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The following report contains a description of the request, request specifications, and results from the modular program run(s).

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Overview for Request cder_ahr_wp007, Report 1 of 2

Request ID: cder_ahr_wp007

Query Description: This report contains the estimated number of individuals with a magnetic resonance imaging (MRI) procedure, and among them, the number who had a seizure that occurred during specified risk and control windows. Gadolinium-based contrast agents (GBCA) define contrast in this request. This is Report 1 of 2. Report 2 contains baseline characteristics of individuals with MRI procedures.

Sentinel Modular Program Tool Used: Cohort Identification and Descriptive Analysis (CIDA) Tool, version 3.0.3, and a Rapid Analytic Development and Response (RADaR) module integrated to capture events for patients with incomplete follow-up.

Data Source: Data from January 1, 2008 to September 30, 2015 from the 13 Data Partners contributing to the Sentinel Distributed Database (SDD) were included in this report. Please see Appendix A for a list of dates of available data for each Data Partner. This request was distributed to Data Partners on November 23, 2016.

Study Design: This request utilized a self-controlled risk interval (SCRI) design. The exposure of interest, risk and control windows relative to the exposure date, and the occurrence of the health outcome of interest during the risk and control windows were identified. The number of exposed individuals and exposure index dates, number of individuals and exposure episodes with an event in the risk or control windows, and censored individuals and exposure episodes in the SDD were calculated overall and were stratified by age group, sex, year, and time-to-event. In this request, index date is defined as the date of exposure initiation, and individuals can have multiple index dates.

Exposures of Interest: The exposures of interest were MRI procedures with GBCA contrast and with or without GBCA contrast. MRIs for extremities, non-extremities, and head/neck were evaluated and were defined using Current Procedural Terminology, Fourth Edition (CPT-4) procedure codes. Please refer to Appendix B for specific codes. MRIs were limited to those that occurred in the outpatient setting.

Cohort Eligibility Criteria: Individuals included in the cohort were required to be continuously enrolled in health plans with at least medical coverage for at least 6 months (183 days) before their MRI, during which gaps in coverage of up to 45 days were allowed. All valid exposures were retained. The following age groups were included in the cohort: 2-17, 18-44, 45-64, and 65+ years.

Cohort Exclusion Criteria: Individuals were required to have no evidence of any MRI with contrast or with or without contrast (including a head or neck MRI) in any care setting in the 183 days prior to the index date. Patients who had a head or neck MRI on the same day as a qualifying exposure were also excluded. Additionally, patients who had at least one of the following conditions in the 183 days prior to the exposure of interest were excluded: myocardial infarction (MI), stroke, brain tumor, Alzheimer's disease, autism spectrum disorder, illegal or legal drug overdose, head injury, or kidney disease. Exclusions could occur in any care setting and were defined using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) diagnosis codes. Please refer to Appendix C for specific codes.

In addition, patients with a history of epilepsy in the 183-days prior to the exposure of interest were excluded from the main analysis. Epilepsy exclusion codes could occur in any care setting and were defined using ICD-9-CM diagnosis codes and National Drug Codes (NDCs) for anti-epileptic medication. Please refer to Appendix D for generic and brand drug names and Appendix E for epilepsy codes.

Risk and Control Windows: The risk window was on the day of MRI/GBCA exposure (day 0) and the control window was assessed from 1 to 42 days following the MRI/GBCA exposure.

Outcome of Interest: The outcome of interest was a seizure. Outcomes were defined using ICD-9-CM diagnosis codes (please refer to Appendix E for specific codes). An outcome of interest was included if the individual had no evidence of the outcome in any care setting in the 183 days prior to the outcome of interest. Three variations were evaluated:

- 1) seizures limited to the emergency department care setting,
- 2) seizures limited to the principal discharge diagnosis in the inpatient setting, and
- 3) seizures limited to either the emergency department care setting or the principal discharge diagnosis in the inpatient setting.

Sensitivity Analyses: Four sensitivity analyses were evaluated in the request.

1) The first sensitivity analysis was performed to include patients with a history of epilepsy, rather than to exclude them from the cohort. Patients were required to have an epilepsy ICD-9-CM diagnosis code or an NDC for an anti-epileptic medication in the 183 days prior to the outcome of interest. The codes were restricted to the outpatient care setting. Please refer to Appendix E for specific codes. In addition, an outcome of interest was included if the individual had no evidence of the outcome in either the emergency department or inpatient care setting in the 183 days prior to the outcome of interest.

2) A second sensitivity analysis was performed to evaluate an unstratified exposure group. This scenario evaluates an exposure of an extremity or non-extremity MRI in the outpatient setting and an outcome of a seizure in either the emergency department care setting or the principal discharge diagnosis in the inpatient setting. There is no inclusion or exclusion of epilepsy evaluated in this analysis.

3) A third sensitivity analysis was performed to evaluate patients with kidney disease. This scenario evaluates an exposure of an extremity or non-extremity MRI in the outpatient setting and an outcome of a seizure in either the emergency department care setting or the principal discharge diagnosis in the inpatient setting. Patients were required to have an ICD-9-CM code for kidney disease. Please refer to Appendix C for specific codes. There is no inclusion or exclusion of epilepsy evaluated in this analysis.

4) A fourth sensitivity analysis was performed to evaluate exposures of a head or neck MRI in the outpatient setting and an outcome of a seizure in either the emergency department care setting or the principal discharge diagnosis in the inpatient setting. There is no inclusion or exclusion of epilepsy evaluated in this analysis.

Please see Appendix F for the specifications of parameters used in the analyses for this request.

Limitations: Algorithms to define exposures and outcomes are imperfect and, therefore, may have been misclassified. Therefore, data should be interpreted with this limitation in mind

Notes: Please contact the Sentinel Operations Center Query Fulfillment Team (qf@sentinelssystem.org) for questions and to provide comments/suggestions for future enhancements to this document.

