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NF180027

**TITLE:** Using Administrative Health Data to Identify Patients with NF1 in Ontario, Canada, and to Assess Prevalence, Mortality, and Health Care Utilization Patterns

**PRINCIPAL INVESTIGATOR:** Carolina Barnett-Tapia

**CONTRACTING ORGANIZATION:** University Health Network

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<b>13. SUPPLEMENTARY NOTES</b>					
<b>14. ABSTRACT</b> We conducted a free text search in EMRALD using NF-related terms, to identify potential individuals with NF1. Out of 593,408 records in EMRALD, 273,444 were eligible for search. 2,200 records had at least one search term, and we prioritized 837 charts with more than 1 term for initial review. Trained chart abstractors identified 42 definitive NF1 cases, and 228 possible cases. Inter and intra rater agreement for chart abstractors ranged between 96 to 100%.  After final review, there were 71 confirmed cases and 37 possible cases. A random review of 300 charts with only one search term did not result in any cases. The minimal prevalence of NF1 in this cohort was 1 in 3851.  A within EMR algorithm to identify NF1 cases though free text search had sensitivity of 85.9 % and 100% specificity, with 78% PPV and 100% NPV. All false positives were possible cases. We tested ~214 billing algorithms using different combinations of outpatient and/or inpatient billing codes. However, no algorithm had acceptable positive predictive value, although all had 100% NPV.					
<b>15. SUBJECT TERMS</b> NF1, prevalence, billing codes, EMR					
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			UU	23	<b>19b. TELEPHONE NUMBER</b> (include area code)

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## INTRODUCTION:

The objective of this study is to develop an algorithm to identify people with NF1 living in the province of Ontario, Canada (population ~ 14 million), through administrative health databases. This algorithm will be used to study incidence, prevalence, NF1-related mortality and health care utilization patterns of patients with NF1. The specific aims for this project are outlined below.

**Specific Aim 1:** To develop and validate an algorithm to identify patients with NF1 in the province of Ontario.

**Specific Aim 2:** To estimate the incidence, prevalence and mortality of patients with NF1 in Ontario, Canada. We hypothesize that we can obtain reliable estimates of incidence and prevalence of NF1 in the province which we expect to be within previously published ranges. We also plan to calculate mortality ratios stratified by age and hypothesize that individuals with NF1 have higher mortality ratios compared to the general population.

**Specific Aim 3:** To study the health-utilization patterns of NF1 patients which includes the number of primary care, specialist and emergency visits, outpatient surgeries, hospital admissions, mental health care and pain treatments. Compared to a matched cohort of healthy controls, we hypothesize that patients with NF1 will have, on average, significantly more visits at all levels of health care.

For the report period, our statement of work was focused in completing Aim 1.

## 1. KEYWORDS:

*NF1, neurofibromatosis 1, electronic medical record, EMR, administrative health databases, algorithm, prevalence, health utilization.*

## 2. ACCOMPLISHMENTS:

What were the major goals of the project?

### Major goals for reporting period (as stated in SOW)

- 1. Regulatory, 100% completed:** we obtained HRPO approval On July 15, 2019
- 2. Chart abstraction and review, 100% completed:** Chart review and final review of possible and definite cases was completed in December 2019.
- 3. Algorithm(s) Development and Validation, 100% completed:** EMR algorithm was tested December 2019. Billing algorithms completed April 2019.

**What was accomplished under these goals?**

Our EMR algorithm identified 71 definitive NF1 cases within 273,440 eligible records. This allowed to estimate a minimum prevalence of 1 in 3851, which is within published ranges. Considering the “possible NF1” records, prevalence could be as low as 1 in 3,100, if half of the possible cases are true positives.

We found that a simple EMR search can reliably identify NF1 cases within electronic medical records. However, we found that no billing algorithm had acceptable positive predictive value (highest PPV was ~71%). The inpatient algorithms had the highest PPV, but few individuals (~25%) in this cohort had an admission with NF1 as a relevant diagnosis. Outpatient billing codes were not specific enough.

While assessing the billing codes for generating the algorithms, we found that the most common diagnostic code in the NF1 individuals was for drug dependence/drug addiction. Although unexpected, this result is in keeping with our hypothesis for the upcoming health utilization study (aim 3), that individuals with NF1 have higher prevalence of mental health disorders. We will explore this further in the health utilization studies in the next reporting periods.

**What opportunities for training and professional development has the project provided?**

Nothing to report

**How were the results disseminated to communities of interest?**

We presented an abstract at the American Academy of Neurology 2020 annual meeting. Unfortunately, due to COVID-19 the meeting was cancelled but the abstract was published in the conference proceedings.

**What do you plan to do during the next reporting period to accomplish the goals?**

- i. We plan to study mortality and health utilization patterns within the EMERALD cohort, comparing NF1 individuals to matched controls.
- ii. We plan to use our planned mitigation strategy, by linking a large cohort of NF1 individuals from two large NF1 centers to administrative health data. We will study billing codes and patterns and we will compare mortality ratios to healthy controls, as well as health utilization patterns

**4. IMPACT:**

**What was the impact on the development of the principal discipline(s) of the project?**

- i. We have validated a simple search to detect individuals with NF1 in electronic medical records. This algorithm can be used in other health care systems to identify individuals with NF1.
- ii. We were able to determine a minimal prevalence of NF1 in this cohort of Ontarians, with a value of 1 in 3851 individuals, which is within published ranges.

**What was the impact on other disciplines?**

Nothing to Report

**What was the impact on technology transfer?**

We have validated a simple EMR search that may be used in any healthcare setting that uses electronic medical records, to identify individuals with NF1. This can lead to further administrative data studies in NF1.

**What was the impact on society beyond science and technology?**

Nothing to Report

**5. CHANGES/PROBLEMS:**

No changes to approach

**Actual or anticipated problems or delays and actions or plans to resolve them**

While our EMR algorithm performed successfully, our billing code algorithms had low positive predictive value. Therefore, we will use our planned mitigation strategy of linking data from specialized NF clinics to administrative health databases. This will allow us to complete aims 2 and 3.

Due to COVID-19, the analysts working at ICES have been asked to prioritize COVID-related projects. This will delay some of our work for the next reporting period.

