Chapter 9 Stata v10.1 Analysis Examples Syntax and Output

General Notes on Stata 10.1

Given that this tool is used throughout the ASDA textbook this chapter includes only the syntax and output for the analysis examples provided in Chapter 9. Stata 10.1 is an excellent tool for survey data analysis as well as graphing and related data management tasks. It offers a very comprehensive set of svy commands as well as weighted graphics and convenient syntax and data management abilities. For these reasons, we use Stata as the primary software for the ASDA text.

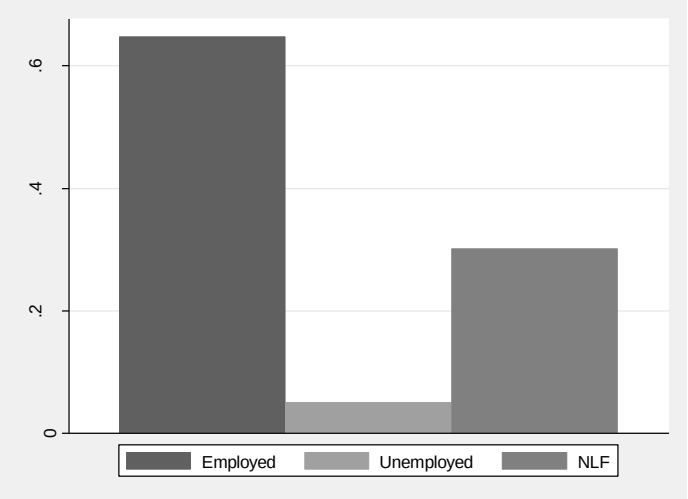
The examples and syntax presented here assume that all data management including variable construction, labels for variable values and other preparation steps are complete. See the Stata documentation for assistance with these issues.

All analysis examples presented can be done in Stata 10.1 and are included in this chapter's output.

Please check the Stata documentation and also the ASDA web site for updates to Stata as new versions are released. For example, we have already included an example of how to use Stata 11.0 with the new "factor" variable features/syntax and compared this to the older "xi" type of syntax for including categorical variables in data analysis.

CHAPTER 9 GENERALIZED LINEAR MODELS STATA 10

```
* figure 9.2 bar graph of work status weighted by ncsrwtlg (part 2 weight)
* create a series of dummys for the graph
tabulate wkstat3c , gen(pid)

graph bar pid* [pweight=ncsrwtlg] , ytitle("Proportions")
/// legend(row(1) lab(1 "Employed") lab(2 "Unemployed") lab(3 "NLF"))
```



```
. * table 9.1 : bivariate associations  of work status and each predictor
. svy: tab wkstat3c sex
(running tabulate on estimation sample)

Number of strata   =        42                  Number of obs      =      5679
Number of PSUs     =        84                  Population size    =  5667.185
                                                Design df          =        42

-----------------------------------
work      |
status 3  |
categorie |          sex
s         |   Male  Female   Total
----------+------------------------
 employed |  .3385   .3093   .6478
 unemploy |  .0131   .0381   .0511
      NLF |  .1188   .1822    .301
          |
    Total |  .4703   .5297       1
-----------------------------------
  Key:  cell proportions

  Pearson:
    Uncorrected   chi2(2)         =  133.3685
    Design-based  F(1.87, 78.75)  =   27.3292     P = 0.0000

. svy: tab wkstat3c ald
(running tabulate on estimation sample)

Number of strata   =        42                  Number of obs      =      5679
Number of PSUs     =        84                  Population size    =  5667.185
                                                Design df          =        42

--------------------------------
work      |
status 3  |
categorie |       AlcDep
s         |     0      1  Total
----------+---------------------
 employed | .6111  .0367  .6478
 unemploy | .0499  .0013  .0511
      NLF | .2847  .0163   .301
          |
    Total | .9457  .0543      1
--------------------------------
  Key:  cell proportions

  Pearson:
    Uncorrected   chi2(2)         =    5.3510
    Design-based  F(1.72, 72.44)  =    3.1249     P = 0.0572

. svy: tab wkstat3c mde
(running tabulate on estimation sample)

Number of strata   =        42                  Number of obs      =      5679
Number of PSUs     =        84                  Population size    =  5667.185
