

Assignment [2]

[STUDY ON PHYSICIANS AND THEIR MONETARY PERKS]

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Introduction

Physicians and manufacturers are the integral part of the medical industry. One understand the requirements and treatment of the disease and other distributes them as per their best of knowledge. The past working of physicians were not so glorified and unified as it is now, back then there was basic medication for most of the diseases, some used to work or some used to have the placebo effect on patients, but now with the growth in the industry of medical science, experts can deal with any epidemic with their utmost efforts. Moreover, physicians have got more scope to earn from their general payments to payments from their researches or their interests from stocks. These payments have the power to motivate the physician fraternity and not only will lead to paragons in industry but also will strengthen company's credibility. Hence, it is very important to examine which things can be bolster for this profession.

Therefore, the objective of the analysis is to understand: What financial benefits are being provided to physicians?

To conduct the investigation, we have five different datasets giving information about physicians and their financial benefits-

- GeneralPayments.sas7bdat-> This dataset has 19 variables and provides information related to payments such date of payments made, manufacturer and physicians, and indicator of spending on drugs, medical supply and biological devices.
- Ownership.txt-> This dataset has 7 variables providing details of the sources and interest held by physicians. These sources are mainly interest from stocks and investments.
- Research.txt-> This text file has 21 variables which revolves around the researches done by physicians (i.e. name of study, context of research and research information link) and the payments made to them in USD and to inform about the successful research which went for clinical trails.
- TexasPhysicians.sas7bdat-> This is SAS data file with 23 variables giving detailed information of physicians and all demographics like country name, firstname-lastname, license number, primary type etc.
- Companies.csv-> This is csv file having 5 variables with full information of the manufacturers and their personal details consisting name, country name, manufacturer id, state name and name sub.

Methods

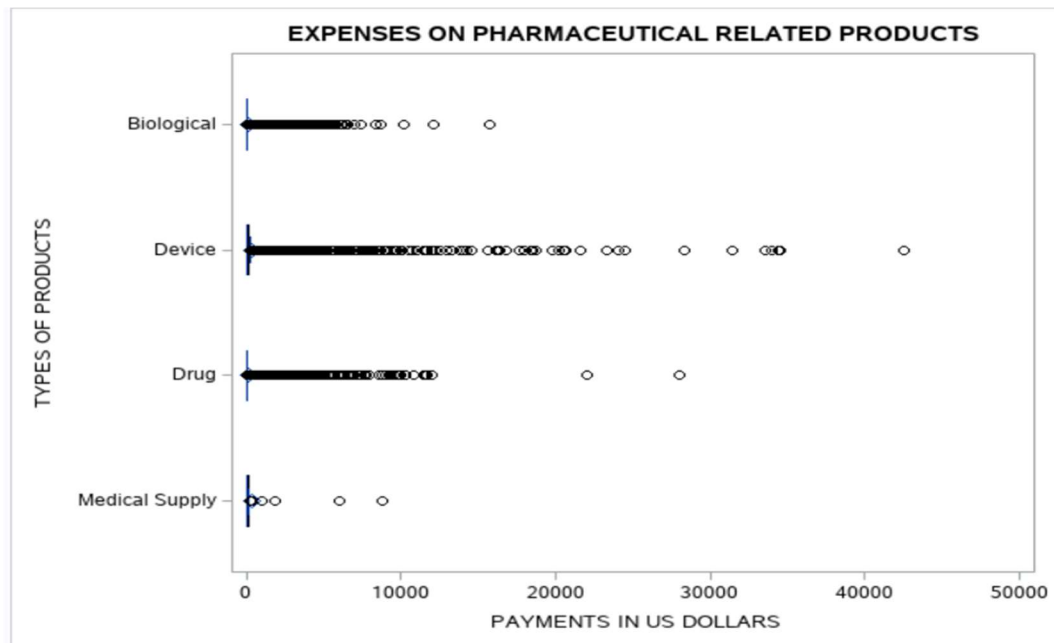
The datasets are provided by <http://www.cms.gov/> (website link of Centers for Medicare & Medicaid Services), which provides medical as well as monetary support / assistance to low-income groups, pregnant women, people of all ages with disabilities or people who need long term care.