**Changes that had a significant impact on expenditures**

Nothing to Report

**Significant changes in use or care of human subjects, vertebrate animals, biohazards, and/or select agents**

Nothing to Report

**Significant changes in use or care of human subjects**

Nothing to Report

**Significant changes in use or care of vertebrate animals**

Nothing to Report

**Significant changes in use of biohazards and/or select agents**

Nothing to Report

**6. PRODUCTS:**

- **Publications, conference papers, and presentations**

**Journal publications.**

Nothing to Report

**Books or other non-periodical, one-time publications.**

Nothing to Report

**Other publications, conference papers and presentations.**

Carolina Barnett Tapia, Elisa Candido, Branson Chen, Patricia Parkin, Priscila Pequeno, Karen Tu. Development of an algorithm to identify individuals with Neurofibromatosis type 1 within administrative data. (1831) Neurology. April 14, 2020; 94 (15 Supplement)

- **Website(s) or other Internet site(s)**

Nothing to Report

- **Technologies or techniques**

EMR search strategy to identify NF1 cases. We will disseminate this through a publication.

- **Inventions, patent applications, and/or licenses**

Nothing to Report

- **Other Products**

Nothing to Report

**7. PARTICIPANTS & OTHER COLLABORATING ORGANIZATIONS**

**What individuals have worked on the project?**

Name:	<i>Carolina Barnett-Tapia</i>
Project Role:	<i>PI</i>
Researcher Identifier (e.g. ORCID ID):	ORCID ID 0000-0001-5546-0221
Nearest person month worked:	3.6
Contribution to Project:	<i>Dr. Barnett-Tapia has coordinated this project. She performed final chart review to classify records as definitive or possible NF1. She reviewed all billing codes from cases to develop the algorithms</i>
Funding Support:	

Name:	<i>Elisa Candido</i>
Project Role:	Co-investigator
Researcher Identifier (e.g. ORCID ID):	
Nearest person month worked:	1.2
Contribution to Project:	<i>Ms. Candido has coordinated the ICES personnel, directed the EMERALD algorithm development</i>
Funding Support:	NA

Name:	Karen Tu
Project Role:	<i>Co-investigator</i>
Researcher Identifier (e.g. ORCID ID):	ORCID ID: 0000-0003-0883-4934
Nearest person month worked:	1.2
Contribution to Project:	<i>Dr. Tu has provided expertise in developing search strategy within EMERALD as well as extensive analysis of billing codes to develop billing algorithms</i>
Funding Support:	

Name:	<i>Patricia Parkin</i>
Project Role:	<i>Co-investigator</i>
Researcher Identifier (e.g. ORCID ID):	
Nearest person month worked:	1.0
Contribution to Project:	<i>Dr. Parkin has provided clinical expertise to determine billing codes to use in algorithms</i>
Funding Support:	

Name:	<i>Branson Chen</i>
Project Role:	Health Information Analyst
Researcher Identifier (e.g. ORCID ID):	
Nearest person month worked:	1.5
Contribution to Project:	<i>Mr. Chen conducted the search within EMRALD, analyzed abstractor reliability, and developed EMR algorithm</i>
Funding Support:	

Name:	Alireza Pourmohammadjani
Project Role:	Chart Abstractor
Researcher Identifier (e.g. ORCID ID):	
Nearest person month worked:	1.5
Contribution to Project:	<i>Mr. Pourmohammadjani conducted chart abstraction</i>
Funding Support:	

Name:	<i>Priscila Pequeno</i>
Project Role:	Senior Research Analyst
Researcher Identifier (e.g. ORCID ID):	
Nearest person month worked:	1.5
Contribution to Project:	<i>Ms. Pequeno developed and tested all the billing algorithms</i>
Funding Support:	

Name:	Soudeh Taghdiri
Project Role:	Chart Abstractor
Researcher Identifier (e.g. ORCID ID):	
Nearest person month worked:	1
Contribution to Project:	Ms. Taghdiri conducted chart abstraction
Funding Support:	

**Has there been a change in the active other support of the PD/PI(s) or senior/key personnel since the last reporting period?**

Nothing to Report

**What other organizations were involved as partners?**

1. **Organization Name:** Institute for Clinical Evaluative Science (ICES)
2. **Location of Organization:** *Toronto, Canada*
3. **Partner's contribution to the project:** Collaboration

The ICES hosts all health administrative data for the province of Ontario, and we contracted their services for this study.

## 8. SPECIAL REPORTING REQUIREMENTS

**COLLABORATIVE AWARDS:** *NA*

**QUAD CHARTS:** *NA*

## 9. APPENDICES:




- 1) American Academy of Neurology Abstract
- 2) EMR search terms
- 3) Frequent outpatient diagnostic codes
- 4) Billing algorithms

April 14, 2020; 94 (15 Supplement) TUESDAY, APRIL 28

# Development of an algorithm to identify individuals with Neurofibromatosis type 1 within administrative data. (1831)

Carolina Barnett Tapia, Elisa Candido, Branson Chen, Patricia Parkin, Priscila Pequeno, Karen Tu

First published April 14, 2020,

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## Abstract

**Objective:** To develop and validate an algorithm using health administrative data to accurately identify individuals with Neurofibromatosis 1 (NF1) living in Ontario, Canada (population ~14 million).

**Background:** NF1 is one of the most common autosomal dominant conditions; however, there is limited population-based data on individuals with NF1.

**Design/Methods:** We identified individuals with

NF1 using the Electronic Medical Records Primary Care Database (EMRPC or EMRALD). Records were included for individuals who were rostered, had a valid health card number and date of birth, had a physician visit within the last 2 years and were on the EMR for  $\geq 1$  year. We conducted a free-text search of commonly-used terms related to NF1 (i.e. neurofibroma, NF1, cafe-au-lait, Lisch, plexiform, freckling, MPNST, optic glioma). Records with  $> 1$  term were reviewed by trained abstractors. An investigator with clinical NF1 expertise reviewed all records initially classified as definitive and possible, and performed final NF1 case allocation. Records not reviewed were assumed to not have NF1; we randomly sampled and abstracted 300 records with only one NF1 related term to confirm that our sampling strategy was unlikely to miss any cases.

**Results:** 273,440 EMRPC records met criteria for abstraction. The free text search found 837 charts with  $>1$  NF1-related terms. None of the randomly sampled charts with only 1 NF1-related term had NF1. Validation has been completed in  $\sim 760$  charts, with 61 definitive cases. This yields a preliminary minimum population-based prevalence of 1 in 4483.

**Conclusions:** Strengths of this study include a large population based sample. The study is limited by the inability to capture individuals with NF1 who have not attended a primary care visit within the last 2

years. After validation is complete, the algorithm will be applied to administrative data for the population of Ontario to study incidence, prevalence, mortality and health care utilization in individuals with NF.