                                                Design df          =        42

--------------------------------
work      |
status 3  |
categorie |   MajorDepEpisode
s         |     0      1  Total
----------+---------------------
 employed | .5175  .1304  .6478
 unemploy | .0438  .0073  .0511
      NLF | .2462  .0548   .301
          |
    Total | .8075  .1925      1
--------------------------------
  Key:  cell proportions

  Pearson:
    Uncorrected   chi2(2)         =    7.5367
    Design-based  F(1.73, 72.86)  =    4.6693     P = 0.0161
```

```
. svy: tab wkstat3c ed4cat
(running tabulate on estimation sample)

Number of strata   =        42                  Number of obs      =      5679
Number of PSUs     =        84                  Population size    =  5667.185
                                                Design df          =        42

-------------------------------------------
work      |
status 3  |
categorie |  years of education-4 categories
s         |  0-11     12  13-15    16+  Total
----------+--------------------------------
 employed | .0706  .2015  .1964  .1793  .6478
 unemploy | .0157  .0193  .0101   .006  .0511
      NLF | .0787  .1054  .0701  .0468   .301
          |
    Total |  .165  .3262  .2767  .2321      1
-------------------------------------------
  Key:  cell proportions

  Pearson:
    Uncorrected   chi2(6)         =  328.7331
    Design-based  F(5.15, 216.12) =   27.6404     P = 0.0000

. svy: tab wkstat3c ag4cat
(running tabulate on estimation sample)

Number of strata   =        42                  Number of obs      =      5679
Number of PSUs     =        84                  Population size    =  5667.185
                                                Design df          =        42

-------------------------------------------
work      |
status 3  |
categorie |              ag4cat
s         |  <=29  30-44  45-59   >=60  Total
----------+--------------------------------
 employed | .1644  .2327  .2025  .0482  .6478
 unemploy | .0068  .0084  .0074  .0284  .0511
      NLF | .0633   .047  .0551  .1356   .301
          |
    Total | .2345  .2882  .2651  .2122      1
-------------------------------------------
  Key:  cell proportions

  Pearson:
    Uncorrected   chi2(6)         = 1244.6688
    Design-based  F(4.96, 208.51) =  113.4945     P = 0.0000

. svy: tab wkstat3c mar3cat
(running tabulate on estimation sample)

Number of strata   =        42                  Number of obs      =      5679
Number of PSUs     =        84                  Population size    =  5667.185
                                                Design df          =        42

-------------------------------------------------
work      |
status 3  |
categorie |      marital status-3 categories
s         |  married  sep/wid/  never ma     Total
----------+--------------------------------------
 employed |     .375      .112     .1609     .6478
 unemploy |    .0361     .0141   9.3e-04     .0511
      NLF |    .1495     .0817     .0698      .301
          |
    Total |    .5607     .2077     .2316         1
-------------------------------------------------
  Key:  cell proportions

  Pearson:
    Uncorrected   chi2(4)         =  148.6144
    Design-based  F(3.20, 134.34) =   23.1237     P = 0.0000
```

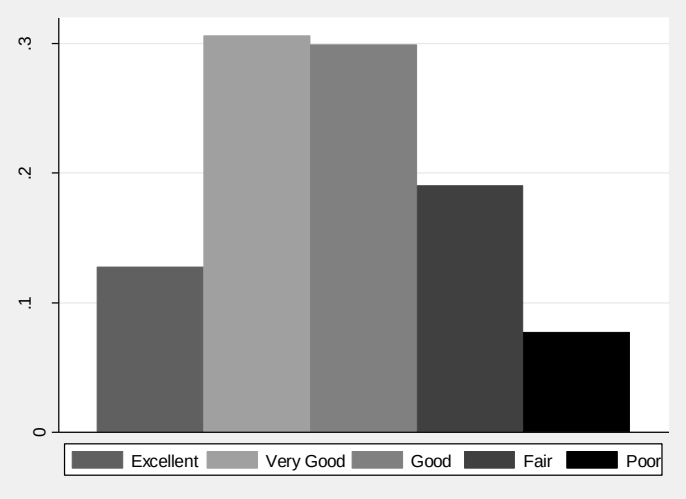
```
. char sex[omit] 2

. tab mar3cat

      marital |
     status-3 |
   categories |      Freq.     Percent        Cum.