For the assignment, I have used SAS Studio to investigate and analyse the datasets to exactly know the financial benefits given to physicians. To understand the reasons and strengths of the benefits, I used several analysis. Below is the flow of the report, to give the overview-

- The first and for most before analysing is to read/import the datasets. For reading the sas.7bat files(**GeneralPayments.sas7bdat**, **TexasPhysicians.sas7bdat**) I used the libname function and named it "ASSIGN" and for reading the csv/txt files(**Companies.csv**, **Research.txt**, **Ownership.txt**) I used the datastep with informat and format function to properly read every variables.
- For the matter of analysis, I used PROC FREQ and PROC SQL, wherever required.
- For further analysis, I used two sample TTEST and for performing the test, first had to filter the relevant variables and had to join tables to determine difference in the average value of general payments for "Medical Doctor" compared to "Doctor of Dentistry" with alpha value of 0.1.
- From my side to understand the benefits, Chi-square test was performed to examine the association between physician's primary type and forms of payment paid, with this we can get to know that which particular type of physicians are dependent or independent from forms of payment.

Results

Let's first understand with the graph which are the products driving the medical industry and working of manufacturers and physicians.



If we look at the above graph, we can clearly see that devices are the very much used products among medical supply, biological and drugs. The maximum payment made in the medical science industry was drawn by devices around \$42000-\$44000 and following are drugs with amount oscillating near \$30000, biological with peak of \$25000 and last comes the medical supply with the maximum amount drawn around \$8000-\$10000.

The making of these products and the amount involved are very much depended on the manufacturing fraternity. The supply of these products is the sum of efforts manufacturers from different states and country. Let us see which country's manufacturer held the most payment.

Obs	Manufacturer_Name	Manufacturer_ID	Manufacturer_Name_Sub	Manufacturer_State	Manufacturer_Country	MEAN_PAYMENT
1	Astellas Pharma Inc	100000010648	Astellas Pharma Inc		Japan	\$1037807.00
2	Jazz Pharmaceuticals	100000005637	Jazz Pharmaceuticals inc	CA	United States	\$75,507.91
3	Veloxis Pharmaceutic	100000151661	Veloxis Pharmaceuticals, Inc	NC	United States	\$73,005.50
4	Pacira Pharmaceutica	100000000135	Pacira Pharmaceuticals Incorporated	NJ	United States	\$52,400.00
5	Ferring Pharmaceutic	100000000309	Ferring Pharmaceuticals inc	NJ	United States	\$50,814.40

The list of five Manufacturers with the highest average payment, most of them are from United States except one company named Astellas Pharma, which is a Japan based company and has average payment of \$1,037,807. Following are Jazz Pharmaceuticals from United States with mean payment of \$75,507, Veloxis Pharmaceuticals again from United States with payment average of \$73,005 and then comes the companies between \$50,000-\$60,000 band are Pacira Pharmaceutic and Ferring Pharmaceutic.

Now, we know how manufacturers work and how much do they earn from the pharmaceutical industry. But, what about the physicians, who acts as a catalyst between manufacturer and general public. The physician profession earns from mainly their general sectors and their interest ownership

and some portion from research payments. The exact numbers and percentage of the full cohort of physicians can be seen below-

PERCENTAGE OF FULL COHORT OF PHYSICIANS			
Obs	FUNDING	COUNT	COHORT_PERCENT
1	GNRL	21986	99.2238
2	GNRL-OWNSHP	70	0.3159
3	GNRL-RSRCH	54	0.2437
4	GNRL-RSRCH-OWNSHP	1	0.0045
5	OWNSHP	46	0.2076
6	RSRCH-OWNSHP	1	0.0045

The pictorial involves abbreviations which as follows-

- 1)GNRL-> Funding from general payments.
- 2)OWNSHP-> Funding from research ownership.
- 3)GNRL-OWNSHP->Fundings from general payments and research ownership.
- 4)GNRL-RSRCH->Fundings from genral payments and research payments.
- 5)RSRCH-OWNSHP->Fundings from research payments and ownership.
- 6)GNRL-RSRCH-OWNSHP->Fundings from general payments,research payments and research ownership.

