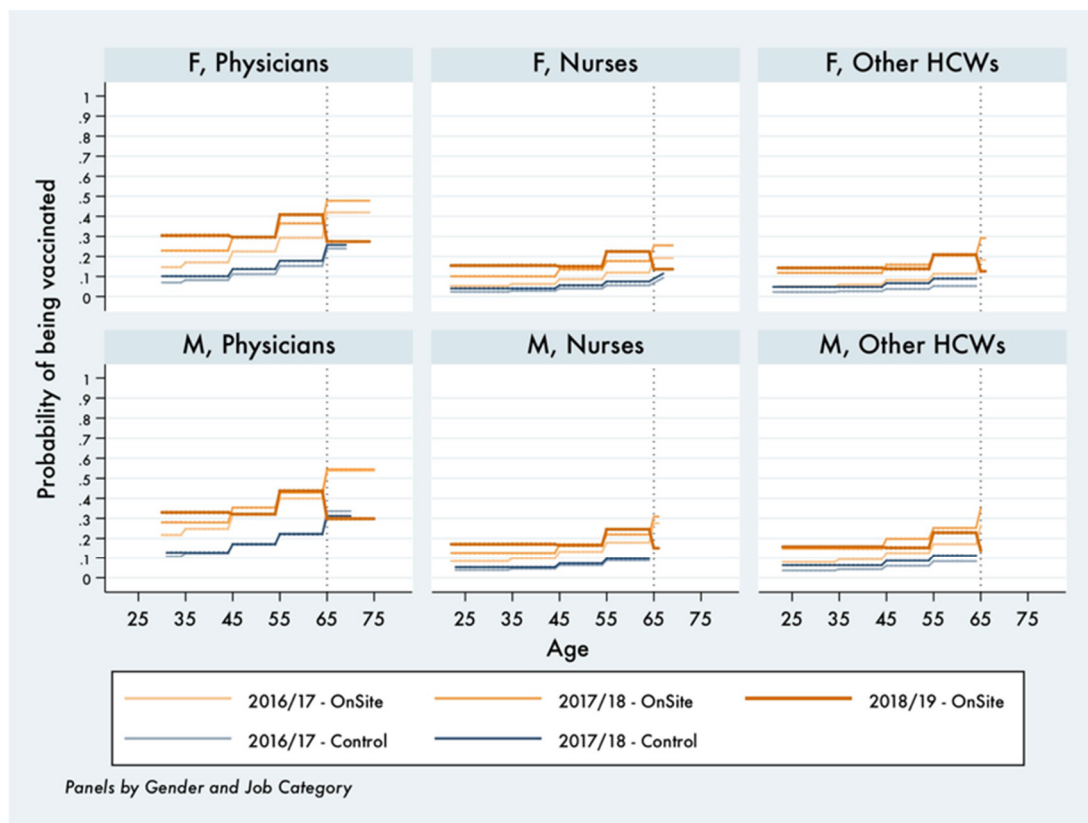


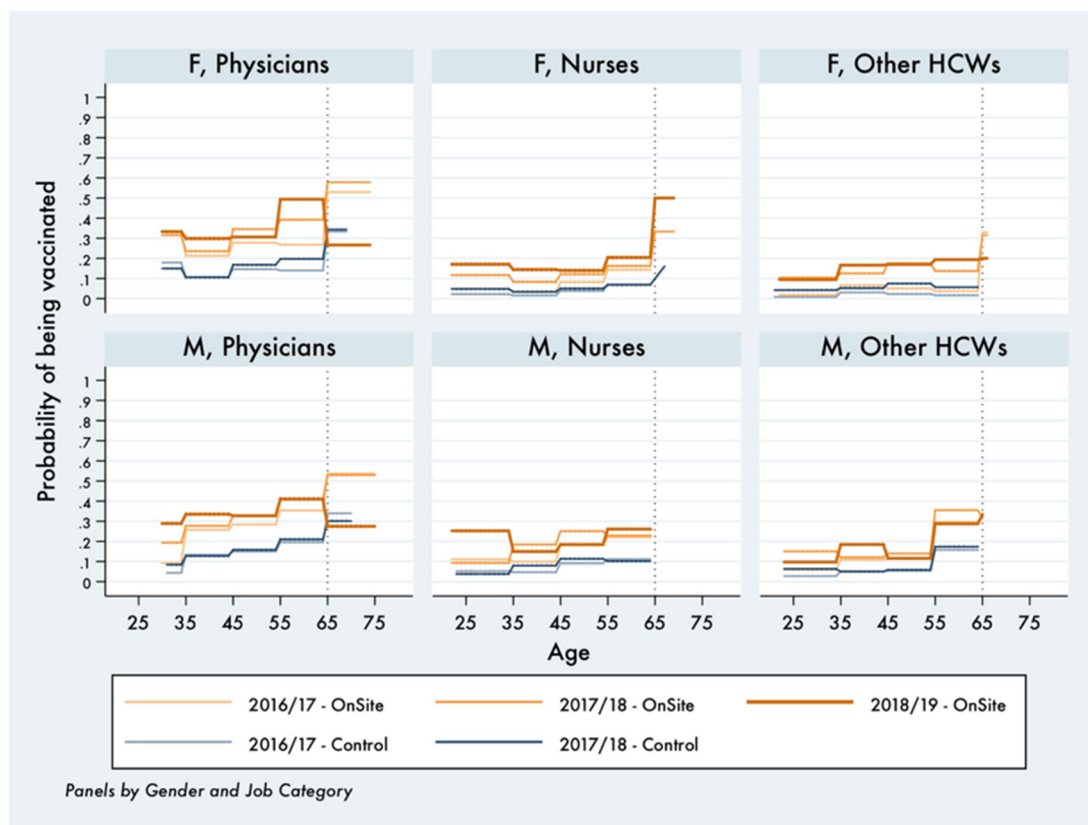
**Table S1.** Vaccination coverage rates in the 36 clinical macro-areas randomized for the first On Site Vaccination, during the influenza vaccination campaign 2016-17. Macro-areas randomly selected for OSV = 12/36 (33.33%); HCWs potentially involved in OSV = 1120/3654 (30.65%).

| Macro-areas*                       | Randomly<br>selected for OSV | Vaccinated | n. HCWs operating<br>in macro-areas** | %           |
|------------------------------------|------------------------------|------------|---------------------------------------|-------------|
| Health Management                  | No                           | 23         | 54                                    | 42.59       |
| Pediatrics                         | Yes                          | 31         | 107                                   | 28.97       |
| Infectious Disease                 | Yes                          | 17         | 63                                    | 26.98       |
| Hematology                         | Yes                          | 23         | 97                                    | 23.71       |
| Pneumology and Thoracic Surgery    | Yes                          | 11         | 57                                    | 19.30       |
| Orthopedics                        | Yes                          | 9          | 64                                    | 14.06       |
| Cardiac Surgery                    | Yes                          | 5          | 36                                    | 13.89       |
| Oncology                           | Yes                          | 13         | 95                                    | 13.68       |
| Medicine (CIC)                     | No                           | 8          | 70                                    | 11.43       |
| Transplant Surgery                 | Yes                          | 4          | 35                                    | 11.43       |
| Orthopedics (CIC)                  | No                           | 4          | 36                                    | 11.11       |
| Intensive Care                     | Yes                          | 25         | 235                                   | 10.64       |
| Emergency Room                     | No                           | 11         | 107                                   | 10.28       |
| General Surgery (CIC)              | No                           | 8          | 79                                    | 10.13       |
| Radiology                          | No                           | 19         | 198                                   | 9.68        |
| Neurology                          | No                           | 14         | 147                                   | 9.52        |