--------------+-----------------------------------
      married |      5,322       57.34       57.34
  sep/wid/div |      2,017       21.73       79.07
never married |      1,943       20.93      100.00
--------------+-----------------------------------
        Total |      9,282      100.00
```

```
*run mlogit model with coefficients and rrr NCS-R DATA

. xi: svy: mlogit wkstat3 i.sex ald mde i.ed4cat i.ag4cat i.mar3cat
i.sex              _Isex_1-2           (naturally coded; _Isex_2 omitted)
i.ed4cat           _Ied4cat_1-4        (naturally coded; _Ied4cat_1 omitted)
i.ag4cat           _Iag4cat_1-4        (naturally coded; _Iag4cat_1 omitted)
i.mar3cat          _Imar3cat_1-3       (naturally coded; _Imar3cat_1 omitted)
(running mlogit on estimation sample)

Survey: Multinomial logistic regression

Number of strata   =        42                  Number of obs      =      5679
Number of PSUs     =        84                  Population size    =  5667.185
                                                Design df          =        42
                                                F(  22,     21)    =     73.91
                                                Prob > F           =    0.0000

------------------------------------------------------------------------------
             |             Linearized
    wkstat3c |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
unemployed   |
     _Isex_1 |  -1.393197   .1976398    -7.05   0.000     -1.79205   -.9943436
         ald |  -.1637813   .3569514    -0.46   0.649    -.8841385    .5565758
         mde |   -.139756   .1572447    -0.89   0.379    -.4570887    .1775767
  _Ied4cat_2 |  -.8470398   .2353963    -3.60   0.001    -1.322089   -.3719908
  _Ied4cat_3 |  -1.365302   .2575147    -5.30   0.000    -1.884987   -.8456159
  _Ied4cat_4 |  -1.730957   .3104877    -5.57   0.000    -2.357547   -1.104367
  _Iag4cat_2 |  -.8523907    .294547    -2.89   0.006    -1.446811   -.2579707
  _Iag4cat_3 |  -.8377006   .2581043    -3.25   0.002    -1.358576   -.3168249
  _Iag4cat_4 |   1.828395   .2946914     6.20   0.000     1.233684    2.423106
 _Imar3cat_2 |  -.5899026   .2252277    -2.62   0.012     -1.04443   -.1353748
 _Imar3cat_3 |  -2.784566   .3802692    -7.32   0.000     -3.55198   -2.017152
       _cons |  -.6438012   .2960744    -2.17   0.035    -1.241304   -.0462987
-------------+----------------------------------------------------------------
NLF          |
     _Isex_1 |  -.6402555   .1100395    -5.82   0.000    -.8623243   -.4181868
         ald |   .3332477   .1302422     2.56   0.014     .0704083    .5960872
         mde |    .098522    .087975     1.12   0.269    -.0790187    .2760627