From the illustration, it can be deduced that main source of income comes from general payments and procurement of devices, medical supply, drugs and biological. The general payments contribute to 99% of the fundings goes to physicians.

"We know that physicians do get the fundings, but still we are unaware of the financial benefits they receive and is their any relation between primary type physician and types of funding they receive."

A) The chi-square test of physician getting funds from general payments

The FREQ Procedure

Frequency Percent Row Pct Col Pct	Table of Physician_Primary_Type by Form_of_Payment_or_Transfer_of_V				
	Form_of_Payment_or_Transfer_of_V(Form_of_Payment_or_Transfer_of_Value)				
	Physician_Primary_Type	Cash or cash equivalent	Dividend, profit or other return on investment	In-kind items and services	Total
	Chiropractor	9 0.05 20.45 0.15	0 0.00 0.00 0.00	35 0.18 79.55 0.27	44 0.23
	Doctor of Dentistry	456 2.38 39.86 7.46	0 0.00 0.00 0.00	688 3.59 60.14 5.27	1144 5.97
	Doctor of Optometry	248 1.29 21.47 4.05	0 0.00 0.00 0.00	907 4.73 78.53 6.95	1155 6.03
	Doctor of Osteopathy	918 4.79 22.97 15.01	0 0.00 0.00 0.00	3079 16.07 77.03 23.60	3997 20.86
	Doctor of Podiatric Medicine	308 1.61 42.37 5.04	0 0.00 0.00 0.00	419 2.19 57.63 3.21	727 3.79
	Medical Doctor	4177 21.80 34.53 68.30	2 0.01 0.02 100.00	7917 41.31 65.45 60.69	12096 63.12
	Total	6116 31.92	2 0.01	13045 68.07	19163 100.00

Frequency Missing = 4

From the above illustration, the medical doctors earn the highest among all primary type physicians from general payments.

SUMMARY OF PAYMENTS RECIEVED BY GENERAL PAYMENTS

The MEANS Procedure

Analysis Variable : Total_Amount_of_Payment_USDollar Total_Amount_of_Payment_USDollars				
N	Mean	Std Dev	Minimum	Maximum
19163	1019.38	55697.36	0.0100000	5714113.59

The chi-square test-

H0- There is no statistically significant association between physician primary type and forms of payment.

HA- There is statistically significant association between physician primary type and forms of payment.

Statistics for Table of Physician_Primary_Type by Form_of_Payment_or_Transfer_of_V

Statistic	DF	Value	Prob
Chi-Square	10	317.1372	<.0001
Likelihood Ratio Chi-Square	10	327.9001	<.0001
Mantel-Haenszel Chi-Square	1	64.4462	<.0001
Phi Coefficient		0.1286	
Contingency Coefficient		0.1276	
Cramer's V		0.0910	

WARNING: 33% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Sample Size = 19163
Frequency Missing = 4

The probability of chi-square distribution with 10 degrees of freedom is less than .0001. Because the probability is so small, we reject the null hypothesis and say that there is statistically significant association between physician primary type and forms of payment.

B)The chi-square test of physician getting funds from research payments

H0- There is no statistically significant association between physician primary type and forms of payment.

HA- There is statistically significant association between physician primary type and forms of payment.

The FREQ Procedure

Frequency Percent Row Pct Col Pct	Table of Physician_Primary_Type by Form_of_Payment_or_Transfer_of_V		
	Physician_Primary_Type	Form_of_Payment_or_Transfer_of_V	
		Cash or cash equivalent	In-kind items and service
	Chiropractor	0 0.00 0.00	0 0.00 0.00
	Doctor of Dentistry	0 0.00 0.00	0 0.00 0.00
	Doctor of Optometry	4 4.44 100.00 5.97	0 0.00 0.00 0.00
	Doctor of Osteopathy	6 6.67 75.00 8.96	2 2.22 25.00 8.70
	Doctor of Podiatric Medicine	1 1.11 100.00 1.49	0 0.00 0.00 0.00
	Medical Doctor	56 62.22 72.73 83.58	21 23.33 27.27 91.30
	Total	67 74.44	23 25.56
	Frequency Missing = 7		

