

**Dataset Integrity Check (DSIC) for the  
Boston Area Community Health Survey (BACH) Baseline File**  
**Addendum: Additional Analysis using Full Legacy Medication Dataset**  
Reference paper: FitzGerald MP, et.al. The Association of Nocturia With Cardiac Disease,  
Diabetes, Body Mass Index, Age and Diuretic Use: Results from the BACH Survey  
*The Journal of Urology* 177 [Apr 2007]: 1385-89.

The BACH survey is a population based epidemiological survey of a broad range of urological symptoms in randomly selected respondents. The BACH sample of 5506 participants was recruited from April 2002 through June 2005. In 2007, BACH main study survey data was submitted to the NIDDK Data Repository, and a data set integrity check (DSIC) performed on the data with reference to the publication FitzGerald MP [2007]<sup>1</sup>. For the purposes of completing the aforementioned DSIC, a single medication variable was submitted to the Repository by the Data Coordinating Center, as the entire legacy medication dataset was not yet available. The current analysis is performed to verify published results on medication use could be reproduced using the full legacy medication dataset.

**Archived Medication Dataset Contents.** The DCC submitted a single *PC-SAS v9* analytical data file (*<bachmeds.sas7bdat>*) representing medication intake data collected from data collection forms, along with a documentation file, *<Sloan Medication Data Systems.doc>*. In total, the data file contains 36145 observations and 8 variables, including the participant identification number, *<id>*, drug (medication) number, *<drugnum>*, drug class *<classlbl>*, and drug coalition number, *<coalitionnum>*. The file contains 4867 unique participant ID numbers, 201 unique drug numbers, 116 drug classes, and 69 coalition numbers.

There is no unique record identifier; rather, unique records in the medication dataset are identified by unique combinations of id-drug-class and/or id-drug-coalition. One drug may belong to simultaneous multiple classes and/or multiple coalitions. The total number of unique drugs taken by the participant is designated by the variable *<drugcnt>*, which is constant for each participant ID.

For purposes of confidentiality, drugs or drug classes reported at low frequency are recoded to “Miscellaneous”.

Remaining variables in the file are: *<indic>*, item number from the medication questionnaire; *<druglbl>*, character label for drug number; and *<coalitionlbl>*, the character label for coalition number. (Accompanying documentation by the DCC refers to *<coalitionlbl>* as “*<coalitionlbl>*”.)

## Analysis

**Part I.** A single variable, an indicator for diuretic use,  $\langle diuretic01 \rangle$ , was previously submitted to the Repository for the purpose of completing the main study data DSIC. Participants taking diuretics were identified by ( $\langle diuretic01 \rangle = 1$ ); those not taking diuretics, as ( $\langle diuretic01 \rangle = 0$ ). For the current analysis,  $\langle diuretic01 \rangle$  is set out for replication using the full legacy medication dataset. For simplicity, the new diuretic indicator from the full legacy dataset shall be referred to as " $\langle diu\_legacy01 \rangle$ ". The steps for calculating  $\langle diu\_legacy01 \rangle$  are as follows:

- All participants reporting medications with at least one occurrence of the word "Diuretic" in a medication's class or coalition labels are considered as diuretic users; i.e., ( $\langle diu\_legacy01 \rangle = 1$ ). Remaining subjects, including those who did not report medication use, are considered as non-users of diuretics, or ( $\langle diu\_legacy01 \rangle = 0$ ).
- Comparison of  $\langle diuretic01 \rangle$  to  $\langle diu\_legacy01 \rangle$  is 99.7% concordant. All diuretic users according to the previously submitted variable ( $\langle diuretic01 \rangle = 1$ ) are also classified as diuretic users per the full legacy variable ( $\langle diu\_legacy01 \rangle = 1$ ). However, eighteen additional subjects are classified as diuretic users per the full legacy variable ( $\langle diu\_legacy01 \rangle = 1$ ), though not as users according to the previous indicator variable ( $\langle diuretic01 \rangle = 0$ ). [Table 1].
- Upon examination of the 18 discordant pairings, it is noted that drug code for all is "miscellaneous", leaving open the possibility these are infrequently reported drugs that have been recoded in the legacy dataset.

In summary, the variable on diuretic use, as previously submitted by the DCC, was reproduced in the full medication legacy dataset with a differential rate of 0.3%. Differences are possibly attributable to low frequency responses being recoded to "miscellaneous" in the legacy dataset.