  _Ied4cat_2 |  -.6514012   .1410189    -4.62   0.000    -.9359888   -.3668136
  _Ied4cat_3 |   -.916942   .1464935    -6.26   0.000    -1.212578   -.6213061
  _Ied4cat_4 |  -1.229501   .1595886    -7.70   0.000    -1.551563   -.9074379
  _Iag4cat_2 |   -.316445   .1287828    -2.46   0.018    -.5763393   -.0565507
  _Iag4cat_3 |   .0649931   .1708814     0.38   0.706    -.2798596    .4098458
  _Iag4cat_4 |   2.380607   .1733995    13.73   0.000     2.030672    2.730541
 _Imar3cat_2 |  -.0522634   .1050115    -0.50   0.621    -.2641851    .1596584
 _Imar3cat_3 |   .5527891   .1323628     4.18   0.000     .2856701    .8199081
       _cons |  -.3794741    .172921    -2.19   0.034    -.7284429   -.0305053
------------------------------------------------------------------------------
(wkstat3c==employed is the base outcome)
```

```
. svy: mlogit, rrr

Survey: Multinomial logistic regression

Number of strata   =        42                  Number of obs      =      5679
Number of PSUs     =        84                  Population size    =  5667.185
                                                Design df          =        42
                                                F(  22,     21)    =     73.91
                                                Prob > F           =    0.0000

------------------------------------------------------------------------------
             |             Linearized
    wkstat3c |        RRR   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
unemployed   |
     _Isex_1 |   .2482803   .0490701    -7.05   0.000     .1666182    .3699662
         ald |   .8489276   .3030259    -0.46   0.649     .4130699    1.744688
         mde |   .8695704   .1367353    -0.89   0.379     .6331242     1.19432
  _Ied4cat_2 |   .4286821   .1009102    -3.60   0.001     .2665779    .6893606
  _Ied4cat_3 |   .2553036   .0657444    -5.30   0.000      .151831    .4292929
  _Ied4cat_4 |   .1771148    .054992    -5.57   0.000     .0946522    .3314205
  _Iag4cat_2 |   .4263943   .1255932    -2.89   0.006     .2353196    .7726178
  _Iag4cat_3 |   .4327044   .1116829    -3.25   0.002     .2570265    .7284583
  _Iag4cat_4 |   6.223889   1.834127     6.20   0.000     3.433855    11.28085
 _Imar3cat_2 |   .5543813    .124862    -2.62   0.012     .3518922    .8733885
 _Imar3cat_3 |   .0617559   .0234839    -7.32   0.000     .0286678    .1330338
-------------+----------------------------------------------------------------
NLF          |
     _Isex_1 |   .5271577   .0580082    -5.82   0.000     .4221797    .6582393
         ald |   1.395493   .1817521     2.56   0.014     1.072946    1.815003
         mde |   1.103539   .0970838     1.12   0.269     .9240227    1.317931
