

Using Python to improve the efficiency on generating report for the program team and the accounting team

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Background of this project

A non-for-profit organization operates programs for intellectual developmental disability patients. Every week the fiscal team receives the remittance data from Medicaid, and the team needs to analyze the data, and reports it to the bookkeeping team and the program operation team. Before using Python, the accounting team needs to spend about one hour to organize and analyze the data using Excel. Also, the report generated by Excel has limited insight to the program operation team to improve the billing process. In order to improve the efficiency and optimize the usage of remittance data, the accounting team decides to use Python script to generate remittance report.

Data used in this project has been manipulated and randomized.

To start, please enter the csv file name below.

Please enter the csv file name, and end with [.csv]:010620.csv

The following table shows the column names and their data types. However, not all the columns would be used by the accounting team for analyzing the remittance.

```
Out[88]: remit_filename      object
sequence_no      int64
batch_no         int64
remit_number     int64
invoice         int64
...
group_reason_code object
authorization_number float64
ssno            float64
pat_responsiblity_amount int64
is_first_line   int64
Length: 91, dtype: object
```

WEEKLY REMITTANCE REPORT - TO EXECUTIVES AND PROGRAM DIRECTORS

This section gives basic information of the weekly remittance summary of different programs, by showing the amounts that were claimed, paid, and denied, with denial percentage. It also shows the list of clients that were not fully paid, with corresponding claim adjustment reason codes (the remit codes) and the remark codes. The billing specialist can contact the insurance company and rebill the clients based on their codes.

BASIC INFO

1/6/2020 8:51:55 AM was the remit posting time.
Total line read is 83

Total payment will be received of the week is \$ 26121.92
Total denial amount is \$ 31997.23
Total claimed amount is \$ 58119.14

PAYMENT ANALYSIS

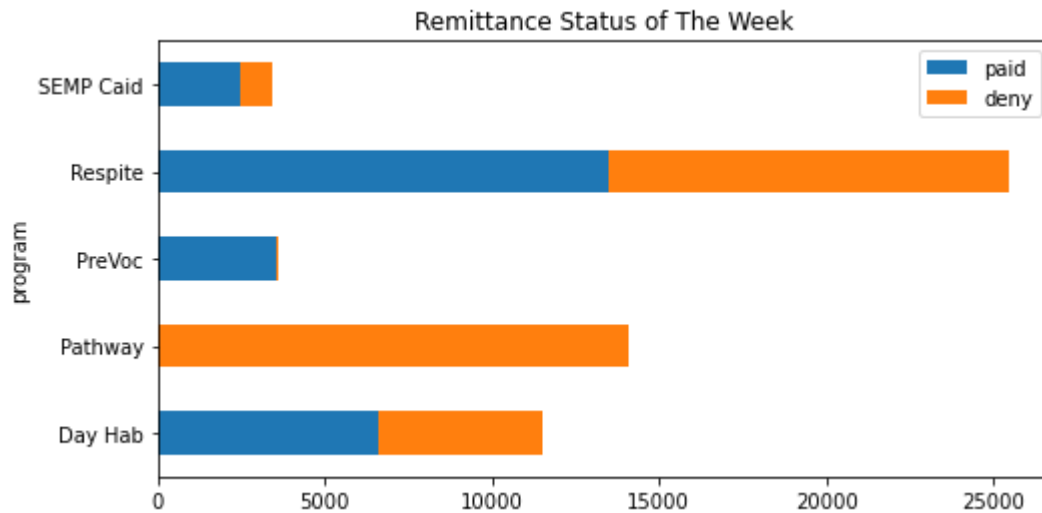
1.Summary

	claimed	paid	deny
program			
Day Hab	11532.17	6630.43	4901.74
Pathway	14110.01	0.00	14110.01
PreVoc	3598.37	3550.42	47.95
Respite	25457.58	13497.49	11960.09
SEMP Caidd	3421.01	2443.58	977.43

2.Detail

		claimed	paid	deny	paid %
program	month				
Day Hab	201902	4901.74	0.00	4901.74	0.00
	201912	6630.43	6630.43	0.00	100.00
Pathway	201901	14110.01	0.00	14110.01	0.00
PreVoc	201908	47.95	0.00	47.95	0.00
	201910	3550.42	3550.42	0.00	100.00
Respite	201907	17297.47	9171.04	8126.43	53.02
	201908	8160.11	4326.45	3833.66	53.02
SEMP Caidd	201910	3421.01	2443.58	977.43	71.43