SUMMARY OF PAYMENTS RECIEVED BY RESEARCH PAYMENTS

The MEANS Procedure

Analysis Variable : Total_Amount_of_Payment				
N	Mean	Std Dev	Minimum	Maximum
90	3586.60	6209.91	2.9900000	31000.00

Funding from research payments table depict that medical doctors are get the maximum monetary benefits in terms of cash or in kinds from research payments.

Statistics for Table of Physician_Primary_Type by Form_of_Payment_or_Transfer_of_V
(Rows and Columns with Zero Totals Excluded)

Statistic	DF	Value	Prob
Chi-Square	3	1.8371	0.6069
Likelihood Ratio Chi-Square	3	3.0701	0.3809
Mantel-Haenszel Chi-Square	1	1.0138	0.3140
Phi Coefficient		0.1429	
Contingency Coefficient		0.1414	
Cramer's V		0.1429	

WARNING: 63% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Sample Size = 90
Frequency Missing = 7

The probability of chi-square distribution with 3 degrees of freedom is 0.6069. Because the probability is greater than alpha, we fail to reject the null hypothesis and say that there is statistically no significant association between physician primary type and forms of payment.

C)The chi-square test of physician getting funds from ownership

The result of the proc freq showed that medical doctor again earns the highest among every primary type physician.

SUMMARY OF PAYMENTS RECIEVED BY OWNERSHIP

The MEANS Procedure

Analysis Variable : Value_of_Interest				
N	Mean	Std Dev	Minimum	Maximum
165	137156.46	406703.20	0	4672605.00

Statistics for Table of Physician_Primary_Type by Terms_of_Interest

(Rows and Columns with Zero Totals Excluded)

Statistic	DF	Value	Prob
Chi-Square	132	175.7802	0.0065
Likelihood Ratio Chi-Square	132	77.9550	1.0000
Mantel-Haenszel Chi-Square	1	0.3808	0.5372
Phi Coefficient		1.1327	
Contingency Coefficient		0.7497	
Cramer's V		0.6540	
WARNING: 97% of the cells have expected counts less than 5. Chi-Square may not be a valid test.			

Sample Size = 137
Frequency Missing = 23301

WARNING: 99% of the data are missing.

The probability of chi-square distribution with 132 degrees of freedom is 0.0065. Because the probability is less than significant value, we reject the null hypothesis and say that there is statistically significant association between physician primary type and terms of interest.

Conclusion

Financial benefits provided to physicians are-

General Payments-19163

Research Payments-90

Ownership-137

The physicians are getting monetary perks from general payments more than any other sectors and fraternity is privileged enough of getting 99% funds source from General Payments.

Among all physicians, Medical Doctors are the highest paid physicians as they hold-

- 12096 proportion out of 19163 from General Payments
- 77 proportion out of 90 from Research Payments
- 117 proportion out of 137 from Ownership

References

- 1) <http://meducator.org/2018/11/the-role-of-physicians-then-and-now/>
- 2) <https://www.cms.gov/About-CMS/Agency-Information/History/index>

APPENDIX

/* Q.1) Read the data into SAS using a data step or using a libref where appropriate. Ensure variables are