  _Ied4cat_2 |   .5213148   .0735152    -4.62   0.000     .3921979    .6929388
  _Ied4cat_3 |   .3997396   .0585593    -6.26   0.000     .2974295    .5372423
  _Ied4cat_4 |   .2924386   .0466699    -7.70   0.000     .2119164    .4035569
  _Iag4cat_2 |   .7287351   .0938486    -2.46   0.018     .5619518    .9450186
  _Iag4cat_3 |   1.067152   .1823564     0.38   0.706     .7558898    1.506585
  _Iag4cat_4 |   10.81146   1.874702    13.73   0.000     7.619207    15.34119
 _Imar3cat_2 |   .9490789   .0996642    -0.50   0.621     .7678314     1.17311
 _Imar3cat_3 |   1.738094    .230059     4.18   0.000     1.330653    2.270291
------------------------------------------------------------------------------
(wkstat3c==employed is the base outcome)

*tests of variables
. test ald

Adjusted Wald test

 ( 1)  [unemployed]ald = 0
 ( 2)  [NLF]ald = 0

       F(  2,    41) =    5.05
            Prob > F =    0.0110

. test mde

Adjusted Wald test

 ( 1)  [unemployed]mde = 0
 ( 2)  [NLF]mde = 0

       F(  2,    41) =    1.14
            Prob > F =    0.3302

. test _Isex_1

Adjusted Wald test

 ( 1)  [unemployed]_Isex_1 = 0
 ( 2)  [NLF]_Isex_1 = 0

       F(  2,    41) =   35.75
            Prob > F =    0.0000

. test _Ied4cat_2 _Ied4cat_3 _Ied4cat_4

Adjusted Wald test

 ( 1)  [unemployed]_Ied4cat_2 = 0
 ( 2)  [NLF]_Ied4cat_2 = 0
 ( 3)  [unemployed]_Ied4cat_3 = 0
 ( 4)  [NLF]_Ied4cat_3 = 0
 ( 5)  [unemployed]_Ied4cat_4 = 0
```

```
 ( 6)  [NLF]_Ied4cat_4 = 0

       F(  6,    37) =   13.68
            Prob > F =    0.0000

. test _Iag4cat_2 _Iag4cat_3 _Iag4cat_4

Adjusted Wald test

 ( 1)  [unemployed]_Iag4cat_2 = 0
 ( 2)  [NLF]_Iag4cat_2 = 0
 ( 3)  [unemployed]_Iag4cat_3 = 0
 ( 4)  [NLF]_Iag4cat_3 = 0
 ( 5)  [unemployed]_Iag4cat_4 = 0
 ( 6)  [NLF]_Iag4cat_4 = 0

       F(  6,    37) =   83.59
            Prob > F =    0.0000

. test _Imar3cat_2 _Imar3cat_3

Adjusted Wald test

 ( 1)  [unemployed]_Imar3cat_2 = 0
 ( 2)  [NLF]_Imar3cat_2 = 0
 ( 3)  [unemployed]_Imar3cat_3 = 0
 ( 4)  [NLF]_Imar3cat_3 = 0

       F(  4,    39) =   24.81
            Prob > F =    0.0000



. * adjusted Wald test for categories of dependent variable NLF unemployed (interaction type)
. test [NLF=unemployed]: _Ied4cat_2 _Ied4cat_3 _Ied4cat_4

Adjusted Wald test

 ( 1) - [unemployed]_Ied4cat_2 + [NLF]_Ied4cat_2 = 0
 ( 2) - [unemployed]_Ied4cat_3 + [NLF]_Ied4cat_3 = 0
 ( 3) - [unemployed]_Ied4cat_4 + [NLF]_Ied4cat_4 = 0

       F(  3,    40) =    1.25
            Prob > F =    0.3030
```

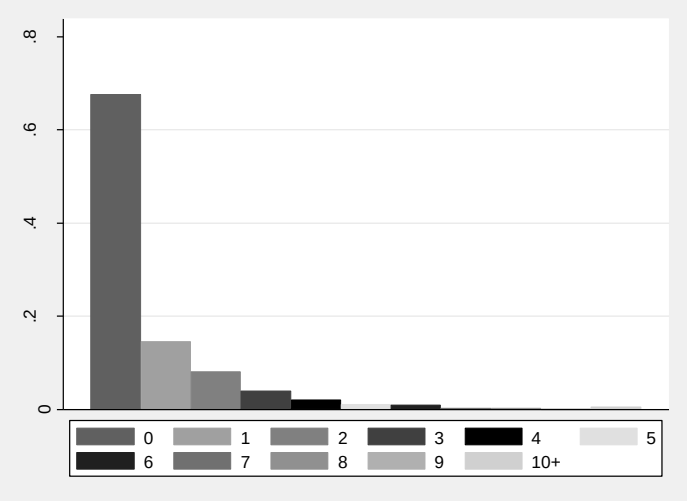
```
* figure 9.4 :weighted bar chart of self rated health HRS DATA
. * create a series of dummys for the graph
. tabulate selfrhealth, gen(pid)

selfrhealth |      Freq.     Percent        Cum.