Out[92]: Text(0.5, 1.0, 'Remittance Status of The Week')



CLIENT ANALYSIS

Client that were denied (by programs):

			claimed	paid	deny	paid %
name	program	month				
Ahm*d	PreVoc	201908	47.95	0.00	47.95	0.00
B*kk*r	Respite	201907	3909.03	2072.55	1836.48	53.02
		201908	3957.90	2098.46	1859.44	53.02
D****	SEMP Caid	201910	977.43	0.00	977.43	0.00
	Pathway	201901	14110.01	0.00	14110.01	0.00
J*h*s**	Respite	201907	3420.40	1813.48	1606.92	53.02
M**t*s	Respite	201908	4202.21	2227.99	1974.22	53.02
		201907	5765.82	3057.01	2708.81	53.02
O**	Day Hab	201902	4901.74	0.00	4901.74	0.00
Th*m*sch*k	Respite	201907	4202.21	2227.99	1974.22	53.02

REMARK AND REMIT CODE REPORT

1. REMARK CODE BY PROGRAMS:

			claimed	paid	deny
program	remark #	name			
Pathway	N30	D****	14110.01	0.0	14110.01
PreVoc	N30	Ahm*d	47.95	0.0	47.95
Respite	M86	B*kk*r	3933.47	0.0	3933.47
		J*h*s**	1710.20	0.0	1710.20
		M**t*s	4984.02	0.0	4984.02
		Th*m*sch*k	2101.11	0.0	2101.11
SEMP Caidd	N30	D****	977.43	0.0	977.43

2. REMIT CODE BY PROGRAMS:

			claimed	paid	deny
program	remit #	name			
Day Hab	200.0	O**	4901.74	0.00	4901.74
Pathway	96.0	D****	14110.01	0.00	14110.01
PreVoc	96.0	Ahm*d	47.95	0.00	47.95
Respite	45.0	B*kk*r	3933.47	4171.01	-237.54
		J*h*s**	1710.20	1813.48	-103.28
		M**t*s	4984.02	5285.01	-300.99
		Th*m*sch*k	2101.11	2227.99	-126.89
	97.0	B*kk*r	3933.47	0.00	3933.47
		J*h*s**	1710.20	0.00	1710.20
		M**t*s	4984.02	0.00	4984.02
		Th*m*sch*k	2101.11	0.00	2101.11
SEMP Caidd	96.0	D****	977.43	0.00	977.43

References

Claim Adjustment Reason Codes:

B1 Non-covered visits.

15 Payment adjusted because the submitted authorization number is missing

16 Claim/service lacks information which is needed for adjudication.

24 Payment for charges adjusted. Charges are covered under a capitation agreement/managed care plan.

29 The time limit for filing has expired.

45 Charges exceed your contracted/ legislated fee arrangement.

96 Non-covered charge(s).

97 Payment is included in the allowance for another service/procedure.

200 no description found

Remark Codes:

MA39 Missing/incomplete/invalid gender.

M49 Missing/incomplete/invalid value code(s) or amount(s).

M62 Missing/incomplete/invalid treatment authorization code.

M86 Service denied because payment already made for same/similar procedure within set time frame.

N216 Patient is not enrolled in this portion of our benefit package.

N30 Patient ineligible for this service.

N340 Missing/incomplete/invalid subscriber birth date.

PAYMENTS SUMMARY BY DATE OF SERVICES

Showing payment summary by date of service? (yes/no): yes

program	date	paid
Day Hab	12/12/2019	1657.61
	12/13/2019	828.80
	12/16/2019	828.80
	12/17/2019	2486.41
	12/18/2019	828.80
PreVoc	10/23/2019	575.42
	10/24/2019	575.94
	10/28/2019	767.23
	10/29/2019	575.94
	10/30/2019	479.95
	10/31/2019	575.94
Respite	7/13/2019	2357.53
	7/20/2019	2435.25
	7/27/2019	1865.30
	7/6/2019	2512.97
	8/10/2019	1295.34
	8/17/2019	518.14
	8/24/2019	1269.44
	8/3/2019	1243.53
SEMP Caid	10/10/2019	895.98
	10/15/2019	1221.79
	10/29/2019	325.81