| Medicine                           | No                           | 18         | 201                                   | 8.96        |
| General Surgery                    | No                           | 10         | 119                                   | 8.40        |
| Urology                            | No                           | 5          | 60                                    | 8.33        |
| Geriatrics (CIC)                   | No                           | 1          | 12                                    | 8.33        |
| Laboratory                         | No                           | 13         | 159                                   | 8.18        |
| Cardiology                         | Yes                          | 8          | 123                                   | 6.50        |
| Allied and Technical Service       | No                           | 16         | 261                                   | 6.13        |
| Geriatrics                         | Yes                          | 8          | 133                                   | 6.02        |
| Private Activity                   | No                           | 3          | 51                                    | 5.88        |
| Cardiology (CIC)                   | No                           | 2          | 34                                    | 5.88        |
| Intensive Care (CIC)               | No                           | 2          | 38                                    | 5.26        |
| Operating Room (CIC)               | No                           | 2          | 47                                    | 4.26        |
| Head and Neck Surgery              | No                           | 6          | 144                                   | 4.17        |
| Rheumatology (CIC)                 | Yes                          | 3          | 75                                    | 4.00        |
| Radiology (CIC)                    | No                           | 1          | 27                                    | 3.70        |
| Operating Room                     | No                           | 9          | 314                                   | 2.87        |
| Neurosurgery                       | No                           | 2          | 71                                    | 2.82        |
| Gynecology and Obstetrics          | No                           | 5          | 223                                   | 2.24        |
| Allied and Technical Service (CIC) | No                           | 1          | 61                                    | 1.64        |
| Private Activity (CIC)             | No                           | 0          | 21                                    | 0.00        |
| <b>Total</b>                       |                              | <b>340</b> | <b>3654</b>                           | <b>9.30</b> |