[Table 1.]

		Diuretic according to full Legacy dataset		Diuretic according to previous indicator	
Frequency	Percent				
Row Pct	Col Pct	N	Y	Total	
		N	0	4674	
			0.00	84.89	
			0.00	100.00	
			0.00	99.62	
		Y	814	18	832
			14.78	0.33	15.11
			97.84	2.16	
			100.00	0.38	
Total		4692	814	5506	
		85.22	14.78	100.00	

**Part II.** After creating a variable for diuretic use using the full legacy medication dataset, the prevalence of nocturia by diuretic use is calculated and compared to published results.

The method for defining nocturia status is previously described in the main study DSIC<sup>1</sup>. The prevalence of nocturia by diuretic use/nonuse is estimated, as well as the effect of diuretic use on the prevalence of nocturia. Prevalences are reported as weighted percents, and Chi-square tests are used to assess differences in two-way breakdowns.

Results of the analysis show weighted distributions of diuretic use, overall and by gender, match published breakdowns in Fitzgerald MP [2007]<sup>1</sup> when rounded to the nearest whole number. Observed numbers of participants using diuretics differ in DSIC versus published results, corresponding with the 18 discordant designations described in Part I. [Table 2].

Table 2.

Diuretic Use in 5,506 BACH respondents (published results extracted from Table 1 in Fitzgerald, MP, 2007: p. 1387)				
	No. Overall (weighted prevalence)		Difference	
	Archived	Published		
Overall (weighted %)	832 (11.2)	814 (10.8)	-18	(-0.4)
Men (weighted %)	256 (8.0)	255 (8.0)	-1	(0.0)
Women (weighted %)	576 (14.1)	559 (13.4)	-17	(-0.7)
P value	<0.001	<0.001	0	

The prevalence of nocturia in diuretic users/nonusers match published breakdowns when rounded to the nearest whole number [Table 3]. Differences in observed versus published numbers of nocturia may be due to the inclusion of multiply imputed missing data in published results, as described previously<sup>1</sup>, and possibly to low frequency responses being recoded to “miscellaneous” in the legacy medication dataset.

Table 3.

Nocturia in BACH survey overall and by diuretic use (published results extracted from Table 2 in Fitzgerald, MP, 2007: p. 1388)				
	No. Overall (weighted prevalence)		Difference	
	Archived	Published		
Overall	1865 (28.4)	1872 (28.4)	7	(0.0)
Diuretic use				
Yes (weighted %)	429 (48.1)	422 (48.4)	-7	(0.3)
No (weighted %)	1436 (25.9)	1451 (26.0)	15	(0.1)
OR (95% CI)	2.64 (2.09, 3.34)	2.66 (2.13, 3.34)	0.02	(0.04, 0)
P value	<0.001	<0.001	0	

In summary, analyses of a diuretic use indicator, created using the BACH full legacy medication dataset, replicated published prevalences with rounding to the nearest whole number.

#### References.

[1] Dataset Integrity Check (DSIC) for the Boston Area Community Health Survey (BACH) Baseline File, with reference to: FitzGerald MP, et.al. The Association of Nocturia With Cardiac Disease, Diabetes, Body Mass Index, Age and Diuretic Use: Results from the BACH Survey *The Journal of Urology* 177 [Apr 2007]: 1385-89.

BACH Baseline DSIC may be downloaded from:

<https://www.niddkrepository.org/niddk/jsp/public/dataset.jsp#BACH> .