PAYMENTS SUMMARY BY NAME THEN DATE OF SERVICES

Showing payment summary by name then date of service? (yes/no): yes

program	name	date	paid
Day Hab	P***	12/13/2019	828.80
		12/16/2019	828.80
		12/18/2019	828.80
PreVoc	Sc*tt	12/12/2019	828.80
		12/17/2019	828.80
	V****	12/12/2019	828.80
		12/17/2019	828.80
	W**k*r	12/17/2019	828.80
		10/23/2019	575.42
	Ch***g	10/24/2019	575.94
		10/28/2019	767.23
		10/29/2019	575.94
		10/30/2019	479.95
		10/31/2019	575.94
Respite	B*kk*r	7/13/2019	518.14
		7/20/2019	518.14
		7/27/2019	518.14
		7/6/2019	518.14
		8/10/2019	544.04
		8/17/2019	518.14
		8/24/2019	518.14
		8/3/2019	518.14
	J*h*s**	7/13/2019	518.14
		7/20/2019	621.77
		7/6/2019	673.58
	M**t*s	7/13/2019	751.30
		7/20/2019	751.30
		7/27/2019	777.21
		7/6/2019	777.21
		8/10/2019	751.30
		8/24/2019	751.30
		8/3/2019	725.39
	Th*m*sch*k	7/13/2019	569.95
		7/20/2019	544.04
		7/27/2019	569.95
		7/6/2019	544.04
SEMP Caidd	Edm**d	10/10/2019	895.98
		10/15/2019	1221.79
		10/29/2019	325.81

WEEKLY REMITTANCE REPORT - TO ACCOUNTING AND BOOKKEEPING TEAM

This section gives basic information of the weekly remittance summary of different programs, by showing the amounts that were claimed, paid, and denied, with denial percentage. Since some of the programs have different cost centers, the fiscal team need to allocate the

payments into different cost centers before sending the report to the bookkeeping team. On the report, the fiscals need to write down the descriptions for the bookkeepers to post on the general ledger system.

BASIC INFO

Total payment will be received of the week is \$ 26121.92

PREVIEW DETAILS

		claimed	paid	deny	paid %
program	month				
Day Hab	201912	6630.43	6630.43	0.00	100.00
PreVoc	201910	3550.42	3550.42	0.00	100.00
Respite	201907	17297.47	9171.04	8126.43	53.02
	201908	8160.11	4326.45	3833.66	53.02
SEMP Caidd	201910	3421.01	2443.58	977.43	71.43

The preview details section shows the remittance payment received at this week. According to the billing circle, when some programs receive big payments at a certain month, the programs would need to allocate the payments to different cost centers. In this remittance, we received the Medicaid payments from 5 programs: Day Hab, Pathway, PreVoc, Respite, and SEMP(Caid). Among these programs, Day Hab, Pathway, and SEMP have multiple cost centers. Therefore, in the Python script below, we enable an option for payment allocation for these 3 programs. The payment allocation amount depends on the estimated revenue given by the program operation staff, and the revenue is booked before we received the actual payment.

NOTICE TO BOOKKEEPING TEAM

Payment allocation for monthly billing needed? (yes/no): yes

	program	fy	month	cc	description	paid
0	Day Hab	20	201912	Multi	Day Hab 20 P7 201912	6630.43
1	PreVoc	20	201910	PVCC1	PreVoc 20 P7 201910	3550.42
2	Respite	20	201907	RPCC1	Respite 20 P7 201907	9171.04
3	Respite	20	201908	RPCC1	Respite 20 P7 201908	4326.45
4	SEMP Caidd	20	201910	Multi	SEMP Caidd 20 P7 201910	2443.58

Allocation for Day Hab? (yes/no): yes

What is the month for this payment? yyyyymm: 201912

>>Payment allocates to cost center DHCC2: 2000

>>Payment allocates to cost center DHCC3: 100

>>Payment allocates to cost center DHCC4: 200

>>Payment allocates to cost center DHCC5: 100

>>Payment allocates to cost center DHCC1 (Default cost center): 4230.43

DayHab payments other than 201912 's billing should be posted under cost center DHCC1

(if there are any).

Allocation for SEMP? (yes/no): no

Please post everything under cost center SCCC1.

Allocation for Pathway? (yes/no): no

Please post everything under cost center PWCC1.