\*(CIC) = macro-areas located in Presidio Columbus \*\*Personnel not included: administrative, staff (e.g. technicians, clerks).



**Figure S1:** Probability of being vaccinated by age class, gender, OSV and job category during the three campaigns (model without interaction, available in table 3 in main text).



**Figure S2:** Probability of being vaccinated by age class, gender, OSV and job category during the three campaigns (model with multiple interaction, available in supplementary material).

**Table S2.** Multivariate logistic regression model (non linear age + OSV + gender + job category with multiple interaction) by campaign

**The 2016-17 influenza season**

|                             |               |   |        |
|-----------------------------|---------------|---|--------|
| Logistic regression         | Number of obs | = | 3,554  |
|                             | LR chi2(26)   | = | 271.65 |
|                             | Prob > chi2   | = | 0.0000 |
| Log likelihood = -962.67934 | Pseudo R2     | = | 0.1236 |

|                          | vacc | Odds Ratio | Std. Err. | z     | P> z  | [95% Conf. Interval] |          |
|--------------------------|------|------------|-----------|-------|-------|----------------------|----------|
| 1.rep_on-site            |      | 2.25191    | .2797474  | 6.53  | 0.000 | 1.765262             | 2.872718 |
| ageclas                  |      |            |           |       |       |                      |          |
| 35/44                    |      | .5502647   | .2743219  | -1.20 | 0.231 | .2071212             | 1.461904 |
| 45/54                    |      | .7844346   | .3979097  | -0.48 | 0.632 | .2902546             | 2.119993 |
| 55/64                    |      | .7437376   | .4008029  | -0.55 | 0.583 | .258645              | 2.138629 |
| 65/75                    |      | 2.290886   | 2.985381  | 0.64  | 0.525 | .1781375             | 29.46128 |
| professione3             |      |            |           |       |       |                      |          |
| infermieri               |      | .1043988   | .0560979  | -4.21 | 0.000 | .0364174             | .299283  |
| OHCWs                    |      | .0388687   | .0426943  | -2.96 | 0.003 | .0045146             | .3346408 |
| ageclas#professione3     |      |            |           |       |       |                      |          |
| 35/44#infermieri         |      | 1.28032    | .854841   | 0.37  | 0.711 | .3459317             | 4.738564 |
| 35/44#OHCWs              |      | 6.784419   | 8.222955  | 1.58  | 0.114 | .6307052             | 72.97917 |
| 45/54#infermieri         |      | 2.215389   | 1.382872  | 1.27  | 0.203 | .6518083             | 7.529739 |
| 45/54#OHCWs              |      | 3.554508   | 4.513856  | 1.00  | 0.318 | .2950137             | 42.82693 |
| 55/64#infermieri         |      | 4.381665   | 2.928592  | 2.21  | 0.027 | 1.182274             | 16.23904 |
| 55/64#OHCWs              |      | 2.721783   | 4.149283  | 0.66  | 0.511 | .1371578             | 54.01154 |
| 65/75#infermieri         |      | 1          | (empty)   |       |       |                      |          |
| 65/75#OHCWs              |      | 1          | (empty)   |       |       |                      |          |
| sex                      |      |            |           |       |       |                      |          |
| M                        |      | .2071989   | .1768297  | -1.84 | 0.065 | .0388998             | 1.103642 |
| ageclas#sex              |      |            |           |       |       |                      |          |
| 35/44#M                  |      | 6.193781   | 5.613682  | 2.01  | 0.044 | 1.048278             | 36.59614 |
| 45/54#M                  |      | 4.968021   | 4.535375  | 1.76  | 0.079 | .8300607             | 29.73426 |
| 55/64#M                  |      | 7.225502   | 6.663495  | 2.14  | 0.032 | 1.185425             | 44.04151 |
| 65/75#M                  |      | 4.964457   | 7.611194  | 1.05  | 0.296 | .2458868             | 100.2325 |
| professione3#sex         |      |            |           |       |       |                      |          |
| infermieri#M             |      | 11.71335   | 11.48298  | 2.51  | 0.012 | 1.714825             | 80.0096  |
| OHCWs#M                  |      | 16.03724   | 24.10879  | 1.85  | 0.065 | .8423986             | 305.3103 |
| ageclas#professione3#sex |      |            |           |       |       |                      |          |
| 35/44#infermieri#M       |      | .2019916   | .2313041  | -1.40 | 0.162 | .0214095             | 1.90572  |
| 35/44#OHCWs#M            |      | .0837038   | .1395486  | -1.49 | 0.137 | .0031889             | 2.197069 |
| 45/54#infermieri#M       |      | .2101029   | .2310443  | -1.42 | 0.156 | .0243438             | 1.813322 |
| 45/54#OHCWs#M            |      | .146599    | .2493905  | -1.13 | 0.259 | .005225              | 4.11314  |
| 55/64#infermieri#M       |      | .096655    | .1092412  | -2.07 | 0.039 | .0105483             | .8856613 |
| 55/64#OHCWs#M            |      | .4532179   | .8490142  | -0.42 | 0.673 | .0115279             | 17.81825 |
| 65/75#infermieri#F       |      | 1          | (empty)   |       |       |                      |          |
| 65/75#infermieri#M       |      | 1          | (empty)   |       |       |                      |          |
| 65/75#OHCWs#F            |      | 1          | (empty)   |       |       |                      |          |
| 65/75#OHCWs#M            |      | 1          | (empty)   |       |       |                      |          |