# Attachment 1

**SAS 9.1 and SAS-Callable SUDAAN 9.0.1 Log  
for programming code submitted  
for the replication of results  
in Tables 1 and 2 of  
Fitzgerald MP, et.al. [Apr 2007]**

```

1                               The SAS System                               17:03 Friday, May 1, 2009
NOTE: Copyright (c) 2002-2003 by SAS Institute Inc., Cary, NC, USA.
NOTE: SAS (r) 9.1 (TS1M3)
      Licensed to RTI INTERNATIONAL, Site 0047670001.
NOTE: This session is executing on the XP_PRO platform.
NOTE: SAS 9.1.3 Service Pack 4
NOTE: SAS initialization used:
      real time          7.28 seconds
      cpu time           0.62 seconds
1      *****
2      * BACH DSIC diuretic full legacy.sas                                *
3      * Purpose: to complete Data Set Integrity Analyses                *
4      * on BACH study legacy dataset                                    *
5      * using data from BACH medication legacy dataset                 *
6      * comparison study paper: Fitzgerald, 2007 Apr (J.Urology)*      *
7      * Programmed by: S. Tan                                           *
8      *****;
9      options ps=60 ls=78 nonumber formchar='|----|+\---+=|~^<>*' mprint
orientation=portrait
9      ! ;
10
11     libname bach 'Z:\05_Users\Sylvia\BACH\data';
NOTE: Libref BACH was successfully assigned as follows:
      Engine:          V9
      Physical Name: Z:\05_Users\Sylvia\BACH\data
12     libname library 'Z:\05_Users\Sylvia\BACH\data';
NOTE: Libname LIBRARY refers to the same physical library as BACH.
NOTE: Libref LIBRARY was successfully assigned as follows:
      Engine:          V9
      Physical Name: Z:\05_Users\Sylvia\BACH\data
13     libname mednutr 'Z:\05_Users\Sylvia\BACH\data\MEDNUTR';
NOTE: Libref MEDNUTR was successfully assigned as follows:
      Engine:          V9
      Physical Name: Z:\05_Users\Sylvia\BACH\data\MEDNUTR
14
15     * Medication info:
16     * Notes. 1. There are no formats assigned to the variables (even
though formats are
16     ! implied in the
17     README.TXT
18     2. There is no unique record ID #, or unique patient-
drug #.
19     Unique records appear to be identified by Drug-Class or
Drug-Coalition.
20     A drug may belong to multiple classes or to
21     multiple coalitions (class/coalition do not completely
match up).
22     Variable DrugCnt verifies unique # of drugs being
taken.
23     3. Variable CoalitionLbl is misspelled as CaalitionLbl .
* ;
24
25     * BACH Full Legacy Medication Dataset, submitted 12/08 * ;
26     data bachmeds; set mednutr.bachmeds;
27     recordid+1; * to create unique ID for records, it is not in the
dataset * ;
28

```

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29           \* attempt to recreate DIURETIC variable from BACH DSIC analysis \*;

NOTE: There were 36145 observations read from the data set MEDNUTR.BACHMEDS.

NOTE: The data set WORK.BACHMEDS has 36145 observations and 9 variables.

NOTE: DATA statement used (Total process time):

real time	32.23 seconds
cpu time	0.29 seconds

30           proc freq data=bachmeds noprint; where classlbl contains  
"DIURETIC" or caalitionlbl

30           ! contains "DIURETIC";

31           tables recordid/out=a; run;

NOTE: There were 998 observations read from the data set WORK.BACHMEDS.

WHERE classlbl contains 'DIURETIC' or caalitionlbl contains 'DIURETIC';

NOTE: The data set WORK.A has 998 observations and 3 variables.

NOTE: PROCEDURE FREQ used (Total process time):

real time	0.07 seconds
cpu time	0.07 seconds

32           data bachmeds; merge bachmeds a(in=in2);

33           by recordid;

34           if in2 then diu01=1; else diu01=0;

35

NOTE: There were 36145 observations read from the data set WORK.BACHMEDS.

NOTE: There were 998 observations read from the data set WORK.A.

NOTE: The data set WORK.BACHMEDS has 36145 observations and 12 variables.

NOTE: DATA statement used (Total process time):

real time	2.50 seconds
cpu time	0.21 seconds

36           proc freq data=bachmeds noprint; where diu01=1; tables id/out=b;

37

38           \* previously sent in conjunction with BACH DSIC \*;

NOTE: There were 998 observations read from the data set WORK.BACHMEDS.

WHERE diu01=1;

NOTE: The data set WORK.B has 832 observations and 3 variables.

NOTE: PROCEDURE FREQ used (Total process time):

real time	0.04 seconds
cpu time	0.04 seconds

39           data diuretic; set bach.diuretic;

40

NOTE: There were 5506 observations read from the data set BACH.DIURETIC.

NOTE: The data set WORK.DIURETIC has 5506 observations and 2 variables.

