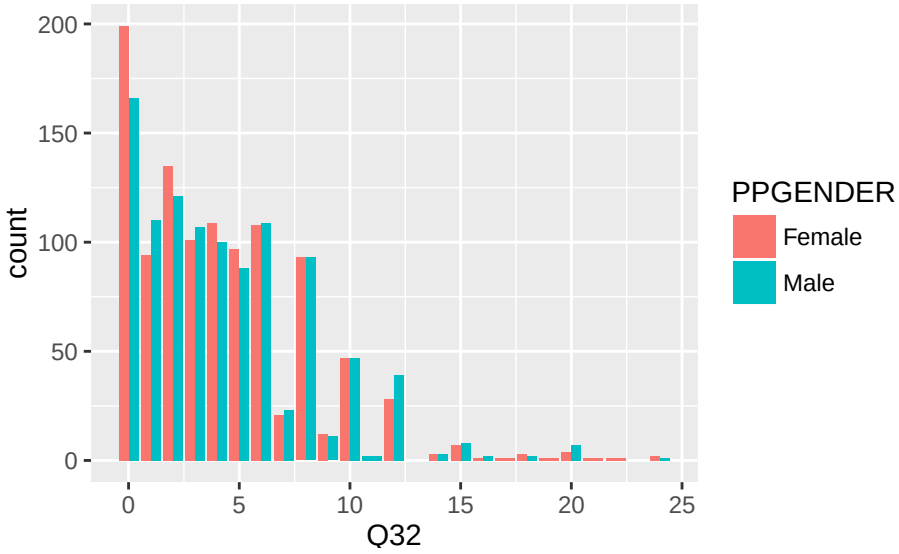


Q32. How many hours of screen time do you spend each day on average when you are sick? Enter 0 if none

```
##       Q32           Q32_Codes
##  Min.   : 0.000   Refused:  61
##  1st Qu.: 1.000   NA's   :2107
##  Median : 4.000
##  Mean   : 4.267
##  3rd Qu.: 6.000
##  Max.   :24.000
##  NA's   :61
```

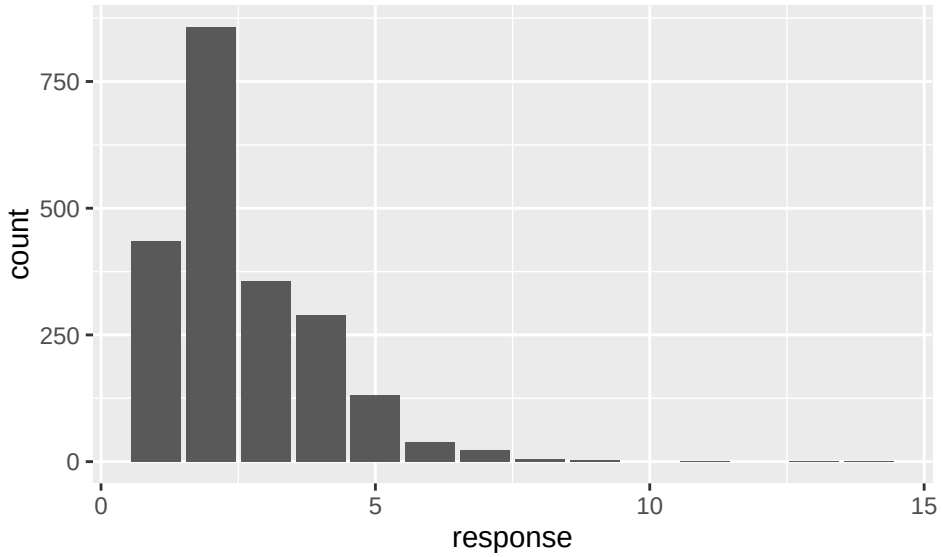



```
## Source: local data frame [43 x 3]
## Groups: Q32 [?]
##
##      Q32 PPGENDER count
##    (int)   (fctr) (int)
## 1      0   Female   199
## 2      0     Male   166
## 3      1   Female    94
## 4      1     Male   110
## 5      2   Female   135
## 6      2     Male   121
## 7      3   Female   101
## 8      3     Male   107
## 9      4   Female   109
## 10     4     Male   100
## ..   ...      ...   ...
```

