

Remove Orphan Claims and Third party Claims for Insurance Data

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ABSTRACT

The purpose of this study is to remove orphan claims and third party claims for insurance claim data using SAS. Orphan claims here refer to the void claims that are neither original nor partial adjustment claims. Third party claims here refer to the claims associated with other third party liability adjudicated by state agencies or private companies. Insurance IDs with only orphan claims usually need special attentions. Also third party claims may increase false positives in practice, particularly in the cases of recoupment or duplicate adjudications by multiple parties. Before doing analysis for the insurance data, we need to remove orphan claims and third party claims in most circumstance and remain a case-by-case decision for these claims. A SAS macro with procedures such as PROC SQL and DATA STEPS is employed to do the data analysis.

INTRODUCTION

An insurance Claim is filed by a policyholder stating that an insured event has occurred and that the insurance company should provide coverage.

An insurance adjuster could be set up with access to portions of the claim to just the right payment amount.

Insurance adjustment may be very complicated. For example, claims that be rejected as duplicates may be adjusted, cancelled or resubmitted. Claims that rejected for eligibility or other billing errors may be adjusted when the eligibility or billing issue is resolved. At different times, billing transactions that have previously processed may be paid or repaid with a duplicate payment.

The presence of third party claims in the data represents a primary payment for dual eligible insured. For example, Medicaid crossover payments are commonly automatically paid by Medicaid following adjudication of the primary Medicare claim. Claims with third party liability are usually adjudicated by private insurance companies.

Historical insurance claim data are used to develop models to establish and evolve evidence-based practice guidelines. However to ensure the data quality due to the complexity of the insurance claim data, we need to prepare the data for developing and deploying predictive models. Data preparation is held as the key to successful data mining. Here we will use a SAS macro to remove orphan claims and third party claims and look closely at these claims.

SAS Codes

```
*****;  
* Remove Orphan Claims and TPL Claims ;  
*****;
```

```
%macro remove_orphan_tpl(datain);
```

```
proc sql;  
  create table claim_check as  
  select id,  
  max(ifn(tpl not in (0,.), 1, 0)) as tpl_id,  
  max(ifn(adjustment_indicator in ('O', 'P'), 1, 0)) as orig_id  
  from &datain.  
  group by id;  
quit;
```

```
data no_orphan_tpl;  
  set claim_check;  
  if orig_id=0 or tpl_id=1 then delete;
```

```

run;

data orphan;
  set claim_check;
  if orig_id=0;
run;

data tpl;
  set claim_check;
  if tpl_id=1;
run;

proc sql;
  create table no_orphan_tpl_claims as
  select a.*
  from &datain. a, no_orphan_tpl b
  where a.id=b.id;
quit;

proc sql;
  create table orphan_claims as
  select a.*
  from &datain. a, orphan b
  where a.id=b.id;
quit;

proc sql;
  create table tpl_claims as
  select a.*
  from &datain. a, tpl b
  where a.id=b.id;
quit;

%mend remove_orphan_tpl;

data insurance;
  infile "C:\Documents and Settings\shiq\Desktop\New Folder\SESUG\tpl.txt";
  input id $6. amount_charged tpl adjustment_indicator $;
run;

%remove_orphan_tpl(insurance);

```

RESULTS

The demonstrated data set "INSURANCE" has 20 observations and 4 variables. One variable is called "ID" which represents the claim identifications. "AMOUNT_CHARGED" means the provider charged on the insurance agents or companies. "TPL" represents the other third party payment to this claim. "ADJUSTMENT_INDICATOR" provides codes for different adjustment activities. Here the code "O" and "P" represent original claims and partial adjustments respectively. The other codes mean void claims for different reasons.

Table 1: The Dataset "INSURANCE" used as an example.

	id	amount_charged	tpl	adjustment_indicator
1	100001	60	.	N
2	100001	70	7	P
3	100001	-6	0	O
4	100001	50	8	P
5	100002	34	.	O
6	100002	-9	0	P
7	100002	67	9	P
8	100003	-9	.	K
9	100004	8	9	O
10	100004	15	.	P
11	100005	78	8	O
12	100005	9	.	P
13	100006	54	0	J
14	100006	-7	.	P
15	100006	-5	.	P
16	100006	35	0	O
17	100007	67	.	P
18	100008	-9	.	P
19	100008	98	7	S
20	100008	43	0	O

For the same claim ID, there are different records with different adjustments and third party payments. We want to find out the orphan claims and third party claims and remove them from the above table.

The following is the table derived from “INSURANCE” containing the check results for orphan claims and third party claims for the distinct 8 claims IDs.

Table 2: Dataset “CLAIM_CHECK” used to check orphan claims and third party claims for different claim IDs.

	id	tpl_id	orig_id
1	100001	1	1
2	100002	1	1
3	100003	0	0
4	100004	1	1
5	100005	1	1
6	100006	0	1
7	100007	0	1
8	100008	1	1

If the claim ID has any record with third party payment not equaling zero or missing, TPL_ID will be assigned as 1 for this ID. Otherwise TPL_ID will be assigned to zero. There are 3 claim IDs not having third party payments. If the claim ID does not have any record with adjustment indicator equaling 'O' or 'P', this claim will be identified as orphan claims and ORID_ID=0. Otherwise ORID_ID=1. There is only one orphan claim ID in the dataset “INSURANCE”.

Table 3: Dataset “TPL_CLAIMS”.

	id	amount_charged	tpl	adjustment_indicator
1	100001	60	.	N
2	100001	70	7	P
3	100001	-6	0	O
4	100001	50	8	P
5	100002	34	.	O
6	100002	-9	0	P
7	100002	67	9	P
8	100004	8	9	O
9	100004	15	.	P
10	100005	78	8	O
11	100005	9	.	P
12	100008	-9	.	P
13	100008	98	7	S
14	100008	43	0	O

From table 3, we can see that third party claim ID: 100001, 100002, 100004, 100005 and 100008 have records with third party payments not equaling 0 or missing.

Table 4: Dataset “ORPHAN_CLAIMS”.

	id	amount_charged	tpl	adjustment_indicator
1	100003	-9	.	K

From table 4, we know that the orphan claim ID 100003 does not have any records with adjustment indicator equaling ‘O’ or ‘P’. But this orphan claim is not a third party claim since its third party payment is missing.

Table 5: Dataset “NO_ORPHAN_TPL_CLAIMS”.

	id	amount_charged	tpl	adjustment_indicator
1	100006	54	0	J
2	100006	-7	.	P
3	100006	-5	.	P
4	100006	35	0	O
5	100007	67	.	P

From table 5, we know that the claim ID 100006 and 100007 are neither third party claims nor orphan claims. They have records with adjustment indicator equaling ‘O’ or ‘P’ and all the third party payments equaling zero or missing. For claim ID 100006, it has one void record and negative adjustments. For claim ID 100007, it has one partial positive adjustment record. If possible, we can pull out all the relative records to claim ID 100007 to see whether there are any void records.

DISCLAIMER

All opinions and suggestions stated in this paper do not necessarily reflect the opinions and suggestions of NCI Information Systems, Inc.

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