Elderly Paper - data analysis

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# Loading the data

Registered cases 10212

Cases after getting rid of some low-reporting countries 10203

Cases with severity of >= II 9415

Children 2524, adults 6891,

Adults 18-64 = 5768 Elderly >=65 = 1123

##   
## adult elderly  
## female 3374 606  
## male 2394 517

##   
## adult elderly  
## female 0.8477387 0.1522613  
## male 0.8223978 0.1776022

##   
## Pearson's Chi-squared test with Yates' continuity correction  
##   
## data: d.rm$b\_sex and d.rm$ages  
## X-squared = 7.7302, df = 1, p-value = 0.00543

There were significantly more males in the elderly group

# Atopic dermatitis

##   
## adult elderly  
## atopic 1628 190  
## non-atopic 4140 933

##   
## adult elderly  
## atopic 0.8954895 0.1045105  
## non-atopic 0.8160852 0.1839148

##   
## Pearson's Chi-squared test with Yates' continuity correction  
##   
## data: d.rm$d\_410\_atopic and d.rm$ages  
## X-squared = 61.281, df = 1, p-value = 0.000000000000004947

Signif. more non atopics in the elderly.

# Cardiovascular disease

##   
## adult elderly  
## no 4479 440  
## yes 960 641  
## unknown 329 42

##   
## adult elderly  
## no 0.91055092 0.08944908  
## yes 0.59962523 0.40037477  
## unknown 0.88679245 0.11320755

##   
## Pearson's Chi-squared test with Yates' continuity correction  
##   
## data: d.rm$q\_410\_cardio\_cur[d.rm$q\_410\_cardio\_cur %in% c("no", "yes")] %>%   
## {  
## as.character(.)  
## } and d.rm$ages[d.rm$q\_410\_cardio\_cur %in% c("no", "yes")]  
## X-squared = 842.03, df = 1, p-value < 0.00000000000000022

# Urticaria

##   
## adult elderly  
## no 5335 1067  
## yes 104 14  
## unknown 329 42

##   
## adult elderly  
## no 0.8333333 0.1666667  
## yes 0.8813559 0.1186441  
## unknown 0.8867925 0.1132075

##   
## Pearson's Chi-squared test with Yates' continuity correction  
##   
## data: val[which(val %in% c("no", "yes"))] %>% as.character() and d.rm$ages[which(val %in% c("no", "yes"))]  
## X-squared = 1.6003, df = 1, p-value = 0.2059

# Mastocytosis

##   
## adult elderly  
## no 5303 1042  
## yes 136 39  
## unknown 329 42

##   
## Pearson's Chi-squared test with Yates' continuity correction  
##   
## data: val[which(val %in% c("no", "yes"))] %>% as.character() and d.rm$ages[which(val %in% c("no", "yes"))]  
## X-squared = 3.8198, df = 1, p-value = 0.05065

# Thyroid disease

##   
## adult elderly  
## no 4963 919  
## yes 476 162  
## unknown 329 42

##   
## Pearson's Chi-squared test with Yates' continuity correction  
##   
## data: val[which(val %in% c("no", "yes"))] %>% as.character() and d.rm$ages[which(val %in% c("no", "yes"))]  
## X-squared = 39.003, df = 1, p-value = 0.0000000004233

# Physical exercise

##   
## adult elderly  
## no 3532 737  
## mild eg. walking 619 111  
## moderate eg. vigorous housework or gardening 480 79  
## vigorous eg. running, heavy manual work, competitive sport 510 77  
## unknown 626 119

## Number of cases in table: 6145   
## Number of factors: 2   
## Test for independence of all factors:  
## Chisq = 9.806, df = 3, p-value = 0.02029

##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm$ages and d.rm$q\_421\_exercise   
##   
## no   
## no -   
## mild eg. walking 1.00  
## moderate eg. vigorous housework or gardening 0.65  
## vigorous eg. running, heavy manual work, competitive sport 0.14  
## unknown 1.00  
## mild eg. walking  
## no -   
## mild eg. walking -   
## moderate eg. vigorous housework or gardening 1.00   
## vigorous eg. running, heavy manual work, competitive sport 1.00   
## unknown 1.00   
## moderate eg. vigorous housework or gardening  
## no -   
## mild eg. walking -   
## moderate eg. vigorous housework or gardening -   
## vigorous eg. running, heavy manual work, competitive sport 1.00   
## unknown 1.00   
## vigorous eg. running, heavy manual work, competitive sport  
## no -   
## mild eg. walking -   
## moderate eg. vigorous housework or gardening -   
## vigorous eg. running, heavy manual work, competitive sport -   
## unknown 1.00   
## unknown  
## no -   
## mild eg. walking -   
## moderate eg. vigorous housework or gardening -   
## vigorous eg. running, heavy manual work, competitive sport -   
## unknown -   
##   
## P value adjustment method: holm