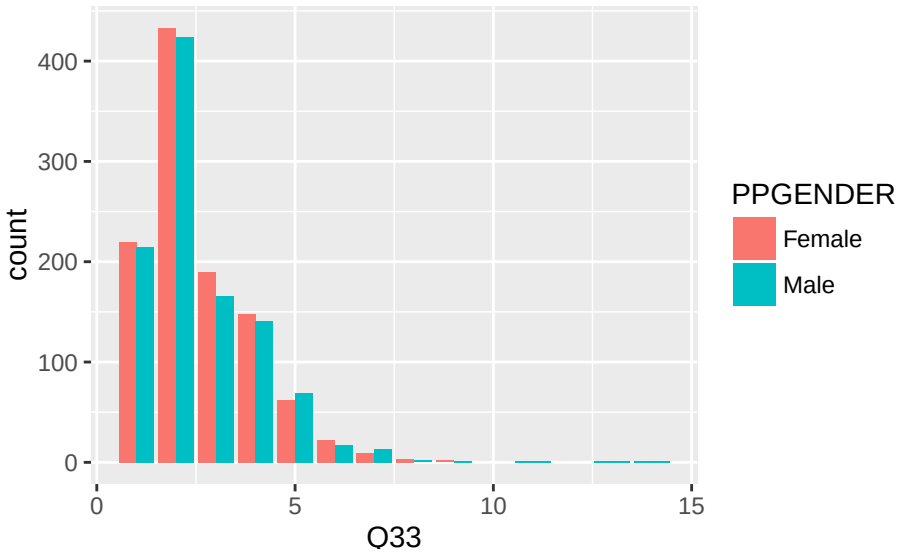


Q33. How many people, including yourself, reside in your household?

```
##       Q33          Q33_Codes
##  Min.   : 1.00   Refused:  28
##  1st Qu.: 2.00   NA's   :2140
##  Median : 2.00
##  Mean   : 2.58
##  3rd Qu.: 3.00
##  Max.   :14.00
##  NA's   :28
```




```
## Source: local data frame [23 x 3]
## Groups: Q33 [?]
##
##      Q33 PPGENDER count
##    (int)   (fctr) (int)
## 1      1   Female   220
## 2      1     Male   215
## 3      2   Female   433
## 4      2     Male   424
## 5      3   Female   190
## 6      3     Male   166
## 7      4   Female   148
## 8      4     Male   141
## 9      5   Female    62
## 10     5     Male    69
## ..   ...      ...   ...
```



Household members

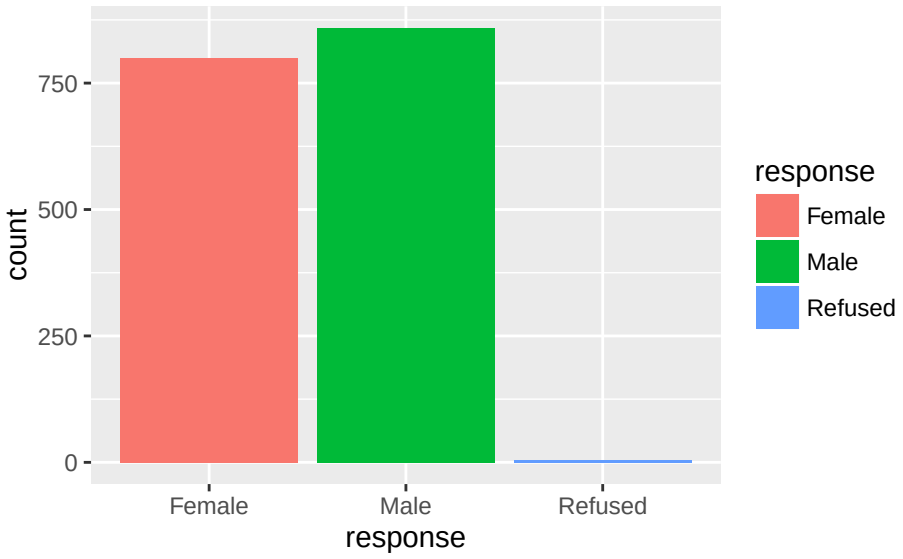
```
##       Q35           Q36             Q36_Codes         Q37
##  Female :799   Min.   :0.000   Don_t know:  61   Min.   :0.000
##  Male   :859   1st Qu.:0.000   Refused   :   5   1st Qu.:0.000
##  Refused:  5   Median :4.000   NA's      :2102   Median :2.000
##  NA's   :505   Mean   :2.873                     Mean   :2.098
##                3rd Qu.:5.000                     3rd Qu.:3.000
##                Max.   :7.000                     Max.   :7.000
##                NA's   :571                       NA's   :663
##       Q37_Codes         Q38             Q38_Codes
##  Don_t know: 143   Min.   :0.0000   Don_t know:  58
##  Refused   :  15   1st Qu.:0.0000   Refused   :  19
##  NA's      :2010   Median :0.0000   NA's      :2091
##                    Mean   :0.3909
##                    3rd Qu.:0.0000
##                    Max.   :7.0000
##                    NA's   :582
##                       Q39                 Q40               Q41
##  Don_t know              : 84   1 to 2 times :1025   Never     :807
##  Less than once per year:222   3 to 5 times : 271   Once      :400
##  More than once per year:593   Never        : 226   2 times   :191
##  Never                   :100   Don_t know   :  87   Don_t know:158
##  Once per year           :656   6 to 10 times:  32   3 times   : 60
##  Refused                 :  8   (Other)      :  22   (Other)   : 47
##  NA's                    :505   NA's         : 505   NA's      :505
##              Q42
##  Don_t know    :166
##  No, never     :567
##  Refused       :  6
##  Yes, always   :661
##  Yes, sometimes:263
##  NA's          :505
##
```

```
##       Q43            Q44             Q44_Codes         Q45
##  Female : 388   Min.   :0.000   Don_t know:  40   Min.   :0.000
##  Male   : 431   1st Qu.:1.000   Refused   :   3   1st Qu.:1.000
##  Refused:   9   Median :5.000   NA's      :2125   Median :2.000
##  NA's   :1340   Mean   :3.669                     Mean   :2.395
##                 3rd Qu.:5.000                     3rd Qu.:4.000
##                 Max.   :7.000                     Max.   :7.000
##                 NA's   :1383                      NA's   :1419
##       Q45_Codes         Q46              Q46_Codes
##  Don_t know:  70   Min.   :0.0000   Don_t know:  42
##  Refused   :   9   1st Qu.:0.0000   Refused   :   9
##  NA's      :2089   Median :0.0000   NA's      :2117
##                    Mean   :0.5727
##                    3rd Qu.:0.0000
##                    Max.   :7.0000
##                    NA's   :1391
##                       Q47                  Q48               Q49
##  Don_t know             :  55   1 to 2 times : 490   Never     : 403
##  Less than once per year: 125   3 to 5 times : 153   Once      : 183
##  More than once per year: 232   Never        :  83   Don_t know:  93
##  Never                  :  59   Don_t know   :  66   2 times   :  91
##  Once per year          : 353   6 to 10 times:  25   3 times   :  32
##  Refused                :   4   (Other)      :  11   (Other)   :  26
##  NA's                   :1340   NA's         :1340   NA's      :1340
##              Q50
##  Don_t know    : 100
##  No, never     : 317
##  Refused       :   4
##  Yes, always   : 275
##  Yes, sometimes: 132
##  NA's          :1340
##
```