NOTE: DATA statement used (Total process time):

real time	0.78 seconds
-----------	--------------

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```

cpu time          0.01 seconds
41      proc sort data=diuretic; by id;

```

NOTE: There were 5506 observations read from the data set WORK.DIURETIC.  
NOTE: The data set WORK.DIURETIC has 5506 observations and 2 variables.  
NOTE: PROCEDURE SORT used (Total process time):

```

real time          0.03 seconds
cpu time           0.01 seconds

```

```

42      data diuretic; merge diuretic b(in=in2); by id;
43          if in2 then diu01=1; else diu01=0;
44          label diuretic01=Diuretic acc to DCC
45          diu01=Diuretic acc to Full Legacy;
46

```

NOTE: There were 5506 observations read from the data set WORK.DIURETIC.  
NOTE: There were 832 observations read from the data set WORK.B.  
NOTE: The data set WORK.DIURETIC has 5506 observations and 5 variables.  
NOTE: DATA statement used (Total process time):

```

real time          0.01 seconds
cpu time           0.01 seconds

```

```

47      proc freq; tables diu01*diuretic01/ missing; run;

```

NOTE: There were 5506 observations read from the data set WORK.DIURETIC.  
NOTE: The PROCEDURE FREQ printed page 1.  
NOTE: PROCEDURE FREQ used (Total process time):

```

real time          0.18 seconds
cpu time           0.03 seconds

```

```

48      * 18 cases too many (compared to previously received dataset)
49      MAY BE due to infrequently reported class or coalition being
recoded
50          to MISCELLANEOUS *;
51      data mednutr.dsic_diu; set diuretic; keep id diu01; run;

```

NOTE: There were 5506 observations read from the data set WORK.DIURETIC.  
NOTE: The data set MEDNUTR.DSIC\_DIU has 5506 observations and 2 variables.  
NOTE: DATA statement used (Total process time):

```

real time          1.96 seconds
cpu time           0.03 seconds

```

```

52
53      * BACH baseline survey legacy dataset *;
54      data bachdata; set bach.repositmain2;
55          if 4<=nghtufrq<=6 then nightfreq=1; else if 1<=nghtufrq<=3 then
nightfreq=0;
56          if urinnt>=2 then twiceurin=1; else if urinnt in (0,1) then
twiceurin=0;
57          if nightfreq=1 or twiceurin=1 then nocturia=100;

```

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```
58         else if nightfreq=0 and twiceurin=0 then nocturia=0;
59         nocturial=nocturia; if nocturia=100 then nocturial=1;
```

NOTE: There were 5506 observations read from the data set BACH.REPOSITMAIN2.

NOTE: The data set WORK.BACHDATA has 5506 observations and 587 variables.

NOTE: DATA statement used (Total process time):

```
real time      1:15.07
cpu time       0.82 seconds
```

```
60         proc sort data=bachdata; by id;
61
```

NOTE: There were 5506 observations read from the data set WORK.BACHDATA.

NOTE: The data set WORK.BACHDATA has 5506 observations and 587 variables.

NOTE: PROCEDURE SORT used (Total process time):

```
real time      5.50 seconds
cpu time       0.40 seconds
```

```
62         data dsic_diu; set mednutr.dsic_diu;
```

NOTE: There were 5506 observations read from the data set MEDNUTR.DSIC\_DIU.

NOTE: The data set WORK.DSIC\_DIU has 5506 observations and 2 variables.

NOTE: DATA statement used (Total process time):

```
real time      0.67 seconds
cpu time       0.01 seconds
```

```
63         proc sort; by id;
```

NOTE: There were 5506 observations read from the data set WORK.DSIC\_DIU.

NOTE: The data set WORK.DSIC\_DIU has 5506 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

```
real time      0.18 seconds
cpu time       0.01 seconds
```

```
64         data bachdata; merge bachdata dsic_diu; by id;
```

```
65
```

```
66         * prevalences using SAS-callable SUDAAN *;
```

```
67         * compare to BACH study publication by Fitzgerald MP [2007] *;
```

NOTE: There were 5506 observations read from the data set WORK.BACHDATA.

NOTE: There were 5506 observations read from the data set WORK.DSIC\_DIU.

NOTE: The data set WORK.BACHDATA has 5506 observations and 588 variables.