<b>d_keyword</b>	<b>d_search_term</b>
neurofibroma	%neurofibr_m%
nf	nf
nf	nf[^a-z0-9/]%
nf	%[^a-z0-9/]nf
nf	%[^a-z0-9/]nf[^a-z0-9/]%
nf1	nf1
nf1	nf1[^a-z0-9]%
nf1	%[^a-z0-9]nf1
nf1	%[^a-z0-9]nf1[^a-z0-9]%
nf2	nf2
nf2	nf2[^a-z0-9]%
nf2	%[^a-z0-9]nf2
nf2	%[^a-z0-9]nf2[^a-z0-9]%
cafe_au_lait	%caf__au_lait%
cal_spot	%[^a-z0-9]cal spot%
lisch	%[^a-z0-9]lisch[^a-z0-9]%
plexiform	%plexiform%
axillary_freckling	%axillary freckling%
inguinal_freckling	%inguinal freckling%
sheath_tumour	%sheath tumo%
pnst	%[^a-ln-z]pnst[^a-z]%
optic_glioma	%optic glioma%
recklinghausen	%recklinghausen%
bilateral_acoustic_neuroma	%bilateral acoustic neuroma%

\*requires more than one term

## Most Common Outpatient Billing Codes

dxcode	_dxcode	Frequency	Percent	Cumulative Frequency	Cumulative Percent
999	WITHOUT DIAGNOSIS	9838	34.63	9838	34.63
304	Drug dependence, drug addiction	1216	4.28	11054	38.91
787	Anorexia, nausea and vomiting, heartburn, dysphagia, hiccough, hematemesis, jaundice, ascites,	605	2.13	11659	41.04
799	Other ill-defined conditions	541	1.9	12200	42.94
847	Neck, low back, coccyx	473	1.66	12673	44.61
460	Acute nasopharyngitis, common cold	463	1.63	13136	46.24
709	Other disorders of skin and subcutaneous tissue	438	1.54	13574	47.78
781	Leg cramps, leg pain, muscle pain, joint pain, arthralgia, joint swelling, masses	372	1.31	13946	49.09
300	Anxiety neurosis, hysteria, neurasthenia, obsessive compulsive neurosis, reactive depression	347	1.22	14293	50.31
785	Chest pain, tachycardia, syncope, shock, edema, masses	331	1.17	14624	51.48
216	Skin (e.g., pigmented naevus, dermatofibroma)	308	1.08	14932	52.56
916	Well baby care	282	0.99	15214	53.55
192	Cranial nerves, spinal cord, other parts of nervous system	278	0.98	15492	54.53
349	Other diseases of central nervous system (e.g., brain abscess, narcolepsy, motor neuron disease)	266	0.94	15758	55.47
780	Convulsions, ataxia, vertigo, headache, except tension headache and migraine	255	0.9	16013	56.37
401	Essential, benign hypertension	241	0.85	16254	57.21
466	Acute bronchitis	237	0.83	16491	58.05
493	Asthma, allergic bronchitis	237	0.83	16728	58.88
379	Other disorders of the eye	227	0.8	16955	59.68
739	Other diseases of musculoskeletal system and connective tissue	190	0.67	17145	60.35
650	Normal delivery, uncomplicated pregnancy	186	0.65	17331	61.01
917	Annual health examination adolescent/adult Well Vision Care	177	0.62	17508	61.63
477	Allergic rhinitis, hay fever	175	0.62	17683	62.24
786	Epistaxis, hemoptysis, cough, dyspnea, masses, shortness of breath, hyperventilation, sleep apnea	173	0.61	17856	62.85
214	Lipoma	168	0.59	18024	63.44
44	Other human immunodeficiency virus infection	158	0.56	18182	64
691	Eczema, atopic dermatitis, neurodermatitis	155	0.55	18337	64.55
727	Synovitis, tenosynovitis, bursitis, bunion, ganglion	154	0.54	18491	65.09
599	Other disorders of urinary tract	151	0.53	18642	65.62
250	Diabetes mellitus, including complications	146	0.51	18788	66.13
703	Ingrown nail, onychogryposis	144	0.51	18932	66.64
842	Wrist, hand, fingers	142	0.5	19074	67.14
724	Lumbar strain, lumbago, coccydynia, sciatica	141	0.5	19215	67.64
758	Chromosomal anomalies (e.g., Down's syndrome, other autosomal anomalies, Klinefelter's syndrome)	141	0.5	19356	68.13