HHM1

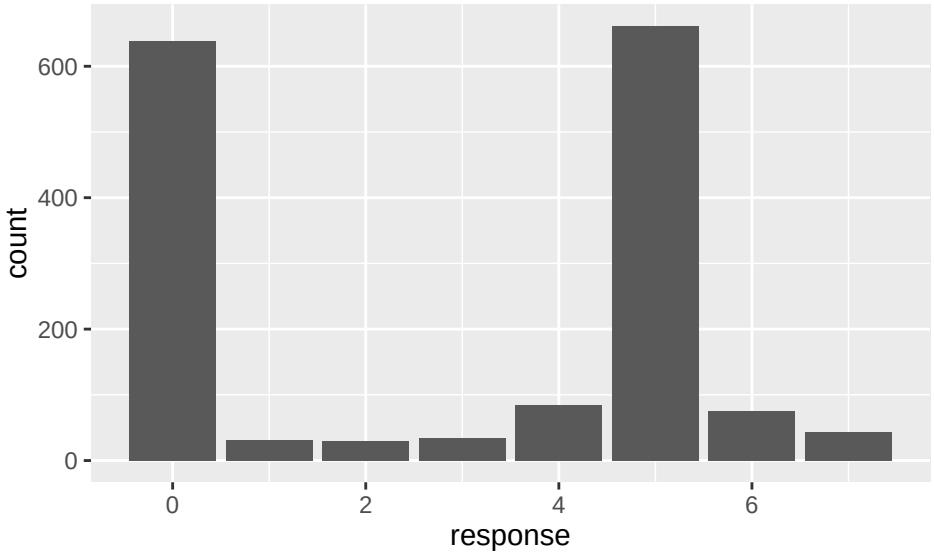
Q35. What is the gender of this member of the household? Remember, this relates to HHM1_Name who is HHM1_AGE years old.

```
##       Q35
##  Female :799
##  Male   :859
##  Refused:  5
##  NA's   :505
```



Q36. On average, how many days per week does this member of your household work or attend day care or school outside of your home?

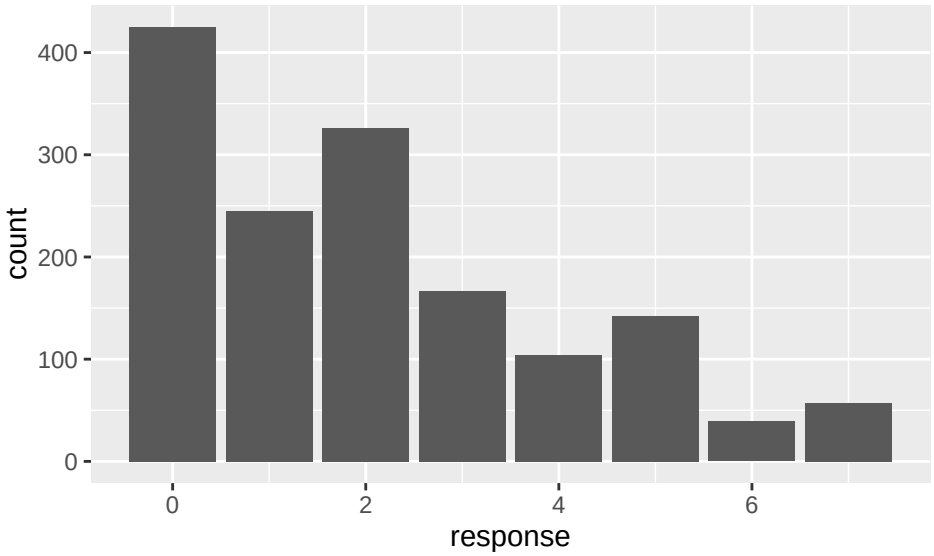
```
##       Q36             Q36_Codes
##  Min.   :0.000   Don_t know:  61
##  1st Qu.:0.000   Refused   :   5
##  Median :4.000   NA's      :2102
##  Mean   :2.873
##  3rd Qu.:5.000
##  Max.   :7.000
##  NA's   :571
```



Q37. On average, how many days per week does this member of your household participate in social activities outside of your home?