# Psychological stress

##   
## adult elderly  
## no(unlikely) 5349 1039  
## yes(likely) 418 84

##   
## Pearson's Chi-squared test with Yates' continuity correction  
##   
## data: d.rm$q\_422\_stress and d.rm$ages  
## X-squared = 0.044403, df = 1, p-value = 0.8331

# Alcohol

##   
## adult elderly  
## no 4280 868  
## yes 326 48  
## unknown 1161 207

##   
## Pearson's Chi-squared test with Yates' continuity correction  
##   
## data: val[which(val %in% c("no", "yes"))] %>% as.character() and d.rm$ages[which(val %in% c("no", "yes"))]  
## X-squared = 3.8, df = 1, p-value = 0.05125

# Menstruation

##   
## adult elderly  
## no 1705 529  
## yes 84 0  
## unknown 1585 77

##   
## Pearson's Chi-squared test with Yates' continuity correction  
##   
## data: val[which(val %in% c("no", "yes"))] %>% as.character() and d.rm$ages[which(val %in% c("no", "yes"))]  
## X-squared = 24.446, df = 1, p-value = 0.0000007644

This variable should not be taken into account I think. The elderly group does not have any menstrruation…

# infection

##   
## adult elderly  
## no 5262 1048  
## yes 177 33  
## unknown 329 42

##   
## Pearson's Chi-squared test with Yates' continuity correction  
##   
## data: val[which(val %in% c("no", "yes"))] %>% as.character() and d.rm$ages[which(val %in% c("no", "yes"))]  
## X-squared = 0.061751, df = 1, p-value = 0.8038

# repeated reaction

##   
## adult elderly  
## no 3454 694  
## yes 1718 314  
## unknown 595 115

##   
## Pearson's Chi-squared test with Yates' continuity correction  
##   
## data: val[which(val %in% c("no", "yes"))] %>% as.character() and d.rm$ages[which(val %in% c("no", "yes"))]  
## X-squared = 1.5401, df = 1, p-value = 0.2146

# Elicitors

## Total

## [[1]]  
## [1] "q\_310\_trigger"  
##   
## [[2]]  
##   
## adult elderly  
## no 372 51  
## yes 4242 883  
## reasonable suspicion 1154 189  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm[selector, x] %>% as.character and d.rm$ages[selector] %>% as.character   
##   
## adult elderly  
## adult - -   
## elderly 0.0011 -   
##   
## P value adjustment method: holm

## Elicitor known

## [[1]]  
## [1] "elicitor\_known"  
##   
## [[2]]  
##   
## adult elderly  
## no 1526 240  
## yes 4242 883  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm[selector, x] %>% as.character and d.rm$ages[selector] %>% as.character   
##   
## adult elderly  
## adult - -   
## elderly 0.00041 -   
##   
## P value adjustment method: holm

## Elicitor suspected

## [[1]]  
## [1] "elicitor\_suspected"  
##   
## [[2]]  
##   
## adult elderly  
## no 4614 934  
## yes 1154 189  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm[selector, x] %>% as.character and d.rm$ages[selector] %>% as.character   
##   
## adult elderly  
## adult - -   
## elderly 0.016 -   
##   
## P value adjustment method: holm

## Drugs

## [[1]]  
## [1] "elicitor\_drug"  
##   
## [[2]]  
##   
## adult elderly  
## no 4511 838  
## yes 1257 285  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm[selector, x] %>% as.character and d.rm$ages[selector] %>% as.character   
##   
## adult elderly  
## adult - -   
## elderly 0.0094 -   
##   
## P value adjustment method: holm

### analgesics

## [[1]]  
## [1] "elicitor\_analg"  
##   
## [[2]]  
##   
## adult elderly  
## no 5286 1012  
## yes 482 111  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm[selector, x] %>% as.character and d.rm$ages[selector] %>% as.character   
##   
## adult elderly  
## adult - -   
## elderly 0.11 -   
##   
## P value adjustment method: holm

### antibiotics

## [[1]]  
## [1] "elicitor\_anty"  
##   
## [[2]]  
##   
## adult elderly  
## no 5395 1044  
## yes 373 79  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm[selector, x] %>% as.character and d.rm$ages[selector] %>% as.character   
##   
## adult elderly  
## adult - -   
## elderly 0.52 -   
##   
## P value adjustment method: holm