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Glossary of Terms for Analyses Using Self-Controlled Risk Interval (SCRI) Tool*

Analytic Cohort - to be included in the analytic cohort, patients in the exposure cohort must have an incident health outcome of interest (HOI) in the risk or control window and meet all post-exposure enrollment requirements.

Care Setting - type of medical encounter or facility where the exposure, event, or condition code was recorded. Possible care settings include: Inpatient Hospital Stay (IP), Non-Acute Institutional Stay (IS), Emergency Department (ED), Ambulatory Visit (AV), and Other Ambulatory Visit (OA). For laboratory results, possible care settings include: Emergency department (E), Home (H), Inpatient (I), Outpatient (O), or Unknown or Missing (U). Along with the Principal Diagnosis Indicator, forms the

Ambulatory Visit (AV) - includes visits at outpatient clinics, same day surgeries, urgent care visits, and other same-day ambulatory hospital encounters, but excludes emergency department encounters.

Emergency Department (ED) - includes ED encounters that become inpatient stays (in which case inpatient stays would be a separate encounter). Excludes urgent care visits.

Inpatient Hospital Stay (IP) - includes all inpatient stays, same-day hospital discharges, hospital transfers, and acute hospital care where the discharge is after the admission date.

Non-Acute Institutional Stay (IS) - includes hospice, skilled nursing facility (SNF), rehab center, nursing home, residential, overnight non-hospital dialysis and other non-hospital stays.

Other Ambulatory Visit (OA) - includes other non-overnight AV encounters such as hospice visits, home health visits, skilled nursing facility visits, other non-hospital visits, as well as telemedicine, telephone and email consultations.

Censored at Evidence of Death - indicates if risk and evaluation windows should be censored based on death date. If death and disenrollment occur on the same day, censoring will be attributed to death.

Cohort Definition (drug/exposure) - indicates how the cohort will be defined: (1) 01: Cohort includes only the first valid incident treatment episode during the duration of the surveillance activity; (2) 02: Cohort includes all valid incident treatment episodes during the duration of the surveillance activity.

outcome of interest due to the exposure.

Data Partner Data Completeness Date - determined by the surveillance team and may be based on information on specific SDD table "completeness" from the DMQA department.

Enrollment Gap - number of days allowed between two consecutive enrollment periods without breaking a "continuously Episodes - the number of index dates (e.g., date of exposure initiation).

Exposure Cohort - to be included in the exposure cohort, patients must have a valid exposure of interest. Valid means that all pre-exposure enrollment, incidence, and inclusion/exclusion criteria specified by the requester are met.

Lookback Period (pre-existing condition) - number of days wherein a member is required to have evidence of pre-existing condition (diagnosis/procedure/drug dispensing).

Post-Exposure Enrollment Requirement - indicates the number of days of continuous enrollment required from exposure date to whichever is greater: the end of the risk or control window. Longer post-exposure continuous enrollment coverage type required before exposure date.

Principal Diagnosis (PDX) - diagnosis or condition established to be chiefly responsible for admission of the patient to the hospital. 'P' = principal diagnosis, 'S' = secondary diagnosis, 'X' = unspecified diagnosis, '.' = blank. Along with the Care Setting values, forms the Caresetting/PDX parameter.

Query Start Date - binds exposure date only; available data before the query start date may be used to determine if enrollment and incidence criteria are met and evaluate inclusion/exclusion criteria and presence/absence of covariates.

Query End Date - defines the last day that a patient can contribute follow-up time to the cohort and is used to calculate the latest possible date that a patient may contribute an exposure to the cohort.

Same Day Exclusion - indicates if an exposure defined using NDCs should be excluded from consideration if more than one of the codes used to define the exposure is observed on the same day.



Surveillance Start Date - for time period 1 (i.e., the first look/evaluation for a Data Partner), this date is surveillance team defined and will often correspond to a medical product launch date.

Time period - refers to a specific look at/evaluation of the data. Requesters evaluate mutually exclusive time periods, by Data Partner, over the course of the surveillance activity.

Washout Period (drug/exposure) - number of days a user is required to have no evidence of prior exposure (drug dispensing/procedure) and continuous drug and medical coverage prior to an incident treatment episode.

Washout Period (event/outcome) - number of days a user is required to have no evidence of a prior event (procedure/diagnosis) and continuous drug and medical coverage prior to an incident outcome of interest.

*all terms may not be used in this report



Table 1a. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in Inpatient (IPP) or Emergency Department (ED) Settings in the Sentinel Distributed Database, by MRI Location and Inclusion Criteria

	Exposure Cohort		Analysis Cohort		Number of Events		Estimate (95% CI)
	Number of Patients	Number of Index Dates	Number of Patients	Number of Index Dates	Risk Window	Control Window	
Seizure in ED or IPP Setting							
MRI	1,520,644	1,731,053	504	505	24	481	2.03 (1.35, 3.06)
Extremity or Non-Extremity MRI (Kidney Disease Inclusion)	64,862	69,947	39	39	0	39	N/A
Head/Neck MRI	1,740,816	2,050,344	6,457	6,479	3,697	2,782	54.50 (51.87, 57.25)



Table 1b. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Sentinel Distributed Database among those without a History of Epilepsy, by MRI Location and Outcome Care Setting