|       |  |          |          |       |       |          |          |
|-------|--|----------|----------|-------|-------|----------|----------|
| _cons |  | .2182562 | .0971705 | -3.42 | 0.001 | .0912012 | .5223152 |
|-------|--|----------|----------|-------|-------|----------|----------|

Note: \_cons estimates baseline odds.

note: 5.ageclas#1.professione3#1.sex != 0 predicts failure perfectly  
5.ageclas#1.professione3#1.sex dropped and 1 obs not used

note: 5.ageclas#1.professione3#2.sex != 0 predicts failure perfectly  
5.ageclas#1.professione3#2.sex dropped and 1 obs not used

note: 5.ageclas#2.professione3#1.sex identifies no observations in the sample

note: 5.ageclas#2.professione3#2.sex identifies no observations in the sample

# The 2017-18 influenza season

|                             |               |   |        |
|-----------------------------|---------------|---|--------|
| Logistic regression         | Number of obs | = | 3,663  |
|                             | LR chi2(27)   | = | 278.13 |
|                             | Prob > chi2   | = | 0.0000 |
| Log likelihood = -1346.4562 | Pseudo R2     | = | 0.0936 |

|                          | vacc | Odds Ratio | Std. Err. | z     | P> z  | [95% Conf. Interval] |          |
|--------------------------|------|------------|-----------|-------|-------|----------------------|----------|
| 1.rep_onsite             |      | 2.618295   | .2792614  | 9.02  | 0.000 | 2.124376             | 3.227051 |
| ageclas                  |      |            |           |       |       |                      |          |
| 35/44                    |      | .670469    | .3804721  | -0.70 | 0.481 | .2204683             | 2.038973 |
| 45/54                    |      | 1.145955   | .6540401  | 0.24  | 0.811 | .374416              | 3.507363 |
| 55/64                    |      | 1.395336   | .826212   | 0.56  | 0.574 | .4371816             | 4.453441 |
| 65/75                    |      | 2.973572   | 2.9453    | 1.10  | 0.271 | .4267466             | 20.71987 |
| professione3             |      |            |           |       |       |                      |          |
| infermieri               |      | .2876309   | .1614169  | -2.22 | 0.026 | .0957516             | .864023  |
| OHCWs                    |      | .2525542   | .166714   | -2.08 | 0.037 | .0692574             | .9209645 |
| ageclas#professione3     |      |            |           |       |       |                      |          |
| 35/44#infermieri         |      | 1.027372   | .6497559  | 0.04  | 0.966 | .2974334             | 3.54867  |
| 35/44#OHCWs              |      | 1.842813   | 1.401396  | 0.80  | 0.421 | .4151185             | 8.180702 |
| 45/54#infermieri         |      | .9059028   | .5613404  | -0.16 | 0.873 | .2689285             | 3.051592 |
| 45/54#OHCWs              |      | 1.597637   | 1.206091  | 0.62  | 0.535 | .3638207             | 7.015664 |
| 55/64#infermieri         |      | 1.052272   | .6891813  | 0.08  | 0.938 | .291499              | 3.79856  |
| 55/64#OHCWs              |      | .9787439   | .8338045  | -0.03 | 0.980 | .1842975             | 5.197789 |