NOTE: DATA statement used (Total process time):

```
real time      37.03 seconds
cpu time       0.68 seconds
```

```
68         proc sort data=bachdata; by strata psunit;
```

```
69         * for table 1 *;
```

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```

70      %macro crosstabs(classvar,tablevar);
71          proc crosstab data=bachdata atlevel1=1 atlevel2=2 deft2;
72              nest strata psunit;
73              weight wtr;
74              class &classvar / nofreq;
75              tables &tablevar;
76              print nsum rowper serow colper secol atlev1 atlev2 chisqp
llchisqp/style=nchs
77                  rowperfmt=f7.1 serowfmt=f7.1 colperfmt=f7.1 secolfmt=f7.1;
78              test chisq llchisq;
79              run;
80      %mend;
81      %crosstabs(diu01 gender,gender*diu01);

```

NOTE: There were 5506 observations read from the data set WORK.BACHDATA.  
NOTE: The data set WORK.BACHDATA has 5506 observations and 588 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
real time 3.54 seconds  
cpu time 0.34 seconds

```

MPRINT(CROSSTABS):  proc crosstab data=bachdata atlevel1=1 atlevel2=2 deft2;
MPRINT(CROSSTABS):  nest strata psunit;
MPRINT(CROSSTABS):  weight wtr;
MPRINT(CROSSTABS):  class diu01 gender / nofreq;
MPRINT(CROSSTABS):  tables gender*diu01;
MPRINT(CROSSTABS):  print nsum rowper serow colper secol atlev1 atlev2
chisqp
llchisqp/style=nchs rowperfmt=f7.1 serowfmt=f7.1 colperfmt=f7.1
secolfmt=f7.1;
MPRINT(CROSSTABS):  test chisq llchisq;
MPRINT(CROSSTABS):  run;

```

```

*****
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RTI International (RTI Staff).
It expires on October 01, 2009.
*****

```

Opened SAS data file BACHDATA for reading.

NOTE: There were 5506 observations read from the data set WORK.BACHDATA.  
NOTE: The PROCEDURE CROSSTAB printed pages 2-4.  
NOTE: PROCEDURE CROSSTAB used (Total process time):  
real time 31.04 seconds  
cpu time 0.70 seconds

```

82
83      * for table 2 *;

```

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```
84      proc freq; tables nocturia*diu01/missing; run;
```

NOTE: There were 5506 observations read from the data set WORK.BACHDATA.

NOTE: The PROCEDURE FREQ printed page 5.

NOTE: PROCEDURE FREQ used (Total process time):

```
real time      0.07 seconds
cpu time       0.03 seconds
```

```
85      %macro prevs(classvar, tablevar);
86      proc descript data=bachdata atlevel1=1 atlevel2=2 deft2;
87      nest strata psunit;
88      weight wtr;
89      class &classvar / nofreq;
90      var nocturia;
91      tables &tablevar;
92      print nsum mean semean atlevl deffmean /style=nchs meanfmt=f7.1
semeanfmt=f7.1;
93      run;
94      %mend;
95      %prevs(diu01,diu01);
MPRINT(PREVS):  proc descript data=bachdata atlevel1=1 atlevel2=2 deft2;
MPRINT(PREVS):  nest strata psunit;
MPRINT(PREVS):  weight wtr;
MPRINT(PREVS):  class diu01 / nofreq;
MPRINT(PREVS):  var nocturia;
MPRINT(PREVS):  tables diu01;
MPRINT(PREVS):  print nsum mean semean atlevl deffmean /style=nchs
meanfmt=f7.1 semeanfmt=f7.1;
MPRINT(PREVS):  run;
```

```
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*****
```

Opened SAS data file BACHDATA for reading.

NOTE: There were 5506 observations read from the data set WORK.BACHDATA.

NOTE: The PROCEDURE DESCRIPT printed pages 6-7.

NOTE: PROCEDURE DESCRIPT used (Total process time):

```
real time      29.71 seconds
cpu time       0.59 seconds
```

```
96
97      %macro ors(classvar, predvar, reflv);
98      proc rlogist data=bachdata deft2;
```

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```
99          nest strata psunit;
100         weight wtr;
101         class &classvar / nofreq;
102         reflevel &predvar = &reflev;
103         model nocturnal=&predvar;
104         print/betas=default risk=default tests=default;
105         run;
106     %mend;
107     %ors(diu01,diu01,0);
MPRINT(ORS):  proc rlogist data=bachdata def2;
MPRINT(ORS):  nest strata psunit;
MPRINT(ORS):  weight wtr;
MPRINT(ORS):  class diu01 / nofreq;
MPRINT(ORS):  reflevel diu01 = 0;
MPRINT(ORS):  model nocturnal=diu01;
MPRINT(ORS):  print/betas=default risk=default tests=default;
MPRINT(ORS):  run;
```