	Exposure Cohort		Analysis Cohort		Number of Events		Estimate (95% CI)
	Number of Patients	Index Dates	Number of Patients	Number of Index Dates	Risk Window	Control Window	
Extremity or Non-Extremity MRI							
Seizure in ED Setting	1,191,386	1,321,593	195	196	11	185	2.41 (1.31, 4.44)
Seizure in IPP Setting	1,191,386	1,321,593	32	32	0	32	N/A
Seizure in ED or IPP Setting	1,191,386	1,321,593	223	224	11	213	2.10 (1.14, 3.84)
Extremity MRI							
Seizure in ED Setting	445,695	469,189	51	51	4	47	3.31 (1.18, 9.22)
Seizure in IPP Setting	445,695	469,189	7	7	0	7	N/A
Seizure in ED or IPP Setting	445,695	469,189	57	57	4	53	2.92 (1.05, 8.08)
Non-Extremity MRI							
Seizure in ED Setting	761,159	857,255	145	146	7	139	2.08 (0.97, 4.44)
Seizure in IPP Setting	761,159	857,255	25	25	0	25	N/A
Seizure in ED or IPP Setting	761,159	857,255	167	168	7	161	1.80 (0.84, 3.83)

Emergency Department (ED)

Inpatient Care setting, in the principal diagnosis position (IPP)

Table 1c. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Sentinel Distributed Database among those with a History of Epilepsy, by MRI Location and Outcome Care Setting

	Exposure Cohort		Analysis Cohort		Number of Events		Estimate (95% CI)
	Number of Patients	Index Dates	Number of Patients	Number of Index Dates	Risk Window	Control Window	
Extremity or Non-Extremity MRI							
Seizure in ED Setting	366,061	409,135	256	256	12	244	2.00 (1.12, 3.58)
Seizure in IPP Setting	366,061	409,135	28	28	1	27	1.52 (0.21, 11.19)
Seizure in ED or IPP Setting	366,061	409,135	280	280	13	267	1.99 (1.14, 3.47)
Extremity MRI							
Seizure in ED Setting	80,229	83,613	68	68	0	68	N/A
Seizure in IPP Setting	80,229	83,613	6	6	0	6	N/A
Seizure in ED or IPP Setting	80,229	83,613	72	72	0	72	N/A
Non-Extremity MRI							
Seizure in ED Setting	291,830	327,496	190	190	12	178	2.74 (1.53, 4.92)
Seizure in IPP Setting	291,830	327,496	22	22	1	21	2.00 (0.27, 14.87)
Seizure in ED or IPP Setting	291,830	327,496	210	210	13	197	2.69 (1.53, 4.72)

Emergency Department (ED)

Inpatient Care setting, in the principal diagnosis position (IPP)



Table 2a. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in Inpatient (IPP) or Emergency Department (ED) settings in the Sentinel Distributed Database, by MRI Location, Inclusion Criteria, and Age

	Exposure Cohort		Analysis Cohort		Number of Events	
	Number of Patients	Number of Index Dates	Number of Patients	Number of Index Dates	Risk Window	Control Window
Extremity or Non-Extremity MRI						
Age Group (Years)						
2-17	77,356	82,834	30	30	3	27
18-44	470,653	515,851	175	175	9	166
45-64	706,188	808,282	227	228	10	218
65+	280,495	324,086	72	72	2	70
Extremity or Non-Extremity MRI (Kidney Disease Inclusion)						
Age Group (Years)						
2-17	186	198	0	0	0	0
18-44	3,601	3,736	4	4	0	4
45-64	21,952	23,496	21	21	0	21
65+	39,360	42,517	14	14	0	14
Head/Neck MRI						
Age Group (Years)						
2-17	98,100	108,971	657	659	359	300
18-44	569,877	658,094	2,564	2,573	1,419	1,154
45-64	732,628	868,759	2,146	2,153	1,248	905
65+	359,471	414,520	1,091	1,094	671	423



Table 2b. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Sentinel Distributed Database among those without a History of Epilepsy, by MRI Location, Outcome Care Setting, and Age

	Exposure Cohort		Analysis Cohort		Number of Events	
	Number of Patients	Number of Index Dates	Number of Patients	Number of Index Dates	Risk Window	Control Window
Extremity or Non-Extremity MRI						
Age Group (Years)						
Seizure in ED Setting						
2-17	73,595	78,449	21	21	3	18
18-44	390,491	420,388	55	55	4	51
45-64	524,996	584,411	90	91	3	88
65+	211,154	238,345	29	29	1	28
Seizure in IPP Setting						
2-17	73,595	78,449	1	1	0	1
18-44	390,491	420,388	8	8	0	8
45-64	524,996	584,411	10	10	0	10
65+	211,154	238,345	13	13	0	13
Seizure in ED or IPP Setting						
2-17	73,595	78,449	22	22	3	19
18-44	390,491	420,388	61	61	4	57
45-64	524,996	584,411	99	100	3	97
65+	211,154	238,345	41	41	1	40
Extremity MRI						
Age Group (Years)						
Seizure in ED Setting						
2-17	54,089	56,728	12	12	3	9
18-44	183,460	192,071	16	16	0	16
45-64	168,257	175,887	19	19	1	18
65+	42,441	44,503	4	4	0	4
Seizure in IPP Setting						
2-17	54,089	56,728	0	0	0	0
18-44	183,460	192,071	2	2	0	2
45-64	168,257	175,887	3	3	0	3
65+	42,441	44,503	2	2	0	2
Seizure in ED or IPP Setting						
2-17	54,089	56,728	12	12	3	9
18-44	183,460	192,071	17	17	0	17
45-64	168,257	175,887	22	22	1	21
65+	42,441	44,503	6	6	0	6

Emergency Department (ED)

Inpatient Care setting, in the principal diagnosis position (IPP)



Table 2b. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Sentinel Distributed Database among those without a History of Epilepsy, by MRI Location, Outcome Care Setting, and Age