| 65/75#infermieri         |      | 1.268191   | 2.011916  | 0.15  | 0.881 | .0565977             | 28.41646 |
| 65/75#OHCWs              |      | 1          | (empty)   |       |       |                      |          |
| sex                      |      |            |           |       |       |                      |          |
| M                        |      | .5221403   | .3772584  | -0.90 | 0.368 | .1266994             | 2.15179  |
| ageclas#sex              |      |            |           |       |       |                      |          |
| 35/44#M                  |      | 2.369235   | 1.835638  | 1.11  | 0.266 | .5189354             | 10.8169  |
| 45/54#M                  |      | 1.782121   | 1.381924  | 0.75  | 0.456 | .3898374             | 8.146871 |
| 55/64#M                  |      | 2.070052   | 1.622568  | 0.93  | 0.353 | .4454349             | 9.620068 |
| 65/75#M                  |      | 1.574585   | 1.817219  | 0.39  | 0.694 | .1639833             | 15.11933 |
| professione3#sex         |      |            |           |       |       |                      |          |
| infermieri#M             |      | 1.486696   | 1.238437  | 0.48  | 0.634 | .2905094             | 7.608236 |
| OHCWs#M                  |      | 2.90767    | 2.709377  | 1.15  | 0.252 | .4681583             | 18.05916 |
| ageclas#professione3#sex |      |            |           |       |       |                      |          |
| 35/44#infermieri#M       |      | 1.34778    | 1.271362  | 0.32  | 0.752 | .2121679             | 8.561663 |
| 35/44#OHCWs#M            |      | .2663342   | .2926129  | -1.20 | 0.229 | .03092               | 2.294113 |

|                    |  |          |          |       |       |          |          |
|--------------------|--|----------|----------|-------|-------|----------|----------|
| 45/54#infermieri#M |  | 1.757753 | 1.640484 | 0.60  | 0.546 | .282192  | 10.94891 |
| 45/54#OHCWs#M      |  | .2814848 | .3081852 | -1.16 | 0.247 | .032924  | 2.406566 |
| 55/64#infermieri#M |  | .9472328 | .9194685 | -0.06 | 0.955 | .1413204 | 6.34905  |
| 55/64#OHCWs#M      |  | 1.100662 | 1.23278  | 0.09  | 0.932 | .1225402 | 9.886197 |
| 65/75#infermieri#M |  | 1        | (empty)  |       |       |          |          |
| 65/75#OHCWs#F      |  | 1        | (empty)  |       |       |          |          |
| 65/75#OHCWs#M      |  | 1        | (empty)  |       |       |          |          |
| _cons              |  | .1760568 | .0943241 | -3.24 | 0.001 | .0616046 | .503144  |

Note: \_cons estimates baseline odds.

note: 5.ageclas#1.professione3#2.sex != 0 predicts failure perfectly

5.ageclas#1.professione3#2.sex dropped and 1 obs not used

note: 5.ageclas#2.professione3#1.sex identifies no observations in the sample

note: 5.ageclas#2.professione3#2.sex identifies no observations in the sample

#### The 2018-19 influenza season

|                             |               |   |        |
|-----------------------------|---------------|---|--------|
| Logistic regression         | Number of obs | = | 4,247  |
|                             | LR chi2(28)   | = | 209.13 |
|                             | Prob > chi2   | = | 0.0000 |
| Log likelihood = -2131.5149 | Pseudo R2     | = | 0.0468 |