**Billing Algorithms, Standard ICES Runs**

<b>Rulenum</b>	<b>Tpos</b>	<b>Tneg</b>	<b>Fneg</b>	<b>Fpos</b>	<b>Sensitivity (%)</b>	<b>Specificity (%)</b>	<b>Positive Predict Value (%)</b>	<b>Negative Predict Value (%)</b>
1	15	273325	56	6	21.1(11.6-30.6)	100.0(100.0-100.0)	71.4(52.1-90.8)	100.0(100.0-100.0)
2	16	273323	55	8	22.5(12.8-32.3)	100.0(100.0-100.0)	66.7(47.8-85.5)	100.0(100.0-100.0)
3	22	273321	49	10	31.0(20.2-41.7)	100.0(100.0-100.0)	68.8(52.7-84.8)	100.0(100.0-100.0)
4	65	125703	6	147628	91.5(85.1-98.0)	46.0(45.8-46.2)	0.0(0.0-0.1)	100.0(100.0-100.0)
5	59	186852	12	86479	83.1(74.4-91.8)	68.4(68.2-68.5)	0.1(0.1-0.1)	100.0(100.0-100.0)
6	54	203028	17	70303	76.1(66.1-86.0)	74.3(74.1-74.4)	0.1(0.1-0.1)	100.0(100.0-100.0)
7	49	223114	22	50217	69.0(58.3-79.8)	81.6(81.5-81.8)	0.1(0.1-0.1)	100.0(100.0-100.0)
8	45	233903	26	39428	63.4(52.2-74.6)	85.6(85.4-85.7)	0.1(0.1-0.1)	100.0(100.0-100.0)
9	56	196541	15	76790	78.9(69.4-88.4)	71.9(71.7-72.1)	0.1(0.1-0.1)	100.0(100.0-100.0)
10	51	218608	20	54723	71.8(61.4-82.3)	80.0(79.8-80.1)	0.1(0.1-0.1)	100.0(100.0-100.0)
11	46	230753	25	42578	64.8(53.7-75.9)	84.4(84.3-84.6)	0.1(0.1-0.1)	100.0(100.0-100.0)
12	57	192563	14	80768	80.3(71.0-89.5)	70.5(70.3-70.6)	0.1(0.1-0.1)	100.0(100.0-100.0)
13	51	215808	20	57523	71.8(61.4-82.3)	79.0(78.8-79.1)	0.1(0.1-0.1)	100.0(100.0-100.0)
14	46	228958	25	44373	64.8(53.7-75.9)	83.8(83.6-83.9)	0.1(0.1-0.1)	100.0(100.0-100.0)
15	40	239602	31	33729	56.3(44.8-67.9)	87.7(87.5-87.8)	0.1(0.1-0.2)	100.0(100.0-100.0)
16	39	247066	32	26265	54.9(43.4-66.5)	90.4(90.3-90.5)	0.1(0.1-0.2)	100.0(100.0-100.0)
17	37	249793	34	23538	52.1(40.5-63.7)	91.4(91.3-91.5)	0.2(0.1-0.2)	100.0(100.0-100.0)
18	32	254147	39	19184	45.1(33.5-56.6)	93.0(92.9-93.1)	0.2(0.1-0.2)	100.0(100.0-100.0)
19	45	232070	26	41261	63.4(52.2-74.6)	84.9(84.8-85.0)	0.1(0.1-0.1)	100.0(100.0-100.0)
20	44	241107	27	32224	62.0(50.7-73.3)	88.2(88.1-88.3)	0.1(0.1-0.2)	100.0(100.0-100.0)
21	42	244946	29	28385	59.2(47.7-70.6)	89.6(89.5-89.7)	0.1(0.1-0.2)	100.0(100.0-100.0)
22	36	250286	35	23045	50.7(39.1-62.3)	91.6(91.5-91.7)	0.2(0.1-0.2)	100.0(100.0-100.0)
23	49	227310	22	46021	69.0(58.3-79.8)	83.2(83.0-83.3)	0.1(0.1-0.1)	100.0(100.0-100.0)
24	46	237366	25	35965	64.8(53.7-75.9)	86.8(86.7-87.0)	0.1(0.1-0.2)	100.0(100.0-100.0)
25	43	242086	28	31245	60.6(49.2-71.9)	88.6(88.4-88.7)	0.1(0.1-0.2)	100.0(100.0-100.0)
26	37	248091	34	25240	52.1(40.5-63.7)	90.8(90.7-90.9)	0.1(0.1-0.2)	100.0(100.0-100.0)
27	67	125702	4	147629	94.4(89.0-99.7)	46.0(45.8-46.2)	0.0(0.0-0.1)	100.0(100.0-100.0)
28	62	186851	9	86480	87.3(79.6-95.1)	68.4(68.2-68.5)	0.1(0.1-0.1)	100.0(100.0-100.0)
29	58	203026	13	70305	81.7(72.7-90.7)	74.3(74.1-74.4)	0.1(0.1-0.1)	100.0(100.0-100.0)
30	55	223112	16	50219	77.5(67.7-87.2)	81.6(81.5-81.8)	0.1(0.1-0.1)	100.0(100.0-100.0)

31	51	233900	20	39431	71.8(61.4-82.3)	85.6(85.4-85.7)	0.1(0.1-0.2)	100.0(100.0-100.0)
32	59	196539	12	76792	83.1(74.4-91.8)	71.9(71.7-72.1)	0.1(0.1-0.1)	100.0(100.0-100.0)
33	56	218606	15	54725	78.9(69.4-88.4)	80.0(79.8-80.1)	0.1(0.1-0.1)	100.0(100.0-100.0)
34	51	230750	20	42581	71.8(61.4-82.3)	84.4(84.3-84.6)	0.1(0.1-0.2)	100.0(100.0-100.0)
35	60	192561	11	80770	84.5(76.1-92.9)	70.4(70.3-70.6)	0.1(0.1-0.1)	100.0(100.0-100.0)
36	56	215806	15	57525	78.9(69.4-88.4)	79.0(78.8-79.1)	0.1(0.1-0.1)	100.0(100.0-100.0)
37	51	228955	20	44376	71.8(61.4-82.3)	83.8(83.6-83.9)	0.1(0.1-0.1)	100.0(100.0-100.0)
38	46	239599	25	33732	64.8(53.7-75.9)	87.7(87.5-87.8)	0.1(0.1-0.2)	100.0(100.0-100.0)
39	46	247063	25	26268	64.8(53.7-75.9)	90.4(90.3-90.5)	0.2(0.1-0.2)	100.0(100.0-100.0)
40	44	249790	27	23541	62.0(50.7-73.3)	91.4(91.3-91.5)	0.2(0.1-0.2)	100.0(100.0-100.0)
41	39	254144	32	19187	54.9(43.4-66.5)	93.0(92.9-93.1)	0.2(0.1-0.3)	100.0(100.0-100.0)
42	50	232067	21	41264	70.4(59.8-81.0)	84.9(84.8-85.0)	0.1(0.1-0.2)	100.0(100.0-100.0)
43	50	241104	21	32227	70.4(59.8-81.0)	88.2(88.1-88.3)	0.2(0.1-0.2)	100.0(100.0-100.0)
44	48	244943	23	28388	67.6(56.7-78.5)	89.6(89.5-89.7)	0.2(0.1-0.2)	100.0(100.0-100.0)
45	43	250283	28	23048	60.6(49.2-71.9)	91.6(91.5-91.7)	0.2(0.1-0.2)	100.0(100.0-100.0)
46	54	227307	17	46024	76.1(66.1-86.0)	83.2(83.0-83.3)	0.1(0.1-0.1)	100.0(100.0-100.0)
47	52	237363	19	35968	73.2(62.9-83.5)	86.8(86.7-87.0)	0.1(0.1-0.2)	100.0(100.0-100.0)
48	49	242083	22	31248	69.0(58.3-79.8)	88.6(88.4-88.7)	0.2(0.1-0.2)	100.0(100.0-100.0)
49	44	248088	27	25243	62.0(50.7-73.3)	90.8(90.7-90.9)	0.2(0.1-0.2)	100.0(100.0-100.0)
50	67	125701	4	147630	94.4(89.0-99.7)	46.0(45.8-46.2)	0.0(0.0-0.1)	100.0(100.0-100.0)
51	58	203025	13	70306	81.7(72.7-90.7)	74.3(74.1-74.4)	0.1(0.1-0.1)	100.0(100.0-100.0)
54	51	216248	20	57083	71.8(61.4-82.3)	79.1(79.0-79.3)	0.1(0.1-0.1)	100.0(100.0-100.0)
55	44	233076	27	40255	62.0(50.7-73.3)	85.3(85.1-85.4)	0.1(0.1-0.1)	100.0(100.0-100.0)
56	41	250526	30	22805	57.7(46.3-69.2)	91.7(91.6-91.8)	0.2(0.1-0.2)	100.0(100.0-100.0)
57	45	243871	26	29460	63.4(52.2-74.6)	89.2(89.1-89.3)	0.2(0.1-0.2)	100.0(100.0-100.0)
58	41	251611	30	21720	57.7(46.3-69.2)	92.1(92.0-92.2)	0.2(0.1-0.2)	100.0(100.0-100.0)
59	31	261975	40	11356	43.7(32.1-55.2)	95.8(95.8-95.9)	0.3(0.2-0.4)	100.0(100.0-100.0)
60	35	260031	36	13300	49.3(37.7-60.9)	95.1(95.1-95.2)	0.3(0.2-0.3)	100.0(100.0-100.0)
61	27	265212	44	8119	38.0(26.7-49.3)	97.0(97.0-97.1)	0.3(0.2-0.5)	100.0(100.0-100.0)
62	21	268225	50	5106	29.6(19.0-40.2)	98.1(98.1-98.2)	0.4(0.2-0.6)	100.0(100.0-100.0)
63	20	269935	51	3396	28.2(17.7-38.6)	98.8(98.7-98.8)	0.6(0.3-0.8)	100.0(100.0-100.0)
64	18	271022	53	2309	25.4(15.2-35.5)	99.2(99.1-99.2)	0.8(0.4-1.1)	100.0(100.0-100.0)
65	17	271689	54	1642	23.9(14.0-33.9)	99.4(99.4-99.4)	1.0(0.5-1.5)	100.0(100.0-100.0)
66	45	246079	26	27252	63.4(52.2-74.6)	90.0(89.9-90.1)	0.2(0.1-0.2)	100.0(100.0-100.0)