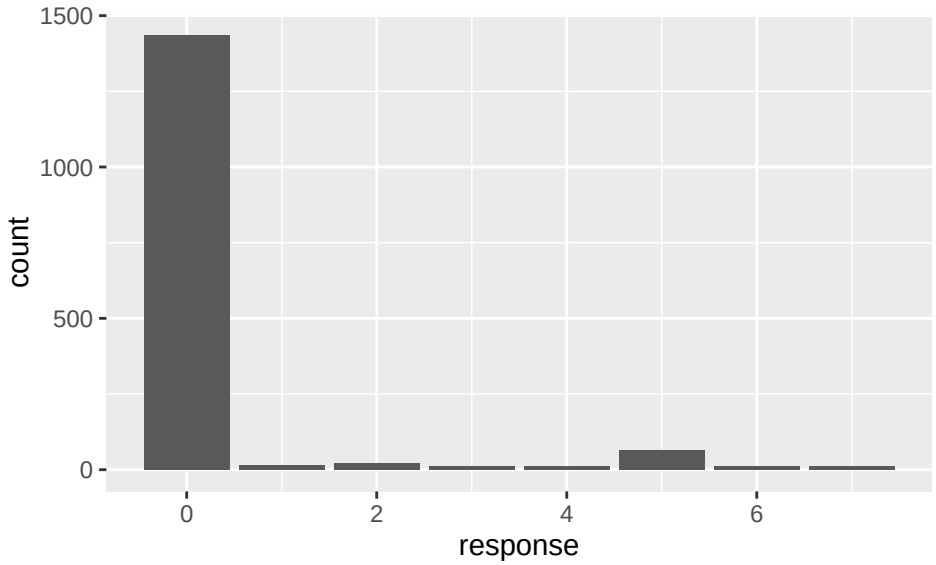
```
##       Q37             Q37_Codes
```

```
##  Min.   :0.000   Don_t know: 143
##  1st Qu.:0.000   Refused   :  15
##  Median :2.000   NA's      :2010
##  Mean   :2.098
##  3rd Qu.:3.000
##  Max.   :7.000
##  NA's   :663
```



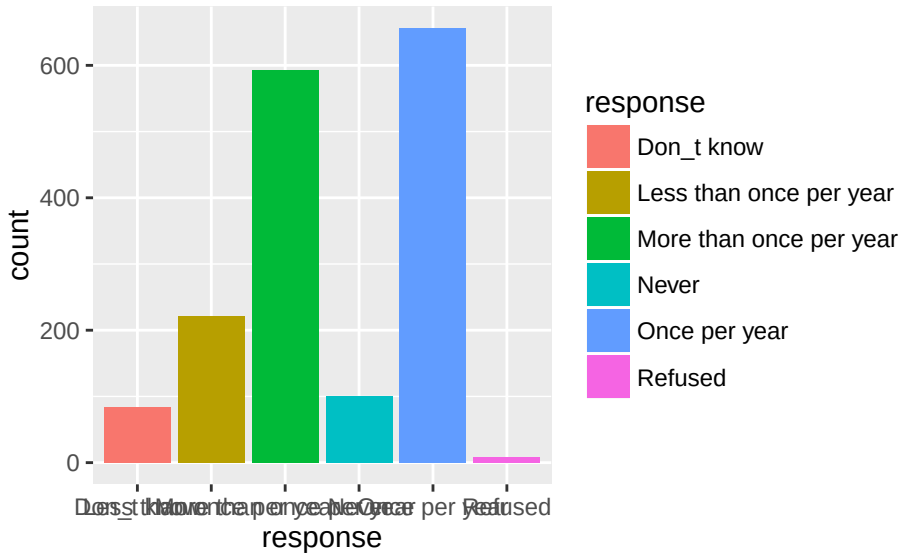
Q38. On average, how many days per week does this member of your household use public transportation?

```
##       Q38             Q38_Codes
##  Min.   :0.0000   Don_t know:  58
##  1st Qu.:0.0000   Refused   :  19
##  Median :0.0000   NA's      :2091
##  Mean   :0.3909
##  3rd Qu.:0.0000
##  Max.   :7.0000
##  NA's   :582
```



Q39. How frequently does this member of your household visit a doctor's office for wellness appointments?

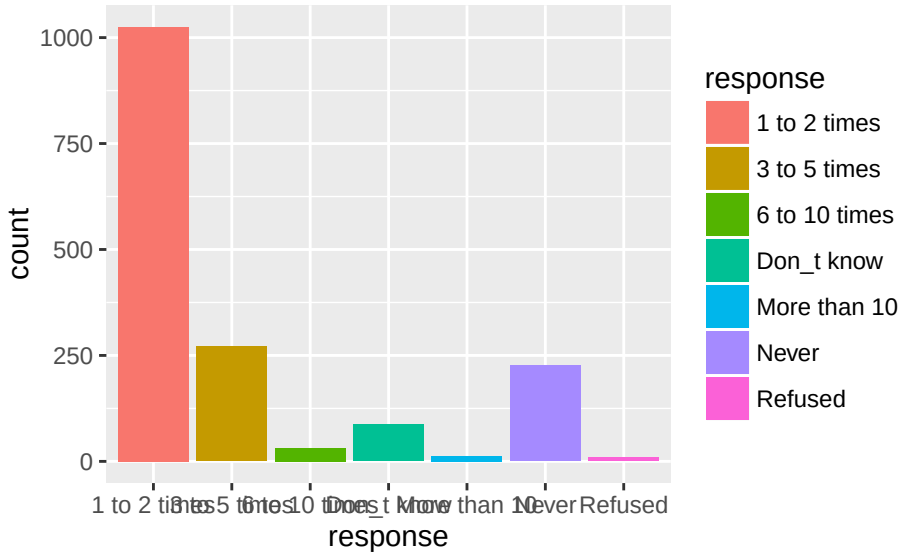
```
##                          Q39
##  Don_t know                : 84
##  Less than once per year:222
##  More than once per year:593
##  Never                     :100
##  Once per year             :656
##  Refused                   :  8
##  NA's                      :505
```