|                      | vacc | Odds Ratio | Std. Err. | z     | P> z  | [95% Conf. Interval] |
|----------------------|------|------------|-----------|-------|-------|----------------------|
| ageclas              |      |            |           |       |       |                      |
| 35/44                |      | .852071    | .2278875  | -0.60 | 0.549 | .5044532 1.439232    |
| 45/54                |      | .8837209   | .2646266  | -0.41 | 0.680 | .49139 1.589293      |
| 55/64                |      | 1.952381   | .6171621  | 2.12  | 0.034 | 1.050736 3.627736    |
| 65/75                |      | .7272727   | .4557124  | -0.51 | 0.611 | .212976 2.483499     |
| professione3         |      |            |           |       |       |                      |
| infermieri           |      | .4111498   | .1104438  | -3.31 | 0.001 | .242856 .6960674     |
| OHCWs                |      | .2077922   | .0721963  | -4.52 | 0.000 | .1051681 .410558     |
| ageclas#professione3 |      |            |           |       |       |                      |
| 35/44#infermieri     |      | .9631617   | .3240763  | -0.11 | 0.911 | .4980744 1.862534    |
| 35/44#OHCWs          |      | 2.259201   | .9598913  | 1.92  | 0.055 | .9824167 5.195342    |
| 45/54#infermieri     |      | .8963202   | .315349   | -0.31 | 0.756 | .4497675 1.786233    |
| 45/54#OHCWs          |      | 2.231854   | 1.015084  | 1.77  | 0.078 | .9152195 5.442598    |
| 55/64#infermieri     |      | .639418    | .2409711  | -1.19 | 0.235 | .3054928 1.338347    |
| 55/64#OHCWs          |      | 1.183171   | .5769778  | 0.34  | 0.730 | .4549416 3.077082    |
| 65/75#infermieri     |      | 6.688559   | 7.950856  | 1.60  | 0.110 | .6508609 68.73485    |
| 65/75#OHCWs          |      | 3.308594   | 4.328605  | 0.91  | 0.360 | .2546969 42.97968    |
| sex                  |      |            |           |       |       |                      |
| M                    |      | .8125      | .2642945  | -0.64 | 0.523 | .4294769 1.537117    |
| ageclas#sex          |      |            |           |       |       |                      |
| 35/44#M              |      | 1.454545   | .5567293  | 0.98  | 0.328 | .6869557 3.079824    |
| 45/54#M              |      | 1.355072   | .5608129  | 0.73  | 0.463 | .6021187 3.049597    |
| 55/64#M              |      | .8775084   | .3655164  | -0.31 | 0.754 | .3878758 1.985226    |
| 65/75#M              |      | 1.282051   | .908242   | 0.35  | 0.726 | .3198083 5.139502    |
| professione3#sex     |      |            |           |       |       |                      |
| infermieri#M         |      | 2.021572   | .8521655  | 1.67  | 0.095 | .8848648 4.618504    |
| OHCWs#M              |      | 1.27574    | .736231   | 0.42  | 0.673 | .4116542 3.95359     |

|                          |  |          |          |       |       |          |          |
|--------------------------|--|----------|----------|-------|-------|----------|----------|
| ageclas#professione3#sex |  |          |          |       |       |          |          |
| 35/44#infermieri#M       |  | .4362081 | .2440891 | -1.48 | 0.138 | .1456755 | 1.306173 |
| 35/44#OHCWs#M            |  | .7517007 | .5239795 | -0.41 | 0.682 | .1917377 | 2.947015 |
| 45/54#infermieri#M       |  | .6240956 | .3538026 | -0.83 | 0.406 | .2054476 | 1.895837 |
| 45/54#OHCWs#M            |  | .4531746 | .3428342 | -1.05 | 0.295 | .1028768 | 1.996245 |
| 55/64#infermieri#M       |  | .9541551 | .5581736 | -0.08 | 0.936 | .3031604 | 3.00307  |
| 55/64#OHCWs#M            |  | 1.848439 | 1.34651  | 0.84  | 0.399 | .4433437 | 7.706719 |
| 65/75#infermieri#M       |  | 1        | (empty)  |       |       |          |          |
| 65/75#OHCWs#M            |  | 1.505009 | 2.807198 | 0.22  | 0.827 | .0388908 | 58.24132 |
|                          |  |          |          |       |       |          |          |
| _cons                    |  | .5       | .1137147 | -3.05 | 0.002 | .3201708 | .7808332 |

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Note: \_cons estimates baseline odds.

note: 5.ageclas#1.professione3#2.sex != 0 predicts failure perfectly  
5.ageclas#1.professione3#2.sex dropped and 1 obs not used