67	38	256451	33	16880	53.5(41.9-65.1)	93.8(93.7-93.9)	0.2(0.2-0.3)	100.0(100.0-100.0)
68	31	262436	40	10895	43.7(32.1-55.2)	96.0(95.9-96.1)	0.3(0.2-0.4)	100.0(100.0-100.0)
69	28	266097	43	7234	39.4(28.1-50.8)	97.4(97.3-97.4)	0.4(0.2-0.5)	100.0(100.0-100.0)
70	22	268285	49	5046	31.0(20.2-41.7)	98.2(98.1-98.2)	0.4(0.3-0.6)	100.0(100.0-100.0)
71	20	269770	51	3561	28.2(17.7-38.6)	98.7(98.7-98.7)	0.6(0.3-0.8)	100.0(100.0-100.0)
72	20	270785	51	2546	28.2(17.7-38.6)	99.1(99.0-99.1)	0.8(0.4-1.1)	100.0(100.0-100.0)
73	67	125702	4	147629	94.4(89.0-99.7)	46.0(45.8-46.2)	0.0(0.0-0.1)	100.0(100.0-100.0)
74	60	189801	11	83530	84.5(76.1-92.9)	69.4(69.3-69.6)	0.1(0.1-0.1)	100.0(100.0-100.0)
75	54	223718	17	49613	76.1(66.1-86.0)	81.8(81.7-82.0)	0.1(0.1-0.1)	100.0(100.0-100.0)
76	46	242860	25	30471	64.8(53.7-75.9)	88.9(88.7-89.0)	0.2(0.1-0.2)	100.0(100.0-100.0)
77	43	253566	28	19765	60.6(49.2-71.9)	92.8(92.7-92.9)	0.2(0.2-0.3)	100.0(100.0-100.0)
78	36	260207	35	13124	50.7(39.1-62.3)	95.2(95.1-95.3)	0.3(0.2-0.4)	100.0(100.0-100.0)
79	30	264278	41	9053	42.3(30.8-53.7)	96.7(96.6-96.8)	0.3(0.2-0.4)	100.0(100.0-100.0)
80	26	266829	45	6502	36.6(25.4-47.8)	97.6(97.6-97.7)	0.4(0.2-0.6)	100.0(100.0-100.0)
81	23	268583	48	4748	32.4(21.5-43.3)	98.3(98.2-98.3)	0.5(0.3-0.7)	100.0(100.0-100.0)
82	21	269828	50	3503	29.6(19.0-40.2)	98.7(98.7-98.8)	0.6(0.3-0.9)	100.0(100.0-100.0)
83	67	125702	4	147629	94.4(89.0-99.7)	46.0(45.8-46.2)	0.0(0.0-0.1)	100.0(100.0-100.0)
84	60	187633	11	85698	84.5(76.1-92.9)	68.6(68.5-68.8)	0.1(0.1-0.1)	100.0(100.0-100.0)
85	55	220833	16	52498	77.5(67.7-87.2)	80.8(80.6-80.9)	0.1(0.1-0.1)	100.0(100.0-100.0)
86	46	240158	25	33173	64.8(53.7-75.9)	87.9(87.7-88.0)	0.1(0.1-0.2)	100.0(100.0-100.0)
87	43	251373	28	21958	60.6(49.2-71.9)	92.0(91.9-92.1)	0.2(0.1-0.3)	100.0(100.0-100.0)
88	37	258305	34	15026	52.1(40.5-63.7)	94.5(94.4-94.6)	0.2(0.2-0.3)	100.0(100.0-100.0)
89	34	262649	37	10682	47.9(36.3-59.5)	96.1(96.0-96.2)	0.3(0.2-0.4)	100.0(100.0-100.0)
90	29	265558	42	7773	40.8(29.4-52.3)	97.2(97.1-97.2)	0.4(0.2-0.5)	100.0(100.0-100.0)
91	25	267560	46	5771	35.2(24.1-46.3)	97.9(97.8-97.9)	0.4(0.3-0.6)	100.0(100.0-100.0)
92	23	268987	48	4344	32.4(21.5-43.3)	98.4(98.4-98.5)	0.5(0.3-0.7)	100.0(100.0-100.0)
93	67	125702	4	147629	94.4(89.0-99.7)	46.0(45.8-46.2)	0.0(0.0-0.1)	100.0(100.0-100.0)
94	60	181250	11	92081	84.5(76.1-92.9)	66.3(66.1-66.5)	0.1(0.0-0.1)	100.0(100.0-100.0)
95	58	212554	13	60777	81.7(72.7-90.7)	77.8(77.6-77.9)	0.1(0.1-0.1)	100.0(100.0-100.0)
96	53	231685	18	41646	74.6(64.5-84.8)	84.8(84.6-84.9)	0.1(0.1-0.2)	100.0(100.0-100.0)
98	42	251823	29	21508	59.2(47.7-70.6)	92.1(92.0-92.2)	0.2(0.1-0.3)	100.0(100.0-100.0)
99	37	257288	34	16043	52.1(40.5-63.7)	94.1(94.0-94.2)	0.2(0.2-0.3)	100.0(100.0-100.0)
100	35	261015	36	12316	49.3(37.7-60.9)	95.5(95.4-95.6)	0.3(0.2-0.4)	100.0(100.0-100.0)
101	30	263683	41	9648	42.3(30.8-53.7)	96.5(96.4-96.5)	0.3(0.2-0.4)	100.0(100.0-100.0)
102	27	265608	44	7723	38.0(26.7-49.3)	97.2(97.1-97.2)	0.3(0.2-0.5)	100.0(100.0-100.0)