Q40. How frequently does this member of the household get sick in a typical year?

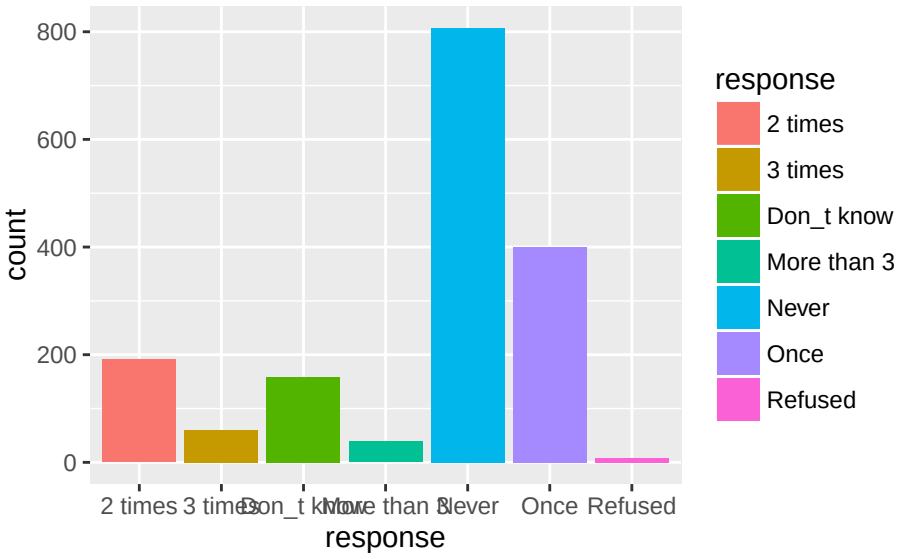
```
##              Q40
```

```
##  1 to 2 times :1025
##  3 to 5 times : 271
##  Never        : 226
##  Don_t know   :  87
##  6 to 10 times:  32
##  (Other)      :  22
##  NA's         : 505
```



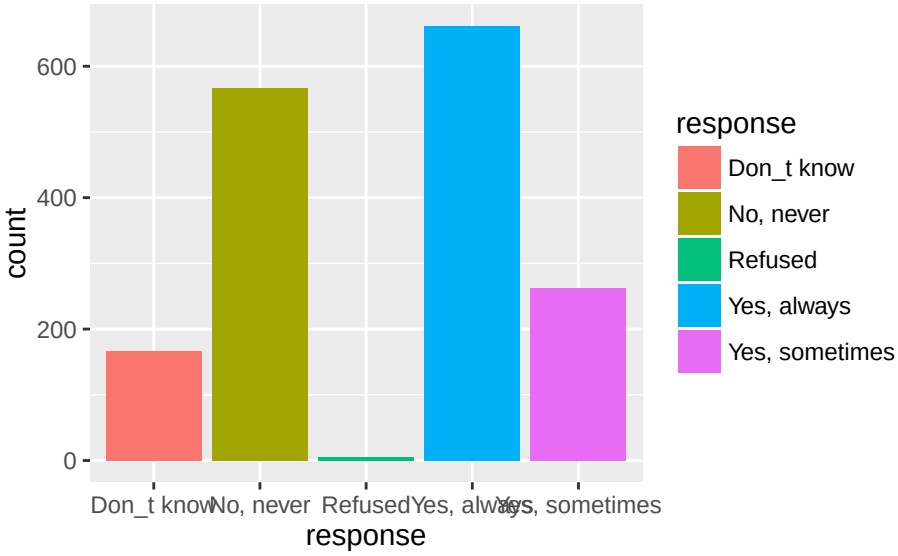
Q41. How many times has this member of your household had influenza or another respiratory illness in the last two years?

```
##          Q41
##  Never     :807
##  Once      :400
##  2 times   :191
##  Don_t know:158
##  3 times   : 60
##  (Other)   : 47
##  NA's      :505
```



Q42. Does this member of your household get an annual influenza vaccine?