------------+-----------------------------------
  Excellent |      2,032       11.02       11.02
  Very Good |      5,260       28.52       39.54
       Good |      5,622       30.48       70.02
       Fair |      3,874       21.01       91.03
       Poor |      1,654        8.97      100.00
------------+-----------------------------------
      Total |     18,442      100.00

graph bar pid* [pweight=kwgtr] , ytitle("Proportion")  ///
>  legend(row(1) lab(1 "Excellent") lab(2 "Very Good") lab(3 "Good") lab(4 "Fair") lab(5 "Poor"))
```




```
* table 9.5 ordinal logistic regression with self rated health predicted by age and gender HRS DATA

. char gender [omit] 2

. xi: svy: ologit selfrhealth kage i.gender
i.gender          _Igender_1-2        (naturally coded; _Igender_2 omitted)
(running ologit on estimation sample)

Survey: Ordered logistic regression

Number of strata   =        56                  Number of obs      =     18443
Number of PSUs     =       112                  Population size    =  76444941
                                                Design df          =        56
                                                F(   2,     55)    =     90.21
                                                Prob > F           =    0.0000

------------------------------------------------------------------------------
             |             Linearized
 selfrhealth |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       kage |   .0288108   .0021779    13.23   0.000     .0244478    .0331737
  _Igender_1 |  -.0706774   .0323277    -2.19   0.033    -.1354376   -.0059172
-------------+----------------------------------------------------------------
       /cut1 |   -.070904   .1530326    -0.46   0.645    -.3774652    .2356572
       /cut2 |   1.614166   .1528562    10.56   0.000     1.307958    1.920374
       /cut3 |   2.916734   .1587994    18.37   0.000     2.598621    3.234848
       /cut4 |   4.405277   .1652987    26.65   0.000     4.074144     4.73641
------------------------------------------------------------------------------
```

```
*table 9.6 cumulative odds ratios

. ologit, or

Survey: Ordered logistic regression

Number of strata   =        56                  Number of obs      =     18443
Number of PSUs     =       112                  Population size    =  76444941
                                                Design df          =        56
                                                F(   2,     55)    =     90.21
                                                Prob > F           =    0.0000

------------------------------------------------------------------------------
             |             Linearized
 selfrhealth | Odds Ratio   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        kage |    1.02923   .0022416    13.23   0.000     1.024749     1.03373
  _Igender_1 |   .9317625   .0301218    -2.19   0.033     .8733337    .9941003
-------------+----------------------------------------------------------------
       /cut1 |   -.070904   .1530326                     -.3774652    .2356572
       /cut2 |   1.614166   .1528562                      1.307958    1.920374
       /cut3 |   2.916734   .1587994                      2.598621    3.234848
       /cut4 |   4.405277   .1652987                      4.074144     4.73641
------------------------------------------------------------------------------
```

```
*Poisson regression for count models HRS DATA

*figure 9.6 Number of Falls Past 24 Months

tab numfalls24 if age65p==1 , gen(ha)

graph bar ha1-ha11 [pweight=kwgtr] , ytitle ("Proportion") ///
legend(row(2) lab(1 "0") lab(2 "1") lab(3 "2") lab(4 "3") lab(5 "4") lab(6 "5") lab(7 "6") lab(8 "7")
lab(9 "8") ///
 lab(10 "9") lab(11 "10+"))
```



```
. * numbers for table 9.7
. sum numfalls24 if age65p==1, detail

                        numfalls24
-------------------------------------------------------------
      Percentiles      Smallest
 1%             0              0
 5%             0              0
10%             0              0       Obs                11197
25%             0              0       Sum of Wgt.        11197

50%             0                      Mean           .9014915
                        Largest       Std. Dev.       2.48224
75%             1             50
90%             3             50       Variance       6.161517
95%             4             50       Skewness       8.680868
99%            10             50       Kurtosis       125.2901

. sum numfalls24 if numfalls24 >= 1 & age65p==1, detail

                        numfalls24
-------------------------------------------------------------
      Percentiles      Smallest
 1%             1              1
 5%             1              1
10%             1              1       Obs                 3690
25%             1              1       Sum of Wgt.         3690

50%             2                      Mean           2.735501
                        Largest       Std. Dev.       3.69888
75%             3             50