```
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*****
```

Opened SAS data file BACHDATA for reading.

NOTE: There were 5506 observations read from the data set WORK.BACHDATA.  
NOTE: The PROCEDURE RLOGIST printed pages 8-12.  
NOTE: PROCEDURE RLOGIST used (Total process time):  
real time 35.92 seconds  
cpu time 0.57 seconds

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414  
NOTE: The SAS System used:  
real time 4:26.18  
cpu time 5.82 seconds

## **Attachment 2**

***SAS 9.1 and SAS-Callable SUDAAN 9.0.1 Output***  
**for programming code submitted**  
**for the replication of results**  
**in Tables 1 and 2 of**  
**Fitzgerald MP, et.al. [Apr 2007]**

## The FREQ Procedure

Table of diu01 by diuretic01

diu01(Diuretic acc to Full Legacy)  
 diuretic01(Diuretic acc to DCC)

Frequency			
Percent			
Row Pct			
Col Pct	0	1	Total
0	4674	0	4674
	84.89	0.00	84.89
	100.00	0.00	
	99.62	0.00	
1	18	814	832
	0.33	14.78	15.11
	2.16	97.84	
	0.38	100.00	
Total	4692	814	5506
	85.22	14.78	100.00

S U D A A N  
Software for the Statistical Analysis of Correlated Data  
Copyright      Research Triangle Institute      August 2008  
Release 10.0

DESIGN SUMMARY: Variances will be computed using the Taylor Linearization Method, Assuming a  
With Replacement (WR) Design

Sample Weight: WTR

Stratification Variables(s): STRATA

Primary Sampling Unit: PSUNIT

Number of observations read	:	5506	Weighted count	:	262878
Denominator degrees of freedom	:	729			

Date: 05-01-2009  
Time: 17:06:31

SUDAAN

Page: 1  
Table: 1

Variance Estimation Method: Taylor Series (WR)  
by: FOIA: A5. Sex of respondent, Diuretic acc to Full Legacy.

---

FOIA: A5. Sex of respondent

Diuretic acc to Full Legacy	Sample Size	Row Percent	SE Row Percent	Col Percent	SE Col Percent	Count at Level 1	Count at Level 2
-----							
Total							
Total	5506	100.0	0.0	100.0	0.0	12	741
0	4674	88.8	0.6	100.0	0.0	12	725
1	832	11.2	0.6	100.0	0.0	12	378
1: Male							
Total	2301	100.0	0.0	47.6	1.1	12	636
0	2045	91.9	0.7	49.3	1.2	12	612
1	256	8.1	0.7	34.1	2.3	12	182
2: Female							
Total	3205	100.0	0.0	52.4	1.1	11	677
0	2629	85.9	0.9	50.7	1.2	11	650
1	576	14.1	0.9	65.9	2.3	11	303

---

Date: 05-01-2009  
Time: 17:06:31

SUDAAN

Page: 2  
Table: 1

Variance Estimation Method: Taylor Series (WR)

Chi Square Test of Independence for FOIA: A5. Sex of respondent and Diuretic acc to Full Legacy

---

	P-value ChiSq	P-value LLChiSq
	0.0000	0.0000

---

## The FREQ Procedure

Table of nocturia by diu01

nocturia      diu01(Diuretic acc to Full Legacy)

Frequency			Total
Percent			
Row Pct			
Col Pct	0	1	
.	15	5	20
	0.27	0.09	0.36
7	5.00	25.00	
	0.32	0.60	
0	3223	398	3621
	58.54	7.23	65.76
	89.01	10.99	
	68.96	47.84	
100	1436	429	1865
	26.08	7.79	33.87
	77.00	23.00	
	30.72	51.56	
Total	4674	832	5506
	84.89	15.11	100.00

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Copyright      Research Triangle Institute      August 2008  
Release 10.0

DESIGN SUMMARY: Variances will be computed using the Taylor Linearization Method, Assuming a  
With Replacement (WR) Design

Sample Weight: WTR

Stratification Variables(s): STRATA

Primary Sampling Unit: PSUNIT

Number of observations read	:	5506	Weighted count	:	262878
Denominator degrees of freedom	:	729			

Date: 05-01-2009  
Time: 17:07:03

SUDAAN

Page: 1  
Table: 1

Variance Estimation Method: Taylor Series (WR)  
by: Variable, Diuretic acc to Full Legacy.

---

Variable	Diuretic acc to Full Legacy	Sample Size	Mean	SE Mean	Count at Level 1	DEFF Mean #2
<hr/>						
NOCTURIA						
Total		5486	28.4	1.1	12	2.99
0		4659	25.9	1.1	12	3.14
1		827	48.1	2.5	12	2.01