	Exposure Cohort		Analysis Cohort		Number of Events	
	Number of Patients	Number of Index Dates	Number of Patients	Number of Index Dates	Risk Window	Control Window
Non-Extremity MRI						
Age Group (Years)						
Seizure in ED Setting						
2-17 Years	20,300	22,198	9	9	0	9
18-44 Years	210,490	229,494	39	39	4	35
45-64 Years	364,008	410,593	72	73	2	71
65+ Years	171,775	194,970	25	25	1	24
Seizure in IPP Setting						
2-17 Years	20,300	22,198	1	1	0	1
18-44 Years	210,490	229,494	6	6	0	6
45-64 Years	364,008	410,593	7	7	0	7
65+ Years	171,775	194,970	11	11	0	11
Seizure in ED or IPP Setting						
2-17 Years	20,300	22,198	10	10	0	10
18-44 Years	210,490	229,494	44	44	4	40
45-64 Years	364,008	410,593	78	79	2	77
65+ Years	171,775	194,970	35	35	1	34

Emergency Department (ED)

Inpatient Care setting, in the principal diagnosis position (IPP)



Table 2c. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Sentinel Distributed Database among those with a History of Epilepsy, by MRI Location, Outcome Care Setting, and Age

	Exposure Cohort		Analysis Cohort		Number of Events	
	Number of Patients	Number of Index Dates	Number of Patients	Number of Index Dates	Risk Window	Control Window
Extremity or Non-Extremity MRI						
Age Group (Years)						
Seizure in ED Setting						
2-17	4,170	4,352	7	7	0	7
18-44	88,040	95,351	106	106	5	101
45-64	199,848	223,754	116	116	6	110
65+	76,787	85,678	27	27	1	26
Seizure in IPP Setting						
2-17	4,170	4,352	3	3	0	3
18-44	88,040	95,351	8	8	0	8
45-64	199,848	223,754	14	14	1	13
65+	76,787	85,678	3	3	0	3
Seizure in ED or IPP Setting						
2-17	4,170	4,352	8	8	0	8
18-44	88,040	95,351	114	114	5	109
45-64	199,848	223,754	128	128	7	121
65+	76,787	85,678	30	30	1	29
Extremity MRI						
Age Group (Years)						
Seizure in ED Setting						
2-17	2,280	2,340	4	4	0	4
18-44	24,784	25,729	38	38	0	38
45-64	42,143	43,913	22	22	0	22
65+	11,241	11,631	4	4	0	4
Seizure in IPP Setting						
2-17	2,280	2,340	1	1	0	1
18-44	24,784	25,729	2	2	0	2
45-64	42,143	43,913	3	3	0	3
65+	11,241	11,631	0	0	0	0
Seizure in ED or IPP Setting						
2-17	2,280	2,340	4	4	0	4
18-44	24,784	25,729	40	40	0	40
45-64	42,143	43,913	24	24	0	24
65+	11,241	11,631	4	4	0	4

Emergency Department (ED)

Inpatient Care setting, in the principal diagnosis position (IPP)



Table 2c. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Sentinel Distributed Database among those with a History of Epilepsy, by MRI Location, Outcome Care Setting, and Age

	Exposure Cohort		Analysis Cohort		Number of Events	
	Number of Patients	Number of Index Dates	Number of Patients	Number of Index Dates	Risk Window	Control Window
Non-Extremity MRI						
Age Group (Years)						
Seizure in ED Setting						
2-17	1,945	2,054	3	3	0	3
18-44	64,385	70,045	70	70	5	65
45-64	161,069	180,914	94	94	6	88
65+	66,678	74,483	23	23	1	22
Seizure in IPP Setting						
2-17	1,945	2,054	2	2	0	2
18-44	64,385	70,045	6	6	0	6
45-64	161,069	180,914	11	11	1	10
65+	66,678	74,483	3	3	0	3
Seizure in ED or IPP Setting						
2-17	1,945	2,054	4	4	0	4
18-44	64,385	70,045	76	76	5	71
45-64	161,069	180,914	104	104	7	97
65+	66,678	74,483	26	26	1	25

Emergency Department (ED)

Inpatient Care setting, in the principal diagnosis position (IPP)



Table 3a. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in Inpatient (IPP) or Emergency Department (ED) settings in the Sentinel Distributed Database, by MRI Location, Inclusion Criteria, and Sex

	<i>Exposure Cohort</i>		<i>Analysis Cohort</i>		<i>Number of Events</i>	
	Number of Patients	Number of Index Dates	Number of Patients	Number of Index Dates	Risk Window	Control Window
Extremity or Non-Extremity MRI						
Female	836,680	953,798	271	271	16	255
Male	683,883	777,160	233	234	8	226
Unknown/Other	81	95	0	0	0	0
Extremity or Non-Extremity MRI (Kidney Disease Inclusion)						
Female	29,337	31,457	17	17	0	17
Male	35,524	38,489	22	22	0	22
Unknown/Other	1	1	0	0	0	0
Head/Neck MRI						
Female	1,072,461	1,282,050	3,529	3,544	1,844	1,700
Male	668,266	768,182	2,928	2,935	1,853	1,082
Unknown/Other	89	112	0	0	0	0

Table 3b. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Sentinel Distributed Database among those without a History of Epilepsy, by MRI Location, Outcome Care Setting, and Sex