90%             5             50       Variance       13.68172
95%             8             50       Skewness       6.382844
99%            20             50       Kurtosis       62.92965
```

```
. * table 9.8 Poisson and Negative Binomial HRS DATA

. char gender[omit] 2
. xi: svy, subpop(age65p): poisson numfalls24 i.gender i.age3cat arthritis diabetes bodywgt totheight ,
irr exposure
> (offset24)
i.gender          _Igender_1-2        (naturally coded; _Igender_2 omitted)
i.age3cat         _Iage3cat_1-3       (naturally coded; _Iage3cat_1 omitted)
(running poisson on estimation sample)

Survey: Poisson regression

Number of strata   =        52                  Number of obs      =     17425
Number of PSUs     =       104                  Population size    =  72415112
                                                Subpop. no. of obs =     10440
                                                Subpop. size       =  35017430
                                                Design df          =        52
                                                F(   7,     46)    =     15.42
                                                Prob > F           =    0.0000

------------------------------------------------------------------------------
             |             Linearized
  numfalls24 |        IRR   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  _Igender_1 |   1.200965   .1289202     1.71   0.094     .9682335    1.489639
 _Iage3cat_2 |   1.269215   .0678555     4.46   0.000     1.140102    1.412949
 _Iage3cat_3 |   1.792955   .1613132     6.49   0.000     1.496795    2.147715
   arthritis |   1.626963   .1340905     5.91   0.000     1.378964    1.919565
    diabetes |   1.296426   .0893593     3.77   0.000     1.128962    1.488732
     bodywgt |   1.000924   .0008859     1.04   0.301     .9991481    1.002703
   totheight |    .977816   .0107869    -2.03   0.047     .9564084    .9997028
    offset24 | (exposure)
------------------------------------------------------------------------------
Note: 4 strata omitted because they contain no subpopulation members.

. estat effects

------------------------------------------------------------
             |             Linearized
  numfalls24 |      Coef.   Std. Err.       DEFF      DEFT
-------------+----------------------------------------------
  _Igender_1 |   .1831258   .1073471     1.05329    1.0263
 _Iage3cat_2 |   .2383983   .0534626     .612216   .782442
 _Iage3cat_3 |   .5838654   .0899705      1.2114   1.10063
   arthritis |   .4867153   .0824176     1.14045   1.06792
    diabetes |   .2596115   .0689274     1.00857   1.00427
     bodywgt |   .0009237   .0008851     .864631   .929855
   totheight |  -.0224337   .0110316     .814035   .902239
       _cons |  -2.684229   .6359342     .786584   .886896
------------------------------------------------------------
```

```
char gender[omit] 2
. xi: svy, subpop(age65p): nbreg numfalls24 i.gender i.age3cat arthritis diabetes bodywgt totheight ,
irr exposure(offset24)
i.gender          _Igender_1-2        (naturally coded; _Igender_2 omitted)
i.age3cat         _Iage3cat_1-3       (naturally coded; _Iage3cat_1 omitted)
(running nbreg on estimation sample)

Survey: Negative binomial regression

Number of strata   =        52                  Number of obs      =     17425
Number of PSUs     =       104                  Population size    =  72415112
                                                Subpop. no. of obs =     10440
                                                Subpop. size       =  35017430
                                                Design df          =        52
                                                F(   7,     46)    =     14.85
                                                Prob > F           =    0.0000

------------------------------------------------------------------------------
             |             Linearized
  numfalls24 |        IRR   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  _Igender_1 |   1.142626   .1324215     1.15   0.255     .9055383    1.441788
 _Iage3cat_2 |    1.28728   .0802976     4.05   0.000     1.135828    1.458928
 _Iage3cat_3 |   1.873708   .1751478     6.72   0.000     1.553242    2.260291
   arthritis |   1.663766   .1473437     5.75   0.000     1.392882    1.987333
    diabetes |   1.299653   .0895161     3.81   0.000     1.131887    1.492286
     bodywgt |   1.000924   .0009082     1.02   0.313     .9991033    1.002748
   totheight |    .985946   .0115215    -1.21   0.231     .9630954    1.009339
    offset24 | (exposure)
-------------+----------------------------------------------------------------
    /lnalpha |   1.272371   .0405174                     1.191067    1.353675
-------------+----------------------------------------------------------------
       alpha |   3.569304   .1446188                     3.290589    3.871627
------------------------------------------------------------------------------
Note: 4 strata omitted because they contain no subpopulation members.