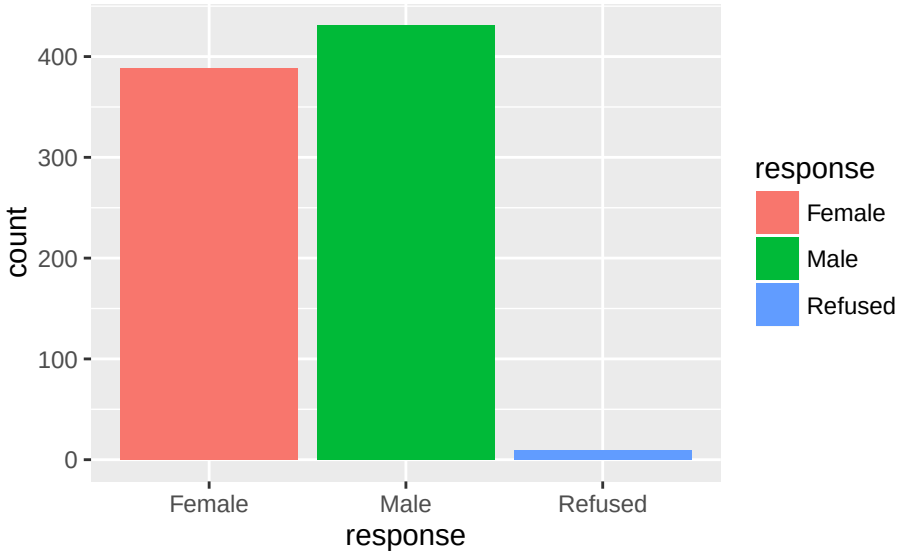
```
##              Q42
##  Don_t know    :166
##  No, never     :567
##  Refused       :  6
##  Yes, always   :661
##  Yes, sometimes:263
##  NA's          :505
```



HHM2

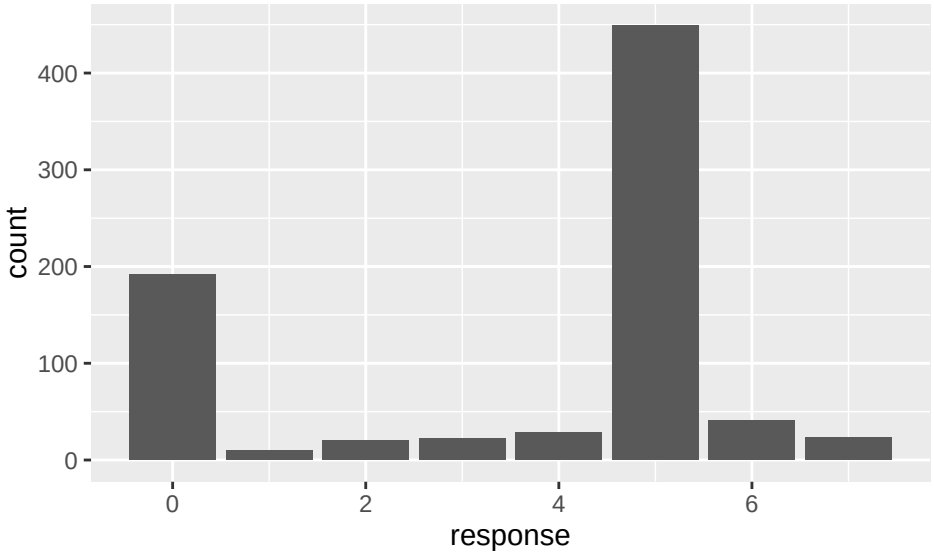
Q43. What is the gender of this member of the household? Remember, this relates to HHM1_Name who is HHM1_AGE years old.

```
##       Q43
##  Female : 388
##  Male   : 431
##  Refused:   9
##  NA's   :1340
```



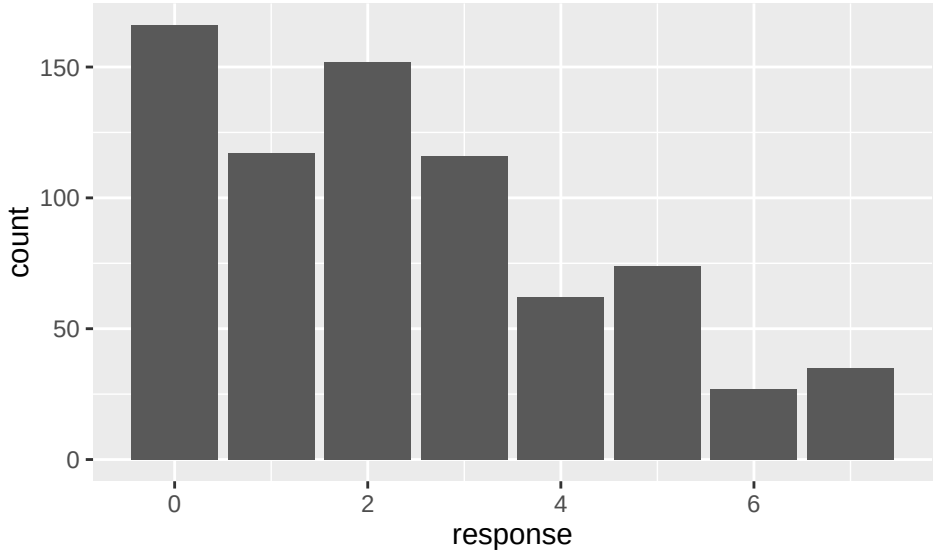
Q44. On average, how many days per week does this member of your household work or attend day care or school outside of your home?

```
##       Q44             Q44_Codes
##  Min.   :0.000   Don_t know:  40
##  1st Qu.:1.000   Refused   :   3
##  Median :5.000   NA's      :2125
##  Mean   :3.669
##  3rd Qu.:5.000
##  Max.   :7.000
##  NA's   :1383
```