	Exposure Cohort		Analysis Cohort		Number of Events	
	Number of Patients	Index Dates	Number of Patients	Index Dates	Risk Window	Control Window
Extremity or Non-Extremity MRI						
Seizure in ED Setting						
Female	629,088	696,981	90	90	7	83
Male	562,233	624,536	105	106	4	102
Unknown/Other	65	76	0	0	0	0
Seizure in IPP Setting						
Female	629,088	696,981	17	17	0	17
Male	562,233	624,536	15	15	0	15
Unknown/Other	65	76	0	0	0	0
Seizure in ED or IPP Setting						
Female	629,088	696,981	106	106	7	99
Male	562,233	624,536	117	118	4	114
Unknown/Other	65	76	0	0	0	0
Extremity MRI						
Seizure in ED Setting						
Female	204,175	214,712	23	23	3	20
Male	241,498	254,450	28	28	1	27
Unknown/Other	22	27	0	0	0	0
Seizure in IPP Setting						
Female	204,175	214,712	4	4	0	4
Male	241,498	254,450	3	3	0	3
Unknown/Other	22	27	0	0	0	0
Seizure in ED or IPP Setting						
Female	204,175	214,712	27	27	3	24
Male	241,498	254,450	30	30	1	29
Unknown/Other	22	27	0	0	0	0
Non-Extremity MRI						
Seizure in ED Setting						
Female	433,499	485,011	68	68	4	64
Male	327,615	372,195	77	78	3	75
Unknown/Other	45	49	0	0	0	0
Seizure in IPP Setting						
Female	433,499	485,011	13	13	0	13
Male	327,615	372,195	12	12	0	12
Unknown/Other	45	49	0	0	0	0
Seizure in ED or IPP Setting						
Female	433,499	485,011	80	80	4	76
Male	327,615	372,195	87	88	3	85
Unknown/Other	45	49	0	0	0	0

Emergency Department (ED)

Inpatient Care setting, in the principal diagnosis position (IPP)

Table 3c. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Sentinel Distributed Database among those with a History of Epilepsy, by MRI Location, Outcome Care Setting, and Sex

	Exposure Cohort		Analysis Cohort		Number of Events	
	Number of Patients	Index Dates	Number of Patients	Index Dates	Risk Window	Control Window
Extremity or Non-Extremity MRI						
Seizure in ED Setting						
Female	228,891	256,633	152	152	9	143
Male	137,151	152,483	104	104	3	101
Unknown/Other	19	19	0	0	0	0
Seizure in IPP Setting						
Female	228,891	256,633	13	13	0	13
Male	137,151	152,483	15	15	1	14
Unknown/Other	19	19	0	0	0	0
Seizure in ED or IPP Setting						
Female	228,891	256,633	164	164	9	155
Male	137,151	152,483	116	116	4	112
Unknown/Other	19	19	0	0	0	0
Extremity MRI						
Seizure in ED Setting						
Female	50,391	52,633	32	32	0	32
Male	29,835	30,977	36	36	0	36
Unknown/Other	3	3	0	0	0	0
Seizure in IPP Setting						
Female	50,391	52,633	2	2	0	2
Male	29,835	30,977	4	4	0	4
Unknown/Other	3	3	0	0	0	0
Seizure in ED or IPP Setting						
Female	50,391	52,633	33	33	0	33
Male	29,835	30,977	39	39	0	39
Unknown/Other	3	3	0	0	0	0
Non-Extremity MRI						
Seizure in ED Setting						
Female	182,458	205,308	121	121	9	112
Male	109,356	122,172	69	69	3	66
Unknown/Other	16	16	0	0	0	0
Seizure in IPP Setting						
Female	182,458	205,308	11	11	0	11
Male	109,356	122,172	11	11	1	10
Unknown/Other	16	16	0	0	0	0
Seizure in ED or IPP Setting						
Female	182,458	205,308	132	132	9	123
Male	109,356	122,172	78	78	4	74
Unknown/Other	16	16	0	0	0	0

Emergency Department (ED)

Inpatient Care setting, in the principal diagnosis position (IPP)



Table 4a. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in Inpatient (IPP) or Emergency Department (ED) settings in the Sentinel Distributed Database (SDD), by MRI Location, Inclusion Criteria, and Year

	<i>Exposure Cohort</i>		<i>Analysis Cohort</i>		<i>Number of Events</i>	
	Number of Patients	Index Dates	Number of Patients	Index Dates	Risk Window	Control Window
Extremity or Non-Extremity MRI						
2008	176,791	178,340	50	50	2	48
2009	229,888	232,855	70	70	4	66
2010	222,146	224,971	53	53	1	52
2011	225,116	228,061	70	70	1	69
2012	232,724	235,885	73	73	2	71
2013	243,943	247,435	71	71	5	66
2014	248,217	251,637	71	71	7	64
2015	131,765	131,869	47	47	2	45
Extremity or Non-Extremity MRI (Kidney Disease Inclusion)						
2008	5,108	5,137	5	5	0	5
2009	6,927	6,981	2	2	0	2
2010	7,383	7,433	5	5	0	5
2011	8,379	8,452	2	2	0	2
2012	9,771	9,859	7	7	0	7
2013	11,526	11,640	6	6	0	6
2014	12,619	12,749	9	9	0	9
2015	7,692	7,696	3	3	0	3
Head/Neck MRI						
2008	238,960	241,021	666	666	335	331
2009	304,658	308,512	815	815	398	417
2010	279,034	282,605	798	798	418	380
2011	269,562	273,247	797	797	452	345
2012	266,746	270,362	857	857	505	352
2013	267,933	271,804	952	952	611	341
2014	261,020	264,479	1,004	1,005	608	397
2015	138,214	138,314	589	589	370	219



Table 4b. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Sentinel Distributed Database among those without a History of Epilepsy, by MRI Location, Outcome Care Setting, and Year