### Local anesthetics

## [[1]]  
## [1] "elicitor\_LA"  
##   
## [[2]]  
##   
## adult elderly  
## no 5649 1100  
## yes 119 23  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm[selector, x] %>% as.character and d.rm$ages[selector] %>% as.character   
##   
## adult elderly  
## adult - -   
## elderly 1 -   
##   
## P value adjustment method: holm

### x-ray (contrast agent)

## [[1]]  
## [1] "elicitor\_contrast"  
##   
## [[2]]  
##   
## adult elderly  
## no 5710 1101  
## yes 58 22  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm[selector, x] %>% as.character and d.rm$ages[selector] %>% as.character   
##   
## adult elderly  
## adult - -   
## elderly 0.01 -   
##   
## P value adjustment method: holm

### PPI

## [[1]]  
## [1] "elicitor\_ppi"  
##   
## [[2]]  
##   
## adult elderly  
## no 5735 1114  
## yes 33 9  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm[selector, x] %>% as.character and d.rm$ages[selector] %>% as.character   
##   
## adult elderly  
## adult - -   
## elderly 0.49 -   
##   
## P value adjustment method: holm

### Cardiovascular drugs

Here Only 1 patient in the youg adults group was positive for the cardio drugs.

## [[1]]  
## [1] "elicitor\_cvd"  
##   
## [[2]]  
##   
## adult elderly  
## no 5759 1118  
## yes 9 5  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm[selector, x] %>% as.character and d.rm$ages[selector] %>% as.character   
##   
## adult elderly  
## adult - -   
## elderly 0.11 -   
##   
## P value adjustment method: holm

## Insects

## [[1]]  
## [1] "elicitor\_insects"  
##   
## [[2]]  
##   
## adult elderly  
## no 3059 490  
## yes 2709 633  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm[selector, x] %>% as.character and d.rm$ages[selector] %>% as.character   
##   
## adult elderly  
## adult - -   
## elderly 0.0000000098 -   
##   
## P value adjustment method: holm

### Yellow jacket

## [[1]]  
## [1] "elicitor\_yj"  
##   
## [[2]]  
##   
## adult elderly  
## no 3831 672  
## yes 1937 451  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm[selector, x] %>% as.character and d.rm$ages[selector] %>% as.character   
##   
## adult elderly  
## adult - -   
## elderly 0.000026 -   
##   
## P value adjustment method: holm

### Bee

## [[1]]  
## [1] "elicitor\_bee"  
##   
## [[2]]  
##   
## adult elderly  
## no 5256 1026  
## yes 512 97  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm[selector, x] %>% as.character and d.rm$ages[selector] %>% as.character   
##   
## adult elderly  
## adult - -   
## elderly 0.84 -   
##   
## P value adjustment method: holm

### Hornet

## [[1]]  
## [1] "elicitor\_hornet"  
##   
## [[2]]  
##   
## adult elderly  
## no 5615 1067  
## yes 153 56  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm[selector, x] %>% as.character and d.rm$ages[selector] %>% as.character   
##   
## adult elderly  
## adult - -   
## elderly 0.000045 -   
##   
## P value adjustment method: holm

## Food

## [[1]]  
## [1] "elicitor\_food"  
##   
## [[2]]  
##   
## adult elderly  
## no 4514 1001  
## yes 1254 122  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm[selector, x] %>% as.character and d.rm$ages[selector] %>% as.character   
##   
## adult elderly  
## adult - -   
## elderly <0.0000000000000002 -   
##   
## P value adjustment method: holm

### wheat

## [[1]]  
## [1] "elicitor\_wheat"  
##   
## [[2]]  
##   
## adult elderly  
## no 1077 105  
## yes 177 17  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm.f[selector, x] and d.rm.f$ages[selector]   
##   
## adult elderly  
## adult - -   
## elderly 1 -   
##   
## P value adjustment method: holm

### hazelnut

## [[1]]  
## [1] "elicitor\_HN"  
##   
## [[2]]  
##   
## adult elderly  
## no 1170 106  
## yes 84 16  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm.f[selector, x] and d.rm.f$ages[selector]   
##   
## adult elderly  
## adult - -   
## elderly 0.015 -   
##   
## P value adjustment method: holm