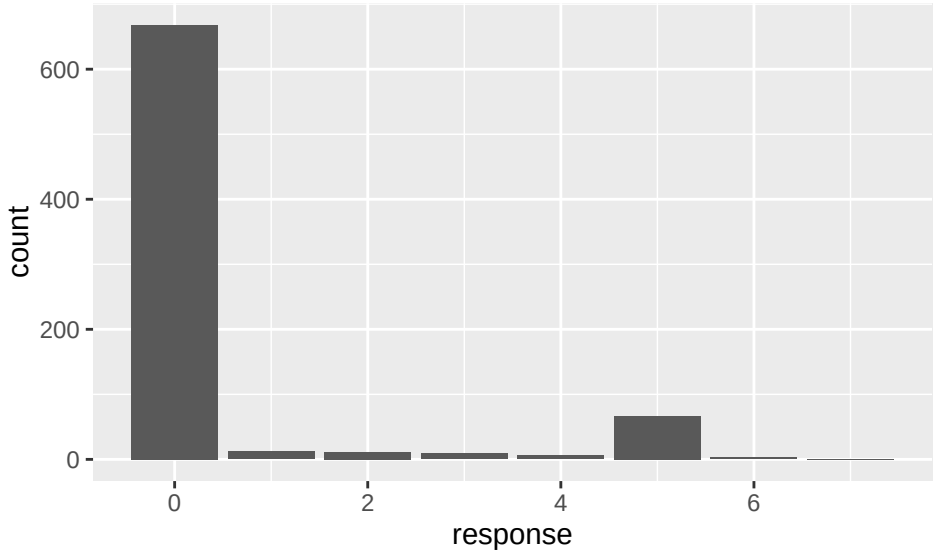
Q45. On average, how many days per week does this member of your household participate in social activities outside of your home?

```
##       Q45             Q45_Codes
##  Min.   :0.000   Don_t know:  70
##  1st Qu.:1.000   Refused   :   9
##  Median :2.000   NA's      :2089
##  Mean   :2.395
##  3rd Qu.:4.000
##  Max.   :7.000
##  NA's   :1419
```



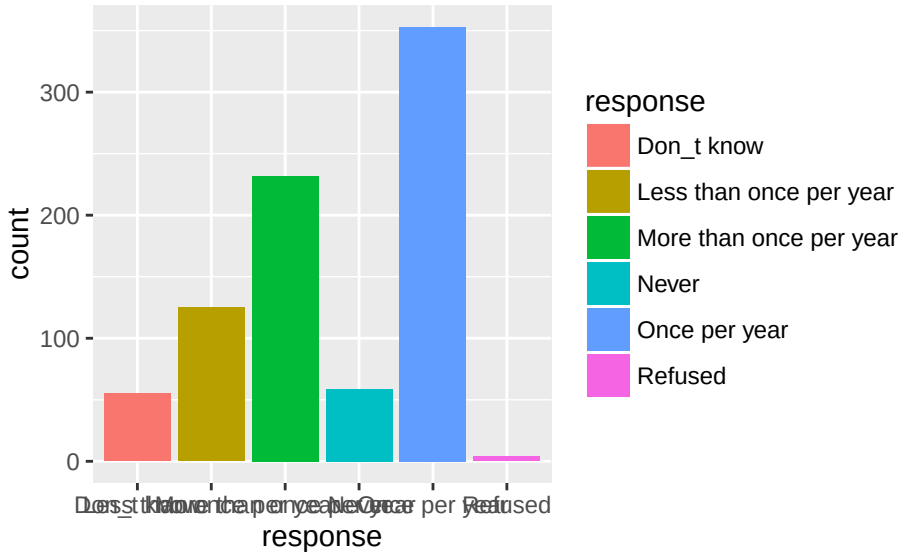
Q46. On average, how many days per week does this member of your household use public transportation?

```
##       Q46             Q46_Codes
##  Min.   :0.0000   Don_t know:  42
##  1st Qu.:0.0000   Refused   :   9
##  Median :0.0000   NA's      :2117
##  Mean   :0.5727
##  3rd Qu.:0.0000
##  Max.   :7.0000
##  NA's   :1391
```



Q47. How frequently does this member of your household visit a doctor's office for wellness appointments?

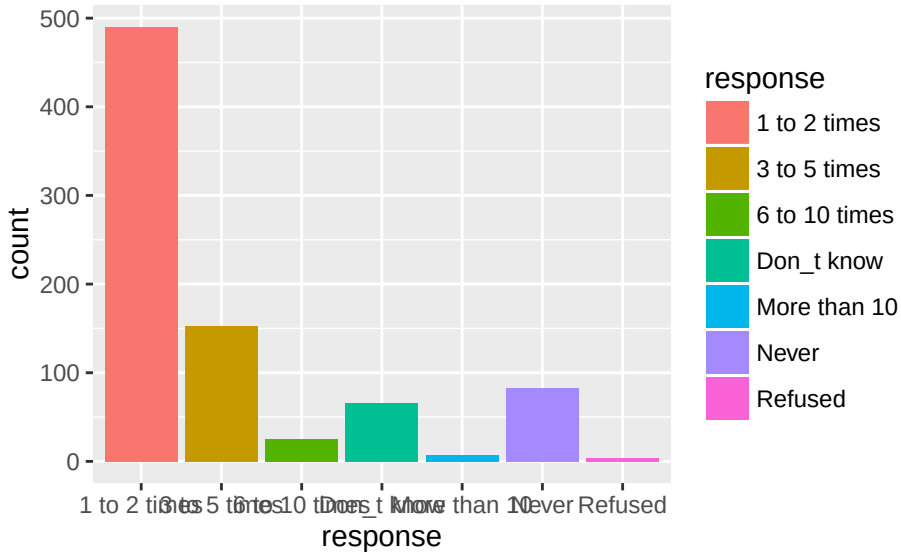
```
##                          Q47
##  Don_t know                :  55
##  Less than once per year: 125
##  More than once per year: 232
##  Never                     :  59
##  Once per year             : 353
##  Refused                   :   4
##  NA's                      :1340
```