	Exposure Cohort		Analysis Cohort		Number of Events	
	Number of Patients	Index Dates	Number of Patients	Index Dates	Risk Window	Control Window
Extremity or Non-Extremity MRI						
Seizure in ED Setting						
2008	136,563	137,526	11	11	0	11
2009	177,872	179,751	26	26	0	26
2010	171,206	172,993	22	22	1	21
2011	173,028	174,918	21	21	1	20
2012	178,229	180,245	29	29	2	27
2013	185,251	187,469	30	30	2	28
2014	187,570	189,764	36	36	4	32
2015	98,864	98,927	21	21	1	20
Seizure in IPP Setting						
2008	136,563	137,526	3	3	0	3
2009	177,872	179,751	6	6	0	6
2010	171,206	172,993	2	2	0	2
2011	173,028	174,918	5	5	0	5
2012	178,229	180,245	10	10	0	10
2013	185,251	187,469	1	1	0	1
2014	187,570	189,764	3	3	0	3
2015	98,864	98,927	2	2	0	2
Seizure in ED or IPP Setting						
2008	136,563	137,526	14	14	0	14
2009	177,872	179,751	31	31	0	31
2010	171,206	172,993	24	24	1	23
2011	173,028	174,918	26	26	1	25
2012	178,229	180,245	37	37	2	35
2013	185,251	187,469	31	31	2	29
2014	187,570	189,764	39	39	4	35
2015	98,864	98,927	22	22	1	21

Emergency Department (ED)

Inpatient Care setting, in the principal diagnosis position (IPP)



Table 4b. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Sentinel Distributed Database among those without a History of Epilepsy, by MRI Location, Outcome Care Setting, and Year

	Exposure Cohort		Analysis Cohort		Number of Events	
	Number of Patients	Number of Index Dates	Number of Patients	Number of Index Dates	Risk Window	Control Window
Extremity MRI						
Seizure in ED Setting						
2008	47,452	47,631	1	1	0	1
2009	64,099	64,448	6	6	0	6
2010	62,278	62,596	6	6	0	6
2011	62,688	62,997	3	3	0	3
2012	64,118	64,479	7	7	2	5
2013	66,914	67,285	10	10	1	9
2014	65,842	66,219	8	8	0	8
2015	33,527	33,534	10	10	1	9
Seizure in IPP Setting						
2008	47,452	47,631	1	1	0	1
2009	64,099	64,448	3	3	0	3
2010	62,278	62,596	0	0	0	0
2011	62,688	62,997	1	1	0	1
2012	64,118	64,479	1	1	0	1
2013	66,914	67,285	0	0	0	0
2014	65,842	66,219	1	1	0	1
2015	33,527	33,534	0	0	0	0
Seizure in ED or IPP Setting						
2008	47,452	47,631	2	2	0	2
2009	64,099	64,448	8	8	0	8
2010	62,278	62,596	6	6	0	6
2011	62,688	62,997	4	4	0	4
2012	64,118	64,479	8	8	2	6
2013	66,914	67,285	10	10	1	9
2014	65,842	66,219	9	9	0	9
2015	33,527	33,534	10	10	1	9

Emergency Department (ED)

Inpatient Care setting, in the principal diagnosis position (IPP)



Table 4b. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Sentinel Distributed Database among those without a History of Epilepsy, by MRI Location, Outcome Care Setting, and Year

	Exposure Cohort		Analysis Cohort		Number of Events	
	Number of Patients	Index Dates	Number of Patients	Index Dates	Risk Window	Control Window
Non-Extremity MRI						
Seizure in ED Setting						
2008	89,678	90,418	10	10	0	10
2009	114,597	116,004	20	20	0	20
2010	109,678	111,050	16	16	1	15
2011	111,071	112,557	18	18	1	17
2012	114,881	116,410	22	22	0	22
2013	119,103	120,827	20	20	1	19
2014	122,515	124,231	28	28	4	24
2015	65,703	65,758	12	12	0	12
Seizure in IPP Setting						
2008	89,678	90,418	2	2	0	2
2009	114,597	116,004	3	3	0	3
2010	109,678	111,050	2	2	0	2
2011	111,071	112,557	4	4	0	4
2012	114,881	116,410	9	9	0	9
2013	119,103	120,827	1	1	0	1
2014	122,515	124,231	2	2	0	2
2015	65,703	65,758	2	2	0	2
Seizure in ED or IPP Setting						
2008	89,678	90,418	12	12	0	12
2009	114,597	116,004	23	23	0	23
2010	109,678	111,050	18	18	1	17
2011	111,071	112,557	22	22	1	21
2012	114,881	116,410	29	29	0	29
2013	119,103	120,827	21	21	1	20
2014	122,515	124,231	30	30	4	26
2015	65,703	65,758	13	13	0	13

Emergency Department (ED)

Inpatient Care setting, in the principal diagnosis position (IPP)



Table 4c. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Sentinel Distributed Database among those with a History of Epilepsy, by MRI Location, Outcome Care Setting, and Year

	Exposure Cohort		Analysis Cohort		Number of Events	
	Number of		Number of		Risk Window	Control Window
	Number of Patients	Index Dates	Number of Patients	Index Dates		
Extremity or Non-Extremity MRI						
Seizure in ED Setting						
2008	40,461	40,765	33	33	2	31
2009	52,488	53,064	36	36	4	32
2010	51,368	51,936	26	26	0	26
2011	52,536	53,103	39	39	0	39
2012	54,930	55,594	33	33	0	33
2013	59,197	59,925	37	37	3	34
2014	61,145	61,831	27	27	2	25
2015	32,894	32,917	25	25	1	24
Seizure in IPP Setting						
2008	40,461	40,765	4	4	0	4
2009	52,488	53,064	4	4	0	4
2010	51,368	51,936	3	3	0	3
2011	52,536	53,103	5	5	0	5
2012	54,930	55,594	5	5	0	5
2013	59,197	59,925	2	2	0	2
2014	61,145	61,831	5	5	1	4
2015	32,894	32,917	0	0	0	0
Seizure in ED or IPP Setting						
2008	40,461	40,765	36	36	2	34
2009	52,488	53,064	39	39	4	35
2010	51,368	51,936	29	29	0	29
2011	52,536	53,103	44	44	0	44
2012	54,930	55,594	36	36	0	36
2013	59,197	59,925	39	39	3	36
2014	61,145	61,831	32	32	3	29
2015	32,894	32,917	25	25	1	24

