

Tony Lim
BIOSTAT 203A LAB 1A
Professor Hilary Aralis
2 Dec 2019

Lab 7

Exercise 1

```
%MACRO square(start, end);  
data sqr_table;  
  do n = &start to &end;  
    sqr_n = n*n;  
    output;  
  end;  
run;  
proc print data=sqr_table noobs;  
  title "Table of Squared Values for Integers from &start to &end";  
run;  
%MEND;  
  
%square(10, 15);
```

Table of Squared Values for Integers from 10 to 15

n	sqr_n
10	100
11	121
12	144
13	169
14	196
15	225

Exercise 2

```
%MACRO provtyp(string1, string2);  
  title "Beneficiary Age and Risk by Provider Type";  
  proc tabulate data=L.cms_providers_la (where = (provider_type = &string1 or provider_type =  
&string2));  
    class provider_type;  
    var beneficiary_average_age beneficiary_average_risk_score;  
    table(beneficiary_average_age beneficiary_average_risk_score),  
    provider_type*(n = 'N' mean = 'Mean' std = 'Standard Deviation');  
  run;  
%MEND provtyp;  
  
%provtyp("Anesthesiology", "Orthopedic Surgery");
```

Beneficiary Age and Risk by Provider Type

	Provider Type of the Provider					
	Anesthesiology			Orthopedic Surgery		
	N	Mean	Standard Deviation	N	Mean	Standard Deviation
Average Age of Beneficiaries	316	70.72	3.61	131	71.78	4.99
Average HCC Risk Score of Beneficiaries	316	2.22	0.81	131	1.44	0.46

Exercise 3

```
%MACRO rtf(obsnum, varname);  
ods rtf file = '/folders/myfolders/Lab_7/sampleoutput.rtf' style=Journal;  
  
title "Listing of Physicians";  
proc print data=L.cms_providers_la (obs=&obsnum);  
  id npf;  
  var nppes_provider_last_org_name nppes_provider_first_name;  
run;  
  
title "&varname by Provider Gender";  
proc means data=L.cms_providers_la;  
  class nppes_provider_gender;  
  var &varname;  
run;  
ods rtf close;  
  
proc contents data=L.cms_providers_la;  
run;  
%MEND;  
  
%rtf(10, beneficiary_average_risk_score);
```

Exercise 4

```
%MACRO rtf(obsnum, varname, name);  
ods rtf file = "/folders/myfolders/Lab_7/&name..rtf" style=Fancyprinter;
```

```
title "Listing of Physicians";  
proc print data=L.cms_providers_la (obs=&obsnum);  
id npi;  
var nppes_provider_last_org_name nppes_provider_first_name;  
run;
```

```
title "&varname by Provider Gender";  
proc means data=L.cms_providers_la;  
class nppes_provider_gender;  
var &varname;  
run;  
ods rtf close;  
proc contents data=L.cms_providers_la;  
run;  
%MEND;
```

```
%rtf(8, beneficiary_average_age, Beneficiary Mean Age);
```

Exercise 5

```
proc report data=L.cms_providers_la;  
column provider_type total_drug_unique_benes total_drug_submitted_chrg_amt;  
define provider_type/display group "Provider Type";  
define total_drug_unique_benes/analysis sum format=COMMA10. "Total Number of  
Beneficiaries with Drug Services";  
define total_drug_submitted_chrg_amt/analysis sum format=dollar17.2;  
run;
```

Exercise 6

```
proc report data=L.cms_providers_la;  
column provider_type NPI total_drug_unique_benes total_drug_submitted_chrg_amt;  
define provider_type/display group "Provider Type";  
define NPI/display "NPI";  
define total_drug_unique_benes/analysis sum format=COMMA10. "Total Number of  
Beneficiaries with Drug Services";  
define total_drug_submitted_chrg_amt/analysis sum format=dollar17.2;  
break after provider_type/summarize;  
run;
```