formatted accordingly where required. */

```
LIBNAME ASSIGN "/home/u47344790/sasuser.v94/ASSIGNMENT2";
```

```
/* READING COMPANIES.csv */
```

```
DATA COMPANY;
```

```
INFORMAT Manufacturer_Name $20. Manufacturer_ID $20. Manufacturer_Name_Sub $40.  
Manufacturer_State $3. Manufacturer_Country $20.;
```

```
INFILE "/home/u47344790/sasuser.v94/ASSIGNMENT2/Companies.csv" DELIMITER="," FIRSTOBS=2  
DSD MISSOVER;
```

```
INPUT Manufacturer_Name$ Manufacturer_ID$ Manufacturer_Name_Sub$ Manufacturer_State$  
Manufacturer_Country$;
```

```
FORMAT Manufacturer_Name $20. Manufacturer_ID $20. Manufacturer_Name_Sub $40.  
Manufacturer_State $3. Manufacturer_Country $20.;
```

```
RUN;
```

```
/* READING OWNERSHIP.txt */
```

```
DATA OWNERSHIP;
```

```
INFORMAT Physician_Profile_ID BEST7. Record_ID $15. Total_Amount_Invested DOLLAR14.2  
Value_of_Interest DOLLAR10.2 Terms_of_Interest $70. Applicable_Manufacturer_or_Appli $15.  
Interest_Held_by_Physician_or_an $50.;
```

```
INFILE "/home/u47344790/sasuser.v94/ASSIGNMENT2/Ownership.txt" DELIMITER=" " FIRSTOBS=2  
DSD MISSOVER;
```

```
INPUT Physician_Profile_ID$ Record_ID$ Total_Amount_Invested Value_of_Interest  
Terms_of_Interest$ Applicable_Manufacturer_or_Appli$ Interest_Held_by_Physician_or_an$;
```

```
FORMAT Physician_Profile_ID BEST7. Record_ID $15. Total_Amount_Invested DOLLAR14.2  
Value_of_Interest DOLLAR10.2 Terms_of_Interest $70. Applicable_Manufacturer_or_Appli $15.  
Interest_Held_by_Physician_or_an $50.;
```

```
RUN;
```

```
/* READING RESEARCH.txt */
```

```
DATA RESEARCH;
```

INFORMAT Covered_Recipient_Type \$30. Noncovered_Recipient_Entity_Name \$80.
Physician_Profile_ID BEST7.

Principal_Investigator_1_Profile \$35. Principal_Investigator_1_Special \$80.
Principal_Investigator_2_Profile \$15.0

Principal_Investigator_2_Special \$80. Applicable_Manufacturer_or_Appli \$15.0
Related_Product_Indicator \$5.

Total_Amount_of_Payment DOLLAR10.2 Date_of_Payment MMDDYY10.
Form_of_Payment_or_Transfer_of_V \$25.Expenditure_Category1 \$20.0

Preclinical_Research_Indicator \$5. Name_of_Study \$150. Dispute_Status_for_Publication \$5.
Record_ID \$15.0

ClinicalTrials_Gov_Identifier \$15. Research_Information_Link Context_of_Research \$100.;

INFILE "/home/u47344790/sasuser.v94/ASSIGNMENT2/Research.txt" DELIMITER="09"X FIRSTOBS=2
DSD MISSOEVER;

INPUT Covered_Recipient_Type\$ Noncovered_Recipient_Entity_Name\$ Physician_Profile_ID\$

Principal_Investigator_1_Profile\$ Principal_Investigator_1_Special\$
Principal_Investigator_2_Profile\$

Principal_Investigator_2_Special\$ Applicable_Manufacturer_or_Appli\$ Related_Product_Indicator\$

Total_Amount_of_Payment Date_of_Payment Form_of_Payment_or_Transfer_of_V\$
Expenditure_Category1\$

Preclinical_Research_Indicator\$ Name_of_Study\$ Dispute_Status_for_Publication\$ Record_ID\$

ClinicalTrials_Gov_Identifier\$ Research_Information_Link\$ Context_of_Research\$;

FORMAT Covered_Recipient_Type \$30. Noncovered_Recipient_Entity_Name \$80.
Physician_Profile_ID BEST7.

Principal_Investigator_1_Profile \$35. Principal_Investigator_1_Special \$80.
Principal_Investigator_2_Profile \$15.0

Principal_Investigator_2_Special \$80. Applicable_Manufacturer_or_Appli \$15.0
Related_Product_Indicator \$5.