103	67	125702	4	147629	94.4(89.0-99.7)	46.0(45.8-46.2)	0.0(0.0-0.1)	100.0(100.0-100.0)
104	62	178158	9	95173	87.3(79.6-95.1)	65.2(65.0-65.4)	0.1(0.0-0.1)	100.0(100.0-100.0)
105	58	208170	13	65161	81.7(72.7-90.7)	76.2(76.0-76.3)	0.1(0.1-0.1)	100.0(100.0-100.0)
106	54	227082	17	46249	76.1(66.1-86.0)	83.1(82.9-83.2)	0.1(0.1-0.1)	100.0(100.0-100.0)
107	49	239558	22	33773	69.0(58.3-79.8)	87.6(87.5-87.8)	0.1(0.1-0.2)	100.0(100.0-100.0)
108	46	247989	25	25342	64.8(53.7-75.9)	90.7(90.6-90.8)	0.2(0.1-0.2)	100.0(100.0-100.0)
109	39	253836	32	19495	54.9(43.4-66.5)	92.9(92.8-93.0)	0.2(0.1-0.3)	100.0(100.0-100.0)
110	35	258139	36	15192	49.3(37.7-60.9)	94.4(94.4-94.5)	0.2(0.2-0.3)	100.0(100.0-100.0)
111	32	261213	39	12118	45.1(33.5-56.6)	95.6(95.5-95.6)	0.3(0.2-0.4)	100.0(100.0-100.0)
112	30	263494	41	9837	42.3(30.8-53.7)	96.4(96.3-96.5)	0.3(0.2-0.4)	100.0(100.0-100.0)
113	67	125702	4	147629	94.4(89.0-99.7)	46.0(45.8-46.2)	0.0(0.0-0.1)	100.0(100.0-100.0)
114	62	176401	9	96930	87.3(79.6-95.1)	64.5(64.4-64.7)	0.1(0.0-0.1)	100.0(100.0-100.0)
115	59	205607	12	67724	83.1(74.4-91.8)	75.2(75.1-75.4)	0.1(0.1-0.1)	100.0(100.0-100.0)
116	54	224304	17	49027	76.1(66.1-86.0)	82.1(81.9-82.2)	0.1(0.1-0.1)	100.0(100.0-100.0)
117	50	236887	21	36444	70.4(59.8-81.0)	86.7(86.5-86.8)	0.1(0.1-0.2)	100.0(100.0-100.0)
118	46	245506	25	27825	64.8(53.7-75.9)	89.8(89.7-89.9)	0.2(0.1-0.2)	100.0(100.0-100.0)
120	37	256160	34	17171	52.1(40.5-63.7)	93.7(93.6-93.8)	0.2(0.1-0.3)	100.0(100.0-100.0)
121	34	259509	37	13822	47.9(36.3-59.5)	94.9(94.9-95.0)	0.2(0.2-0.3)	100.0(100.0-100.0)
146	67	125701	4	147630	94.4(89.0-99.7)	46.0(45.8-46.2)	0.0(0.0-0.1)	100.0(100.0-100.0)
147	58	203025	13	70306	81.7(72.7-90.7)	74.3(74.1-74.4)	0.1(0.1-0.1)	100.0(100.0-100.0)
148	46	239597	25	33734	64.8(53.7-75.9)	87.7(87.5-87.8)	0.1(0.1-0.2)	100.0(100.0-100.0)
179	36	257016	35	16315	50.7(39.1-62.3)	94.0(93.9-94.1)	0.2(0.1-0.3)	100.0(100.0-100.0)
180	28	265005	43	8326	39.4(28.1-50.8)	97.0(96.9-97.0)	0.3(0.2-0.5)	100.0(100.0-100.0)
181	59	176403	12	96928	83.1(74.4-91.8)	64.5(64.4-64.7)	0.1(0.0-0.1)	100.0(100.0-100.0)
182	62	176401	9	96930	87.3(79.6-95.1)	64.5(64.4-64.7)	0.1(0.0-0.1)	100.0(100.0-100.0)
238	59	196539	12	76792	83.1(74.4-91.8)	71.9(71.7-72.1)	0.1(0.1-0.1)	100.0(100.0-100.0)
312	3	273328	68	3	4.2(0.0-8.9)	100.0(100.0-100.0)	50.0(10.0-90.0)	100.0(100.0-100.0)