### soy

## [[1]]  
## [1] "elicitor\_soy"  
##   
## [[2]]  
##   
## adult elderly  
## no 1176 116  
## yes 78 6  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm.f[selector, x] and d.rm.f$ages[selector]   
##   
## adult elderly  
## adult - -   
## elderly 0.71 -   
##   
## P value adjustment method: holm

### celery

## [[1]]  
## [1] "elicitor\_celery"  
##   
## [[2]]  
##   
## adult elderly  
## no 1180 115  
## yes 74 7  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm.f[selector, x] and d.rm.f$ages[selector]   
##   
## adult elderly  
## adult - -   
## elderly 1 -   
##   
## P value adjustment method: holm

### shellfish

## [[1]]  
## [1] "elicitor\_shellfish"  
##   
## [[2]]  
##   
## adult elderly  
## no 1131 107  
## yes 123 15  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm.f[selector, x] and d.rm.f$ages[selector]   
##   
## adult elderly  
## adult - -   
## elderly 0.47 -   
##   
## P value adjustment method: holm

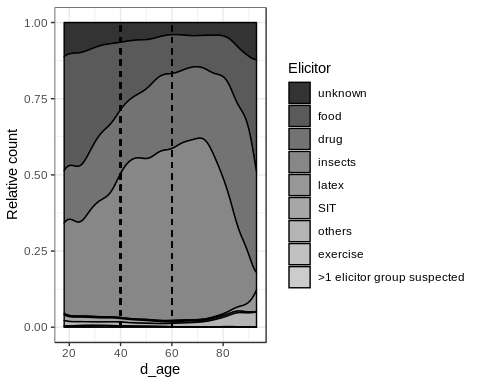
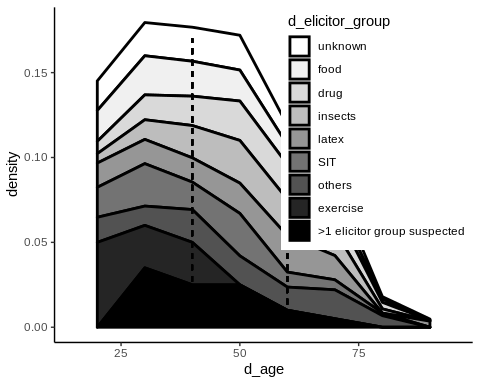
### peanut

## [[1]]  
## [1] "elicitor\_peanut"  
##   
## [[2]]  
##   
## adult elderly  
## no 1186 121  
## yes 68 1  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm.f[selector, x] and d.rm.f$ages[selector]   
##   
## adult elderly  
## adult - -   
## elderly 0.045 -   
##   
## P value adjustment method: holm

## Immunotherapy (SIT)

## [[1]]  
## [1] "elicitor\_SIT"  
##   
## [[2]]  
##   
## adult elderly  
## no 5705 1118  
## yes 63 5  
##   
## [[3]]  
##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: d.rm[selector, x] %>% as.character and d.rm$ages[selector] %>% as.character   
##   
## adult elderly  
## adult - -   
## elderly 0.066 -   
##   
## P value adjustment method: holm

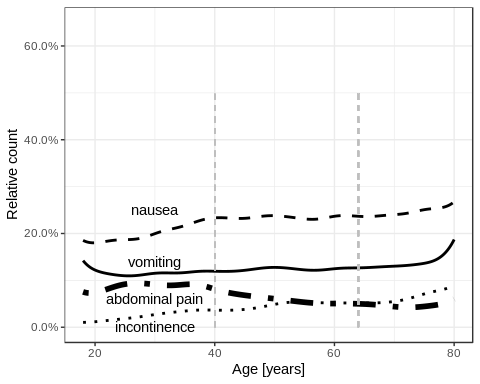
# Plots



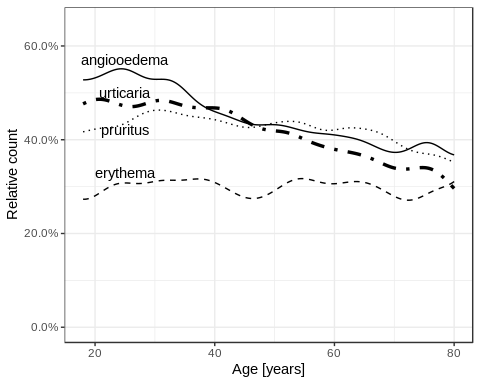
So we can do it - the question now is what do we want to display? Food? or any other variables here that may be of interest?