Total_Amount_of_Payment DOLLAR10.2 Date_of_Payment MMDDYY10.
Form_of_Payment_or_Transfer_of_V \$25.Expenditure_Category1 \$20.0

Preclinical_Research_Indicator \$5. Name_of_Study \$150. Dispute_Status_for_Publication \$5.
Record_ID \$15.0

ClinicalTrials_Gov_Identifier \$15. Research_Information_Link Context_of_Research \$100.;

RUN;

/* Q.2) Produce a graph that shows the distribution of the value of general payments made, for each
of

the different types of categories being drug, biological, device or other. Adjust your graph so this shows on a log scale. Ensure the graph is clearly labelled and has an informative title. */

```
ODS GRAPHICS ON;
```

```
PROC SGPLOT DATA=assign.general_payments;
```

```
TITLE "EXPENSES ON PHARMACEUTICAL RELATED PRODUCTS";
```

```
HBOX Total_Amount_of_Payment_USDollar / category=Indicate_Drug_or_Biological_or_D;
```

```
xaxis max=50000 LABEL= "PAYMENTS IN US DOLLARS";
```

```
yaxis LABEL="TYPES OF PRODUCTS";
```

```
RUN;
```

/* Q.3) Using PROC SQL, determine the average value of research payments given by each Manufacturer. Include in your report the details (name etc) for the five Manufacturers with the highest average payment, in an output produced with SAS code. Ensure this is well presented. */

```
PROC SQL OUTOBS=5;
```

```
CREATE TABLE A AS
```

```
SELECT DISTINCT Manufacturer_Name, Manufacturer_ID, Manufacturer_Name_Sub,  
Manufacturer_State, Manufacturer_Country, AVG(Total_Amount_of_Payment) AS MEAN_PAYMENT  
FORMAT DOLLAR12.2
```

```
FROM RESEARCH
```

```
RIGHT JOIN COMPANY
```

```
ON RESEARCH.Applicable_Manufacturer_or_Appli=COMPANY.Manufacturer_ID
```

```
GROUP BY Manufacturer_ID
```

```
ORDER BY MEAN_PAYMENT DESC;
```

```
QUIT;
```

```
PROC PRINT DATA=A;
```

```
RUN;
```

/* Q.4) Create a new variable "Funding" to represent the type, or combination of funding received by each physician. Produce a count of this new variable and show the percentage of the full cohort of physicians in this data set. */

```
PROC SQL;

CREATE TABLE XYZ AS

SELECT A.Physician_Profile_ID AS ID,
COUNT(B.Total_Amount_of_Payment) AS RSRCH ,
COUNT(C.Total_Amount_Invested) AS OWNSHP,
COUNT(D.Total_Amount_of_Payment_USDOLLAR) AS GNRL
FROM ASSIGN.texas_physicians A
LEFT JOIN RESEARCH B ON A.Physician_Profile_ID = B.Physician_Profile_ID
LEFT JOIN OWNERSHIP C ON A.Physician_Profile_ID = C.Physician_Profile_ID
LEFT JOIN ASSIGN.general_payments D ON A.Physician_Profile_ID = D.Physician_Profile_ID
GROUP BY A.Physician_Profile_ID;

QUIT;
```

```
PROC SQL;

CREATE TABLE FUNDINGS AS

SELECT

(CASE WHEN GNRL>=1 AND RSRCH=0 AND OWNSHP=0 THEN "GNRL"
      WHEN GNRL=0 AND RSRCH>=1 AND OWNSHP=0 THEN "RSRCH"
      WHEN GNRL=0 AND RSRCH=0 AND OWNSHP>=1 THEN "OWNSHP"
      WHEN GNRL>=1 AND RSRCH>=1 AND OWNSHP=0 THEN "GNRL-RSRCH"
      WHEN GNRL=0 AND RSRCH>=1 AND OWNSHP>=1 THEN "RSRCH-OWNSHP"
      WHEN GNRL>=1 AND RSRCH=0 AND OWNSHP>=1 THEN "GNRL-OWNSHP"
      WHEN GNRL>=1 AND RSRCH>=1 AND OWNSHP>=1 THEN "GNRL-RSRCH-OWNSHP" ELSE " " END)
AS FUNDING,*

FROM XYZ;

RUN;
```

```
PROC SQL;

CREATE TABLE TABFUND AS
```

```
SELECT FUNDING,COUNT(FUNDING) AS COUNT,(COUNT(FUNDING)*100/(SELECT COUNT(*)FROM
FUNDINGS)) AS COHORT_PERCENT
```

```
FROM FUNDINGS
```

```
GROUP BY FUNDING;
```

```
QUIT;
```

```
PROC PRINT DATA=TABFUND;
```

```
TITLE "PERCENTAGE OF FULL COHORT OF PHYSICIANS";
```

```
RUN;
```