**Billing Algorithms, Custom Runs (Specialties)**

<b>Rulenum</b>	<b>Tpos</b>	<b>Tneg</b>	<b>Fneg</b>	<b>Fpos</b>	<b>Sensitivity (%)</b>	<b>Specificity (%)</b>	<b>Positive Predict Value (%)</b>	<b>Negative Predict Value (%)</b>
1	15	273325	56	6	21.1(11.6-30.6)	100.0(100.0-100.0)	71.4(52.1-90.8)	100.0(100.0-100.0)
2	16	273323	55	8	22.5(12.8-32.3)	100.0(100.0-100.0)	66.7(47.8-85.5)	100.0(100.0-100.0)
3	22	273321	49	10	31.0(20.2-41.7)	100.0(100.0-100.0)	68.8(52.7-84.8)	100.0(100.0-100.0)
4	60	181569	11	91762	84.5(76.1-92.9)	66.4(66.3-66.6)	0.1(0.0-0.1)	100.0(100.0-100.0)
6	47	231533	24	41798	66.2(55.2-77.2)	84.7(84.6-84.8)	0.1(0.1-0.1)	100.0(100.0-100.0)
9	48	228221	23	45110	67.6(56.7-78.5)	83.5(83.4-83.6)	0.1(0.1-0.1)	100.0(100.0-100.0)
12	50	226333	21	46998	70.4(59.8-81.0)	82.8(82.7-82.9)	0.1(0.1-0.1)	100.0(100.0-100.0)
15	33	252773	38	20558	46.5(34.9-58.1)	92.5(92.4-92.6)	0.2(0.1-0.2)	100.0(100.0-100.0)
19	39	248752	32	24579	54.9(43.4-66.5)	91.0(90.9-91.1)	0.2(0.1-0.2)	100.0(100.0-100.0)
23	42	246422	29	26909	59.2(47.7-70.6)	90.2(90.0-90.3)	0.2(0.1-0.2)	100.0(100.0-100.0)
27	63	181568	8	91763	88.7(81.4-96.1)	66.4(66.3-66.6)	0.1(0.1-0.1)	100.0(100.0-100.0)
29	53	231530	18	41801	74.6(64.5-84.8)	84.7(84.6-84.8)	0.1(0.1-0.2)	100.0(100.0-100.0)
32	53	228218	18	45113	74.6(64.5-84.8)	83.5(83.4-83.6)	0.1(0.1-0.1)	100.0(100.0-100.0)
35	55	226330	16	47001	77.5(67.7-87.2)	82.8(82.7-82.9)	0.1(0.1-0.1)	100.0(100.0-100.0)
38	40	252770	31	20561	56.3(44.8-67.9)	92.5(92.4-92.6)	0.2(0.1-0.3)	100.0(100.0-100.0)
42	45	248749	26	24582	63.4(52.2-74.6)	91.0(90.9-91.1)	0.2(0.1-0.2)	100.0(100.0-100.0)
46	48	246419	23	26912	67.6(56.7-78.5)	90.2(90.0-90.3)	0.2(0.1-0.2)	100.0(100.0-100.0)
50	63	181567	8	91764	88.7(81.4-96.1)	66.4(66.3-66.6)	0.1(0.1-0.1)	100.0(100.0-100.0)
51	53	231529	18	41802	74.6(64.5-84.8)	84.7(84.6-84.8)	0.1(0.1-0.2)	100.0(100.0-100.0)
54	43	239810	28	33521	60.6(49.2-71.9)	87.7(87.6-87.9)	0.1(0.1-0.2)	100.0(100.0-100.0)
73	63	181568	8	91763	88.7(81.4-96.1)	66.4(66.3-66.6)	0.1(0.1-0.1)	100.0(100.0-100.0)
74	55	224962	16	48369	77.5(67.7-87.2)	82.3(82.2-82.4)	0.1(0.1-0.1)	100.0(100.0-100.0)
75	49	244779	22	28552	69.0(58.3-79.8)	89.6(89.4-89.7)	0.2(0.1-0.2)	100.0(100.0-100.0)
83	63	181568	8	91763	88.7(81.4-96.1)	66.4(66.3-66.6)	0.1(0.1-0.1)	100.0(100.0-100.0)
84	55	223884	16	49447	77.5(67.7-87.2)	81.9(81.8-82.1)	0.1(0.1-0.1)	100.0(100.0-100.0)
85	49	243446	22	29885	69.0(58.3-79.8)	89.1(88.9-89.2)	0.2(0.1-0.2)	100.0(100.0-100.0)
93	63	181568	8	91763	88.7(81.4-96.1)	66.4(66.3-66.6)	0.1(0.1-0.1)	100.0(100.0-100.0)
94	56	220775	15	52556	78.9(69.4-88.4)	80.8(80.6-80.9)	0.1(0.1-0.1)	100.0(100.0-100.0)
95	50	239629	21	33702	70.4(59.8-81.0)	87.7(87.5-87.8)	0.1(0.1-0.2)	100.0(100.0-100.0)
103	63	181568	8	91763	88.7(81.4-96.1)	66.4(66.3-66.6)	0.1(0.1-0.1)	100.0(100.0-100.0)
104	58	219248	13	54083	81.7(72.7-90.7)	80.2(80.1-80.4)	0.1(0.1-0.1)	100.0(100.0-100.0)
105	51	237714	20	35617	71.8(61.4-82.3)	87.0(86.8-87.1)	0.1(0.1-0.2)	100.0(100.0-100.0)
146	63	181567	8	91764	88.7(81.4-96.1)	66.4(66.3-66.6)	0.1(0.1-0.1)	100.0(100.0-100.0)