Emergency Department (ED)

Inpatient Care setting, in the principal diagnosis position (IPP)

Table 4c. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Sentinel Distributed Database among those with a History of Epilepsy, by MRI Location, Outcome Care Setting, and Year

	Exposure Cohort		Analysis Cohort		Number of Events	
	Number of		Number of		Risk Window	Control Window
	Number of Patients	Index Dates	Number of Patients	Index Dates		
Extremity MRI						
Seizure in ED Setting						
2008	7,760	7,786	5	5	0	5
2009	10,481	10,530	9	9	0	9
2010	10,449	10,502	7	7	0	7
2011	10,769	10,822	15	15	0	15
2012	11,499	11,565	11	11	0	11
2013	12,572	12,634	8	8	0	8
2014	12,891	12,962	8	8	0	8
2015	6,812	6,812	5	5	0	5
Seizure in IPP Setting						
2008	7,760	7,786	1	1	0	1
2009	10,481	10,530	2	2	0	2
2010	10,449	10,502	0	0	0	0
2011	10,769	10,822	1	1	0	1
2012	11,499	11,565	1	1	0	1
2013	12,572	12,634	0	0	0	0
2014	12,891	12,962	1	1	0	1
2015	6,812	6,812	0	0	0	0
Seizure in ED or IPP Setting						
2008	7,760	7,786	6	6	0	6
2009	10,481	10,530	10	10	0	10
2010	10,449	10,502	7	7	0	7
2011	10,769	10,822	16	16	0	16
2012	11,499	11,565	11	11	0	11
2013	12,572	12,634	8	8	0	8
2014	12,891	12,962	9	9	0	9
2015	6,812	6,812	5	5	0	5

Emergency Department (ED)

Inpatient Care setting, in the principal diagnosis position (IPP)



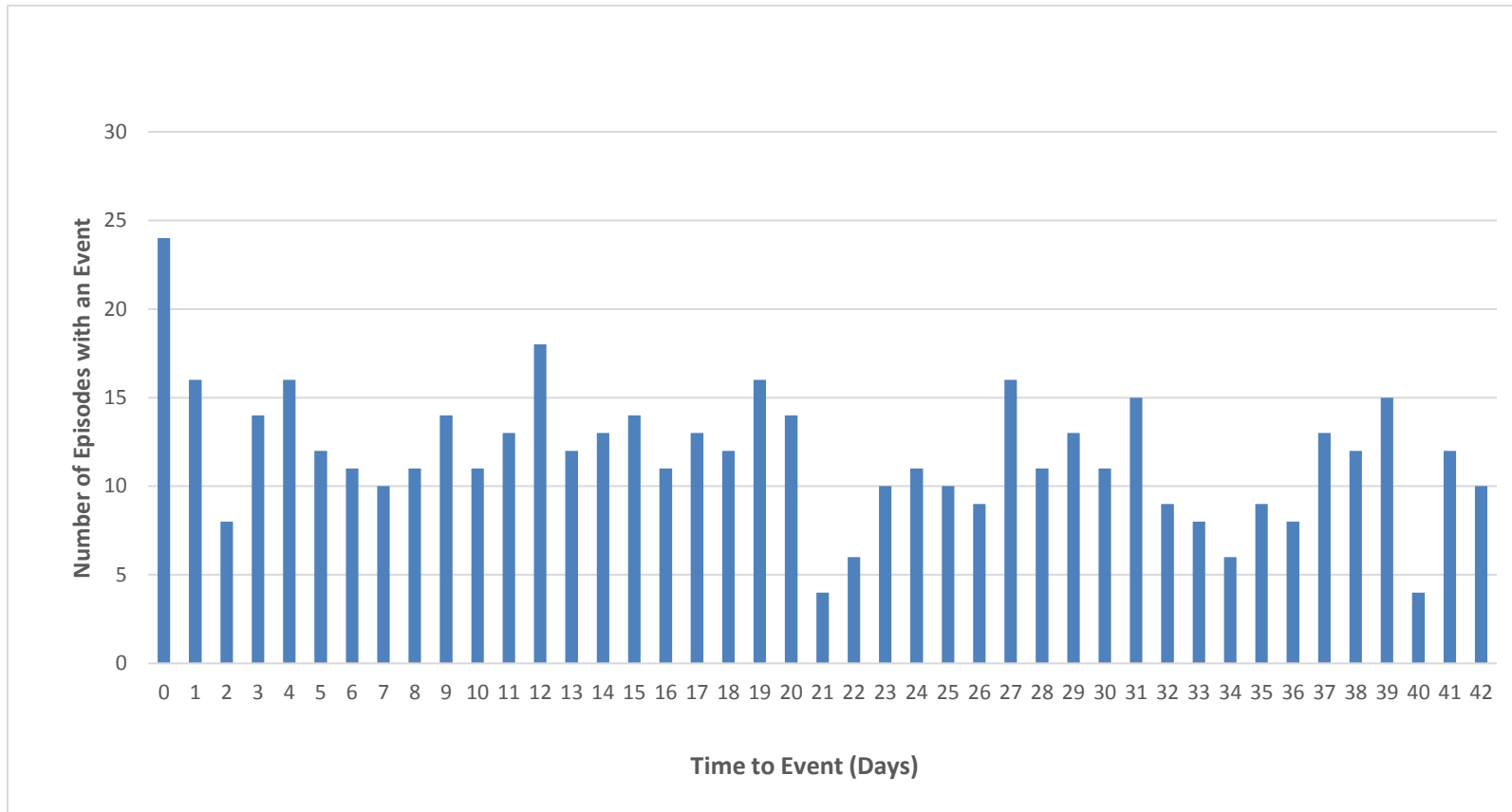
Table 4c. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Sentinel Distributed Database among those with a History of Epilepsy, by MRI Location, Outcome Care Setting, and Year