/* Q.5)Use a t test to determine whether there is a difference in the average value of general payments

for “Medical Doctor” compared to “Doctor of Dentistry” ie using their primary type. Use $\alpha=0.1$. */

```
DATA TEXAS2;
```

```
SET assign.texas_physicians;
```

```
KEEP Physician_Profile_ID Physician_Primary_Type Physician_Profile_First_Name
Physician_Profile_Last_Name;
```

```
WHERE Physician_Primary_Type="Medical Doctor" OR Physician_Primary_Type="Doctor of
Dentistry";
```

```
RUN;
```

```
PROC SQL;
```

```
CREATE TABLE TEXAS3 AS
```

```
SELECT DISTINCT A.*,B.Total_Amount_of_Payment_USDollar FORMAT DOLLAR14.2
```

```
FROM TEXAS2 A
```

```
LEFT JOIN ASSIGN.general_payments B ON A.Physician_Profile_ID=B.Physician_Profile_ID;
```

```
QUIT;
```

```
PROC TTEST DATA=TEXAS3 alpha=0.1 ;
```

```
VAR Total_Amount_of_Payment_USDollar;
```

```
CLASS Physician_Primary_Type;
```

RUN;

/* Q.6)Include any other relevant analysis of this data (only) to assist you to understand the payments being made to US physicians. */

PROC SQL;

CREATE TABLE YAB1 AS

SELECT

DISTINCT(A.Physician_Primary_Type),B.Total_Amount_of_Payment_USDollar,B.Form_of_Payment_or_Transfer_of_V

FROM ASSIGN.texas_physicians A

LEFT JOIN ASSIGN.general_payments B ON A.Physician_Profile_ID = B.Physician_Profile_ID;

QUIT;

PROC FREQ DATA=YAB1;

TABLES Physician_Primary_Type*Form_of_Payment_or_Transfer_of_V / chisq;

RUN;

PROC MEANS DATA=YAB1;

TITLE "SUMMARY OF PAYMENTS RECIEVED BY GENERAL PAYMENTS";

VAR Total_Amount_of_Payment_USDollar;

RUN;

PROC SQL;

CREATE TABLE UAB1 AS

SELECT

DISTINCT(A.Physician_Primary_Type),B.Total_Amount_of_Payment,B.Form_of_Payment_or_Transfer_of_V

FROM ASSIGN.texas_physicians A

LEFT JOIN RESEARCH B ON A.Physician_Profile_ID = B.Physician_Profile_ID;

QUIT;

```
PROC FREQ DATA=UAB1;
TABLES Physician_Primary_Type*Form_of_Payment_or_Transfer_of_V / chisq;
RUN;
```

```
PROC MEANS DATA=UAB1;
TITLE "SUMMARY OF PAYMENTS RECIEVED BY RESEARCH PAYMENTS";
VAR Total_Amount_of_Payment;
RUN;
```

```
PROC SQL;
CREATE TABLE IAB1 AS
SELECT A.Physician_Primary_Type,B.Value_of_Interest,B.Terms_of_Interest
FROM ASSIGN.texas_physicians A
LEFT JOIN OWNERSHIP B ON A.Physician_Profile_ID = B.Physician_Profile_ID;
QUIT;
```

```
PROC FREQ DATA=IAB1 ;
TABLES Physician_Primary_Type*Terms_of_Interest / chisq;
RUN;
```

```
PROC MEANS DATA=IAB1;
TITLE "SUMMARY OF PAYMENTS RECIEVED BY OWNERSHIP";
VAR Value_of_Interest;
RUN;
```