147	53	231529	18	41802	74.6(64.5-84.8)	84.7(84.6-84.8)	0.1(0.1-0.2)	100.0(100.0-100.0)
148	41	252768	30	20563	57.7(46.3-69.2)	92.5(92.4-92.6)	0.2(0.1-0.3)	100.0(100.0-100.0)
312	3	273328	68	3	4.2(0.0-8.9)	100.0(100.0-100.0)	50.0(10.0-90.0)	100.0(100.0-100.0)
313	54	218352	17	54979	76.1(66.1-86.0)	79.9(79.7-80.0)	0.1(0.1-0.1)	100.0(100.0-100.0)
314	46	236582	25	36749	64.8(53.7-75.9)	86.6(86.4-86.7)	0.1(0.1-0.2)	100.0(100.0-100.0)
315	58	218349	13	54982	81.7(72.7-90.7)	79.9(79.7-80.0)	0.1(0.1-0.1)	100.0(100.0-100.0)
316	52	236579	19	36752	73.2(62.9-83.5)	86.6(86.4-86.7)	0.1(0.1-0.2)	100.0(100.0-100.0)
317	59	186851	12	86480	83.1(74.4-91.8)	68.4(68.2-68.5)	0.1(0.1-0.1)	100.0(100.0-100.0)
318	45	233908	26	39423	63.4(52.2-74.6)	85.6(85.4-85.7)	0.1(0.1-0.1)	100.0(100.0-100.0)
319	46	230759	25	42572	64.8(53.7-75.9)	84.4(84.3-84.6)	0.1(0.1-0.1)	100.0(100.0-100.0)
320	46	228962	25	44369	64.8(53.7-75.9)	83.8(83.6-83.9)	0.1(0.1-0.1)	100.0(100.0-100.0)
321	32	254164	39	19167	45.1(33.5-56.6)	93.0(92.9-93.1)	0.2(0.1-0.2)	100.0(100.0-100.0)
322	36	250305	35	23026	50.7(39.1-62.3)	91.6(91.5-91.7)	0.2(0.1-0.2)	100.0(100.0-100.0)
323	37	248111	34	25220	52.1(40.5-63.7)	90.8(90.7-90.9)	0.1(0.1-0.2)	100.0(100.0-100.0)
324	62	186850	9	86481	87.3(79.6-95.1)	68.4(68.2-68.5)	0.1(0.1-0.1)	100.0(100.0-100.0)
325	51	233905	20	39426	71.8(61.4-82.3)	85.6(85.4-85.7)	0.1(0.1-0.2)	100.0(100.0-100.0)
326	51	230756	20	42575	71.8(61.4-82.3)	84.4(84.3-84.6)	0.1(0.1-0.2)	100.0(100.0-100.0)
327	51	228959	20	44372	71.8(61.4-82.3)	83.8(83.6-83.9)	0.1(0.1-0.1)	100.0(100.0-100.0)
328	39	254161	32	19170	54.9(43.4-66.5)	93.0(92.9-93.1)	0.2(0.1-0.3)	100.0(100.0-100.0)
329	43	250302	28	23029	60.6(49.2-71.9)	91.6(91.5-91.7)	0.2(0.1-0.2)	100.0(100.0-100.0)
330	44	248108	27	25223	62.0(50.7-73.3)	90.8(90.7-90.9)	0.2(0.1-0.2)	100.0(100.0-100.0)
331	62	186849	9	86482	87.3(79.6-95.1)	68.4(68.2-68.5)	0.1(0.1-0.1)	100.0(100.0-100.0)
332	51	233903	20	39428	71.8(61.4-82.3)	85.6(85.4-85.7)	0.1(0.1-0.2)	100.0(100.0-100.0)
333	62	186850	9	86481	87.3(79.6-95.1)	68.4(68.2-68.5)	0.1(0.1-0.1)	100.0(100.0-100.0)
334	41	241820	30	31511	57.7(46.3-69.2)	88.5(88.4-88.6)	0.1(0.1-0.2)	100.0(100.0-100.0)
335	62	186850	9	86481	87.3(79.6-95.1)	68.4(68.2-68.5)	0.1(0.1-0.1)	100.0(100.0-100.0)
336	51	227679	20	45652	71.8(61.4-82.3)	83.3(83.2-83.4)	0.1(0.1-0.1)	100.0(100.0-100.0)
337	46	246573	25	26758	64.8(53.7-75.9)	90.2(90.1-90.3)	0.2(0.1-0.2)	100.0(100.0-100.0)
338	62	186850	9	86481	87.3(79.6-95.1)	68.4(68.2-68.5)	0.1(0.1-0.1)	100.0(100.0-100.0)
339	51	226689	20	46642	71.8(61.4-82.3)	82.9(82.8-83.1)	0.1(0.1-0.1)	100.0(100.0-100.0)
340	46	245302	25	28029	64.8(53.7-75.9)	89.7(89.6-89.9)	0.2(0.1-0.2)	100.0(100.0-100.0)
341	62	186850	9	86481	87.3(79.6-95.1)	68.4(68.2-68.5)	0.1(0.1-0.1)	100.0(100.0-100.0)
342	53	223801	18	49530	74.6(64.5-84.8)	81.9(81.7-82.0)	0.1(0.1-0.1)	100.0(100.0-100.0)
343	48	241664	23	31667	67.6(56.7-78.5)	88.4(88.3-88.5)	0.2(0.1-0.2)	100.0(100.0-100.0)
344	62	186850	9	86481	87.3(79.6-95.1)	68.4(68.2-68.5)	0.1(0.1-0.1)	100.0(100.0-100.0)
345	55	222383	16	50948	77.5(67.7-87.2)	81.4(81.2-81.5)	0.1(0.1-0.1)	100.0(100.0-100.0)
346	48	239879	23	33452	67.6(56.7-78.5)	87.8(87.6-87.9)	0.1(0.1-0.2)	100.0(100.0-100.0)
347	62	186849	9	86482	87.3(79.6-95.1)	68.4(68.2-68.5)	0.1(0.1-0.1)	100.0(100.0-100.0)

348	51	233903	20	39428	71.8(61.4-82.3)	85.6(85.4-85.7)	0.1(0.1-0.2)	100.0(100.0-100.0)
349	40	254159	31	19172	56.3(44.8-67.9)	93.0(92.9-93.1)	0.2(0.1-0.3)	100.0(100.0-100.0)
350	51	221563	20	51768	71.8(61.4-82.3)	81.1(80.9-81.2)	0.1(0.1-0.1)	100.0(100.0-100.0)
351	43	238824	28	34507	60.6(49.2-71.9)	87.4(87.3-87.5)	0.1(0.1-0.2)	100.0(100.0-100.0)
352	55	221560	16	51771	77.5(67.7-87.2)	81.1(80.9-81.2)	0.1(0.1-0.1)	100.0(100.0-100.0)
353	49	238821	22	34510	69.0(58.3-79.8)	87.4(87.2-87.5)	0.1(0.1-0.2)	100.0(100.0-100.0)
354	19	272688	52	643	26.8(16.5-37.1)	99.8(99.7-99.8)	2.9(1.6-4.1)	100.0(100.0-100.0)
355	7	272760	64	571	9.9(2.9-16.8)	99.8(99.8-99.8)	1.2(0.3-2.1)	100.0(100.0-100.0)
356	7	273284	64	47	9.9(2.9-16.8)	100.0(100.0-100.0)	13.0(4.0-21.9)	100.0(100.0-100.0)
357	25	249722	46	23609	35.2(24.1-46.3)	91.4(91.3-91.5)	0.1(0.1-0.1)	100.0(100.0-100.0)
358	2	273230	69	101	2.8(0.0-6.7)	100.0(100.0-100.0)	1.9(0.0-4.6)	100.0(100.0-100.0)
359	16	272368	55	963	22.5(12.8-32.3)	99.6(99.6-99.7)	1.6(0.8-2.4)	100.0(100.0-100.0)
360	8	272336	63	995	11.3(3.9-18.6)	99.6(99.6-99.7)	0.8(0.2-1.3)	100.0(100.0-100.0)
361	14	273082	57	249	19.7(10.5-29.0)	99.9(99.9-99.9)	5.3(2.6-8.0)	100.0(100.0-100.0)
362	5	273129	66	202	7.0(1.1-13.0)	99.9(99.9-99.9)	2.4(0.3-4.5)	100.0(100.0-100.0)
363	6	273319	65	12	8.5(2.0-14.9)	100.0(100.0-100.0)	33.3(11.6-55.1)	100.0(100.0-100.0)
364	22	251206	49	22125	31.0(20.2-41.7)	91.9(91.8-92.0)	0.1(0.1-0.1)	100.0(100.0-100.0)
365	2	273287	69	44	2.8(0.0-6.7)	100.0(100.0-100.0)	4.3(0.0-10.2)	100.0(100.0-100.0)
366	14	272678	57	653	19.7(10.5-29.0)	99.8(99.7-99.8)	2.1(1.0-3.2)	100.0(100.0-100.0)
367	8	272620	63	711	11.3(3.9-18.6)	99.7(99.7-99.8)	1.1(0.3-1.9)	100.0(100.0-100.0)