Second plot - symptoms

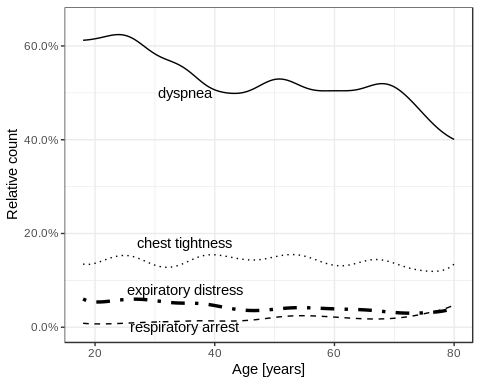
## Gastrointestinal



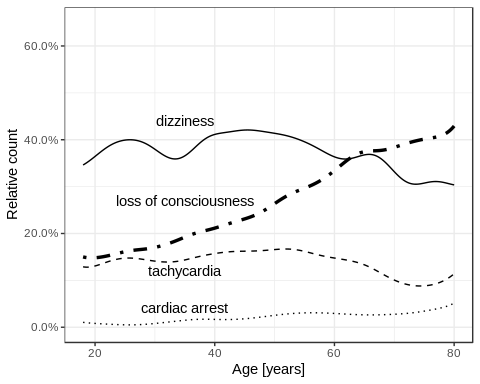
## Skin



## Respiratory



## Cardiac



# Risk of developing a biphasic reaction

## with concomitant hypotension

left Biphasic, top - Hypotension as a symptom. Alle cases, no age differentiation:

## Number of cases in table: 4940   
## Number of factors: 2   
## Test for independence of all factors:  
## Chisq = 1.738, df = 1, p-value = 0.1874

## with unknown trigger as an elicitor

Unknown elicitor showed relevant meanig that unknown trigger-cases were more often connected with biphasic reactions

##   
## no yes  
## no 292 3588  
## yes 25 148

## Trigger  
## Biphasic unknown known  
## not biphasic 0.92113565 0.96038544  
## biphasic 0.07886435 0.03961456

## Number of cases in table: 4053   
## Number of factors: 2   
## Test for independence of all factors:  
## Chisq = 11.016, df = 1, p-value = 0.0009031

## Biphasic reaction depending on the trigger group

##   
## -9 no yes unknown  
## food 206 1067 42 61  
## drugs 240 1150 44 108  
## insects 818 2166 96 261  
## other 38 149 11 10  
## unkown 73 292 25 34

##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: tab   
##   
## food drugs insects other unkown  
## food - - - - -   
## drugs 1.000 - - - -   
## insects 1.000 1.000 - - -   
## other 0.639 0.616 0.860 - -   
## unkown 0.035 0.024 0.051 1.000 -   
##   
## P value adjustment method: holm

##   
## Pearson's Chi-squared test with Yates' continuity correction  
##   
## data: t[c(1, 5), 2:3]  
## X-squared = 8.3589, df = 1, p-value = 0.003838

# e\_423\_five most important concomitant drugs - beta ass, ace at2 and ppi

##   
## adult elderly  
## no 4777 509  
## yes 991 614

##   
## Pearson's Chi-squared test with Yates' continuity correction  
##   
## data: val[which(val %in% c("no", "yes"))] %>% as.character() and d.rm$ages[which(val %in% c("no", "yes"))]  
## X-squared = 737.52, df = 1, p-value < 0.00000000000000022

# Differences between Age groups and time to reaction

##   
## 00 – 10 Minutes 11 - 30 Minutes 31 - 60 Minutes 61 - 120 Minutes  
## adult 2146 1107 371 193  
## elderly 436 199 57 41  
##   
## 121 – 240 Minutes (2 – 4 hours) more than 240 Minutes  
## adult 132 130  
## elderly 29 21

##   
## Pairwise comparisons using Pearson's Chi-squared tests   
##   
## data: tab   
##   
## 00 – 10 Minutes 11 - 30 Minutes  
## 00 – 10 Minutes - -   
## 11 - 30 Minutes 1 -   
## 31 - 60 Minutes 1 1   
## 61 - 120 Minutes 1 1   
## 121 – 240 Minutes (2 – 4 hours) 1 1   
## more than 240 Minutes 1 1   
## 31 - 60 Minutes 61 - 120 Minutes  
## 00 – 10 Minutes - -   
## 11 - 30 Minutes - -   
## 31 - 60 Minutes - -   
## 61 - 120 Minutes 1 -   
## 121 – 240 Minutes (2 – 4 hours) 1 1   
## more than 240 Minutes 1 1   
## 121 – 240 Minutes (2 – 4 hours)  
## 00 – 10 Minutes -   
## 11 - 30 Minutes -   
## 31 - 60 Minutes -   
## 61 - 120 Minutes -   
## 121 – 240 Minutes (2 – 4 hours) -   
## more than 240 Minutes 1   
## more than 240 Minutes  
## 00 – 10 Minutes -   
## 11 - 30 Minutes -   
## 31 - 60 Minutes -   
## 61 - 120 Minutes -   
## 121 – 240 Minutes (2 – 4 hours) -   
## more than 240 Minutes -   
##   
## P value adjustment method: holm