```

```
. * table 9.9 zinb two part models zero inflated negative binomial HRS DATA

. char gender[omit] 2

. xi: svy, subpop(age65p): zinb numfalls24 i.gender i.age3cat arthritis diabetes bodywgt totheight ,
irr exposure(offset24) /
> //
> inflate(i.age3cat i.gender arthritis diabetes bodywgt totheight)
i.gender          _Igender_1-2        (naturally coded; _Igender_2 omitted)
i.age3cat         _Iage3cat_1-3       (naturally coded; _Iage3cat_1 omitted)
(running zinb on estimation sample)

Survey: Zero-inflated negative binomial regression

Number of strata   =        52                  Number of obs      =     17425
Number of PSUs     =       104                  Population size    =  72415112
                                                Subpop. no. of obs =     10440
                                                Subpop. size       =  35017430
                                                Design df          =        52
                                                F(   7,     46)    =      3.17
                                                Prob > F           =    0.0080

------------------------------------------------------------------------------
             |             Linearized
             |        IRR   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
numfalls24   |
  _Igender_1 |   1.457223   .2004076     2.74   0.008     1.105795    1.920337
 _Iage3cat_2 |   1.078548   .0923776     0.88   0.381     .9082341    1.280801
 _Iage3cat_3 |   1.279948   .1562197     2.02   0.048     1.001906    1.635149
   arthritis |   1.439035   .1738658     3.01   0.004     1.129221    1.833851
    diabetes |    1.12969   .1024673     1.34   0.185     .9417009    1.355206
     bodywgt |   .9999821    .001032    -0.02   0.986     .9979133    1.002055
   totheight |   .9830855   .0125757    -1.33   0.188     .9581717    1.008647
    offset24 | (exposure)
-------------+----------------------------------------------------------------
inflate      |
 _Iage3cat_2 |  -.7577216   .2367305    -3.20   0.002    -1.232756   -.2826872
 _Iage3cat_3 |  -28.72435    1.79479   -16.00   0.000    -32.32586   -25.12284
  _Igender_1 |    1.24634   .3386231     3.68   0.001     .5668433    1.925837
   arthritis |  -.6408446   .2227805    -2.88   0.006    -1.087886   -.1938029
    diabetes |  -.9289489   .3591926    -2.59   0.013    -1.649722   -.2081762
     bodywgt |  -.0053818   .0027616    -1.95   0.057    -.0109234    .0001598
   totheight |  -.0023997   .0324576    -0.07   0.941    -.0675306    .0627312
       _cons |    .154651   1.852995     0.08   0.934    -3.563655    3.872957
-------------+----------------------------------------------------------------
    /lnalpha |   .9693604    .040975    23.66   0.000      .887138    1.051583
-------------+----------------------------------------------------------------
       alpha |   2.636258   .1080208                      2.42817    2.862178
------------------------------------------------------------------------------
Note: 4 strata omitted because they contain no subpopulation members.
```