---

S U D A A N  
 Software for the Statistical Analysis of Correlated Data  
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 Release 10.0

DESIGN SUMMARY: Variances will be computed using the Taylor Linearization Method, Assuming a  
 With Replacement (WR) Design

Sample Weight: WTR  
 Stratification Variables(s): STRATA  
 Primary Sampling Unit: PSUNIT

Number of zero responses        : 3621  
 Number of non-zero responses : 1865

Independence parameters have converged in 5 iterations

Number of observations read	:	5506	Weighted count:	262878
Observations used in the analysis	:	5486	Weighted count:	262108
Denominator degrees of freedom	:	729		

Maximum number of estimable parameters for the model is 2

File BACHDATA contains 741 Clusters  
 740 clusters were used to fit the model  
 Maximum cluster size is 59 records  
 Minimum cluster size is 1 records

Sample and Population Counts for Response Variable NOCTURIA1  
 Based on observations used in the analysis

0: Sample Count	3621	Population Count	187617
1: Sample Count	1865	Population Count	74491

R-Square for dependent variable NOCTURIA1 (Cox & Snell, 1989): 0.021826

-2 * Normalized Log-Likelihood with Intercepts Only	:	6548.92
-2 * Normalized Log-Likelihood Full Model	:	6427.86
Approximate Chi-Square (-2 * Log-L Ratio)	:	121.06
Degrees of Freedom	:	1

Note: The approximate Chi-Square is not adjusted for clustering.  
 Refer to hypothesis test table for adjusted test.

Date: 05-01-2009  
Time: 17:07:32

SUDAAN

Page: 1  
Table: 1

Variance Estimation Method: Taylor Series (WR)  
SE Method: Robust (Binder, 1983)  
Working Correlations: Independent  
Link Function: Logit  
Response variable NOCTURIAL: NOCTURIAL  
by: Independent Variables and Effects.

---

Independent Variables and Effects	Beta Coeff.	DEFF Beta #2	SE Beta	Lower 95% Limit Beta	Upper 95% Limit Beta	T-Test
B=0						
Intercept	-1.05	3.28	0.06	-1.17	-0.93	-17.72
Diuretic acc to Full Legacy						
0	0.00	.	0.00	0.00	0.00	.
1	0.97	1.87	0.12	0.74	1.21	8.18

---

Date: 05-01-2009  
Time: 17:07:32

SUDAAN

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Table: 1

Variance Estimation Method: Taylor Series (WR)  
SE Method: Robust (Binder, 1983)  
Working Correlations: Independent  
Link Function: Logit  
Response variable NOCTURIAL: NOCTURIAL  
by: Independent Variables and Effects.

Independent Variables and Effects	P-value T-Test B=0
Intercept	0.0000
Diuretic acc to Full Legacy	
0	.
1	0.0000

Date: 05-01-2009  
Time: 17:07:32

SUDAAN

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Table: 1

Variance Estimation Method: Taylor Series (WR)  
SE Method: Robust (Binder, 1983)  
Working Correlations: Independent  
Link Function: Logit  
Response variable NOCTURIA1: NOCTURIA1  
by: Contrast.

---

Contrast	Degrees of Freedom	Wald F	P -value Wald F
OVERALL MODEL	2	159.16	0.0000
MODEL MINUS INTERCEPT	1	66.90	0.0000
INTERCEPT	.	.	.
DIU01	1	66.90	0.0000

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Date: 05-01-2009  
Time: 17:07:32

SUDAAN

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Table: 1

Variance Estimation Method: Taylor Series (WR)  
SE Method: Robust (Binder, 1983)  
Working Correlations: Independent  
Link Function: Logit  
Response variable NOCTURIAL: NOCTURIAL  
by: Independent Variables and Effects.

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Independent Variables and Effects	Odds Ratio	Lower 95% Limit OR	Upper 95% Limit OR
Intercept	0.35	0.31	0.39
Diuretic acc to Full Legacy			
0	1.00	1.00	1.00
1	2.64	2.09	3.34

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S. Tan  
May 1, 2009