Q48. How frequently does this member of the household get sick in a typical year?

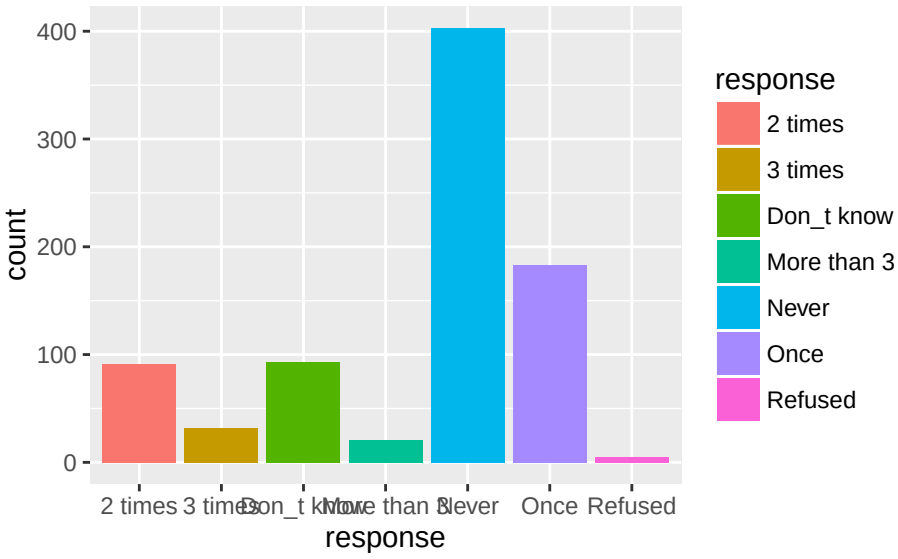
```
##              Q48
```

```
##  1 to 2 times : 490
##  3 to 5 times : 153
##  Never        :  83
##  Don_t know   :  66
##  6 to 10 times:  25
##  (Other)      :  11
##  NA's         :1340
```



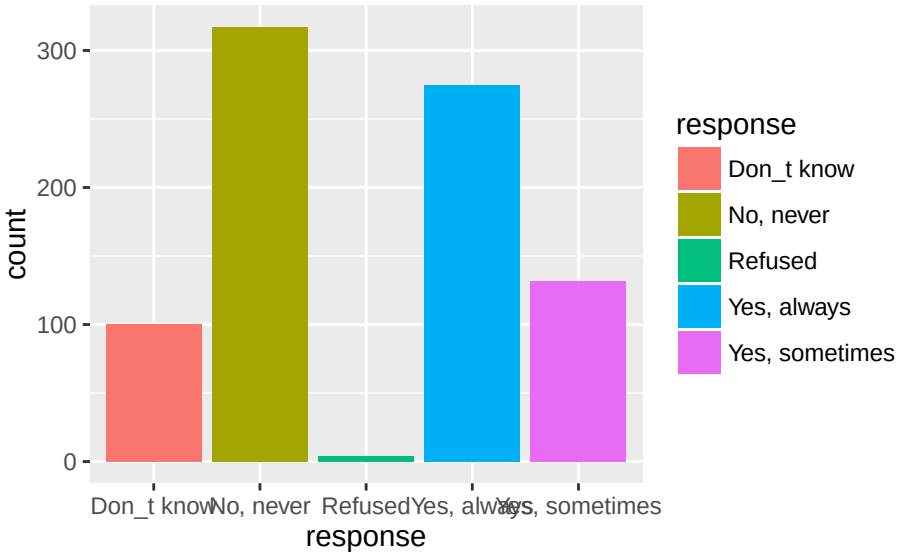
Q49. How many times has this member of your household had influenza or another respiratory illness in the last two years?

```
##          Q49
##  Never     : 403
##  Once      : 183
##  Don_t know:  93
##  2 times   :  91
##  3 times   :  32
##  (Other)   :  26
##  NA's      :1340
```



Q50. Does this member of your household get an annual influenza vaccine?

```
##              Q50
##  Don_t know    : 100
##  No, never     : 317
##  Refused       :   4
##  Yes, always   : 275
##  Yes, sometimes: 132
##  NA's          :1340
```



to-do:

- need to remove NA's
- ggplot(q7) + geom_bar(aes(x = option, fill = response), position = "dodge")
- ggplot(data = data) + geom_bar(mapping = aes(x = Q1)) + stat_sum()