# Table 3

## grade I grade II grade III grade IV   
## 0 4055 0 0

## $`grade I`  
## grade I grade II grade III grade IV   
## 0 0 0 0   
##   
## $`grade II`  
## grade I grade II grade III grade IV   
## 0 4055 0 0   
##   
## $`grade III`  
## grade I grade II grade III grade IV   
## 0 0 2630 0   
##   
## $`grade IV`  
## grade I grade II grade III grade IV   
## 0 0 0 206

##   
## adult elderly  
## no treatment 0.07004161 0.07658059  
## solely lay 0.07680305 0.04185218  
## solely professional 0.74757282 0.80053428  
## first lay followed by professional 0.04126214 0.02849510  
## unknown 0.06432039 0.05253785

##   
## Call:  
## glm(formula = d.rm$ages %>% factor() ~ d\_severity\_rm + q\_510\_first,   
## family = "binomial", data = d.rm)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.7660 -0.6851 -0.5563 -0.5006 2.2428   
##   
## Coefficients:  
## Estimate Std. Error z value  
## (Intercept) -1.72430 0.12240 -14.088  
## d\_severity\_rmgrade III 0.45767 0.06718 6.813  
## d\_severity\_rmgrade IV 0.64835 0.17179 3.774  
## q\_510\_firstsolely lay -0.70659 0.19457 -3.632  
## q\_510\_firstsolely professional -0.06321 0.12497 -0.506  
## q\_510\_firstfirst lay followed by professional -0.52734 0.22365 -2.358  
## q\_510\_firstunknown -0.28943 0.18435 -1.570  
## Pr(>|z|)   
## (Intercept) < 0.0000000000000002 \*\*\*  
## d\_severity\_rmgrade III 0.00000000000957 \*\*\*  
## d\_severity\_rmgrade IV 0.000161 \*\*\*  
## q\_510\_firstsolely lay 0.000282 \*\*\*  
## q\_510\_firstsolely professional 0.613019   
## q\_510\_firstfirst lay followed by professional 0.018382 \*   
## q\_510\_firstunknown 0.116411   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for binomial family taken to be 1)  
##   
## Null deviance: 6126.9 on 6890 degrees of freedom  
## Residual deviance: 6045.4 on 6884 degrees of freedom  
## AIC: 6059.4  
##   
## Number of Fisher Scoring iterations: 4

Here we see that if we adjust the treatment of a given reaction to severity (so the severity among adults and elderly is cosidered the same), elderly had less reactions that were treated solely by lay persons, or lay + profesionnal. This is interesting..

##   
## adult elderly   
## 5768 1123

##   
## adult elderly   
## 0.8370338 0.1629662

## ages d\_age  
## 1 adult 43.31987  
## 2 elderly 71.03829

## # A tibble: 2 x 3  
## ages m sd  
## <chr> <dbl> <dbl>  
## 1 adult 43.3 12.7   
## 2 elderly 71.0 4.84

##   
## adult elderly  
## female 3374 606  
## male 2394 517

##   
## adult elderly  
## female 0.5849515 0.5396260  
## male 0.4150485 0.4603740

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Adults | % | Elderly | % | p-val | variable |
| 3374 | 58.5 | 606 | 54.0 | 0.0054 | female Sex |
| 1628 | 28.2 | 190 | 16.9 | 0.0000 | atopic |
| 517 | 11.2 | 104 | 11.7 | 0.6863 | cardiovascular |
| 136 | 2.4 | 39 | 3.5 | 0.0506 | mastocytosis |
| 476 | 8.3 | 162 | 14.4 | 0.0000 | thyroid |
| 2529 | 43.8 | 376 | 33.5 | 0.0000 | urticaria |
| 418 | 7.2 | 84 | 7.5 | 0.8331 | stress |
| 326 | 5.7 | 48 | 4.3 | 0.0513 | alcohol |
| 177 | 3.1 | 33 | 2.9 | 0.8038 | infection |