	Exposure Cohort		Analysis Cohort		Number of Events	
	Number of Patients	Number of Index Dates	Number of Patients	Number of Index Dates	Risk Window	Control Window
Non-Extremity MRI						
Seizure in ED Setting						
2008	32,900	33,161	29	29	2	27
2009	42,349	42,823	27	27	4	23
2010	41,206	41,682	19	19	0	19
2011	42,081	42,543	24	24	0	24
2012	43,734	44,276	22	22	0	22
2013	46,948	47,554	30	30	3	27
2014	48,636	49,182	19	19	2	17
2015	26,256	26,275	20	20	1	19
Seizure in IPP Setting						
2008	32,900	33,161	3	3	0	3
2009	42,349	42,823	2	2	0	2
2010	41,206	41,682	3	3	0	3
2011	42,081	42,543	4	4	0	4
2012	43,734	44,276	4	4	0	4
2013	46,948	47,554	2	2	0	2
2014	48,636	49,182	4	4	1	3
2015	26,256	26,275	0	0	0	0
Seizure in ED or IPP Setting						
2008	32,900	33,161	31	31	2	29
2009	42,349	42,823	29	29	4	25
2010	41,206	41,682	22	22	0	22
2011	42,081	42,543	28	28	0	28
2012	43,734	44,276	25	25	0	25
2013	46,948	47,554	32	32	3	29
2014	48,636	49,182	23	23	3	20
2015	26,256	26,275	20	20	1	19

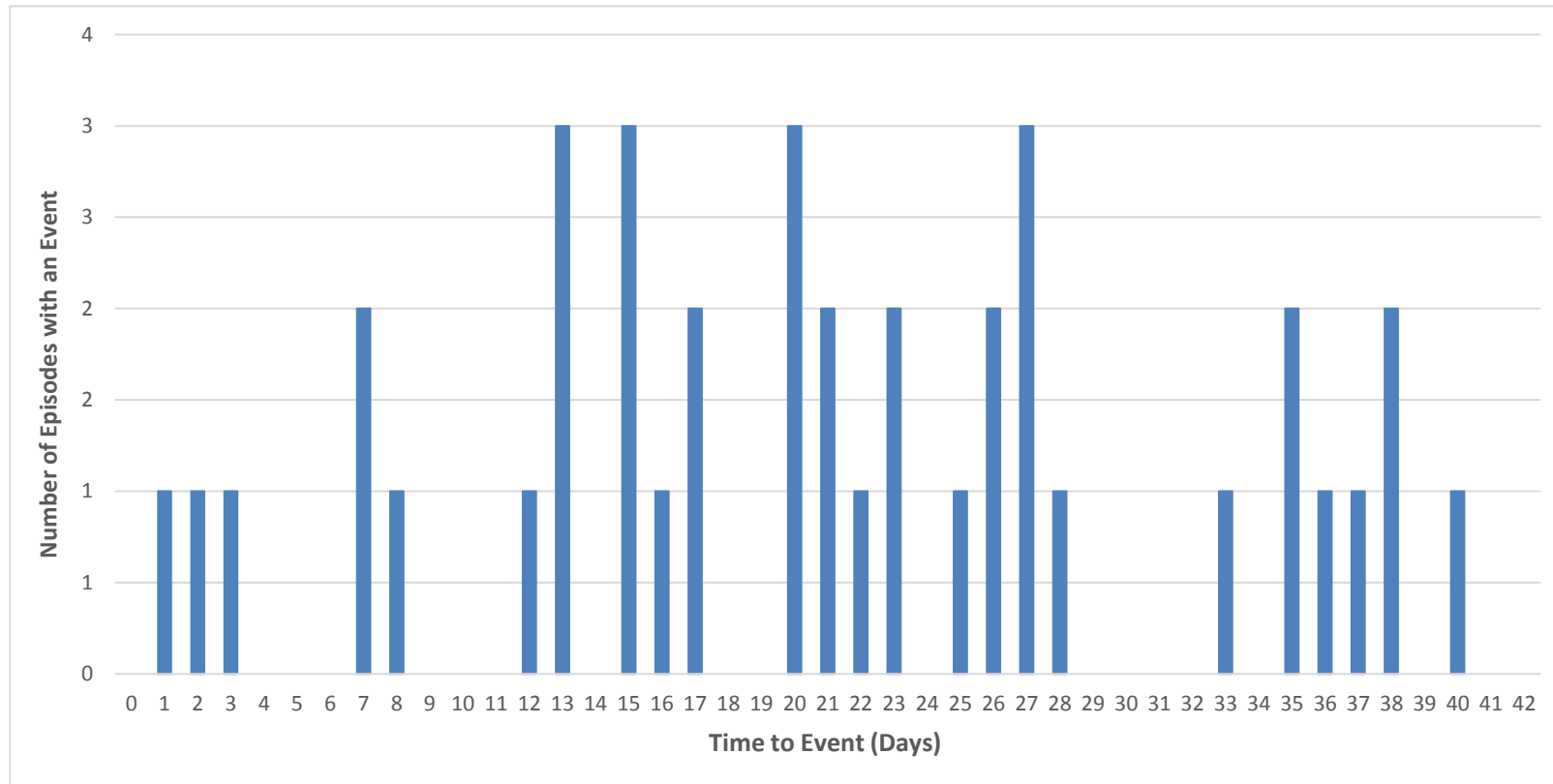
Emergency Department (ED)

Inpatient Care setting, in the principal diagnosis position (IPP)

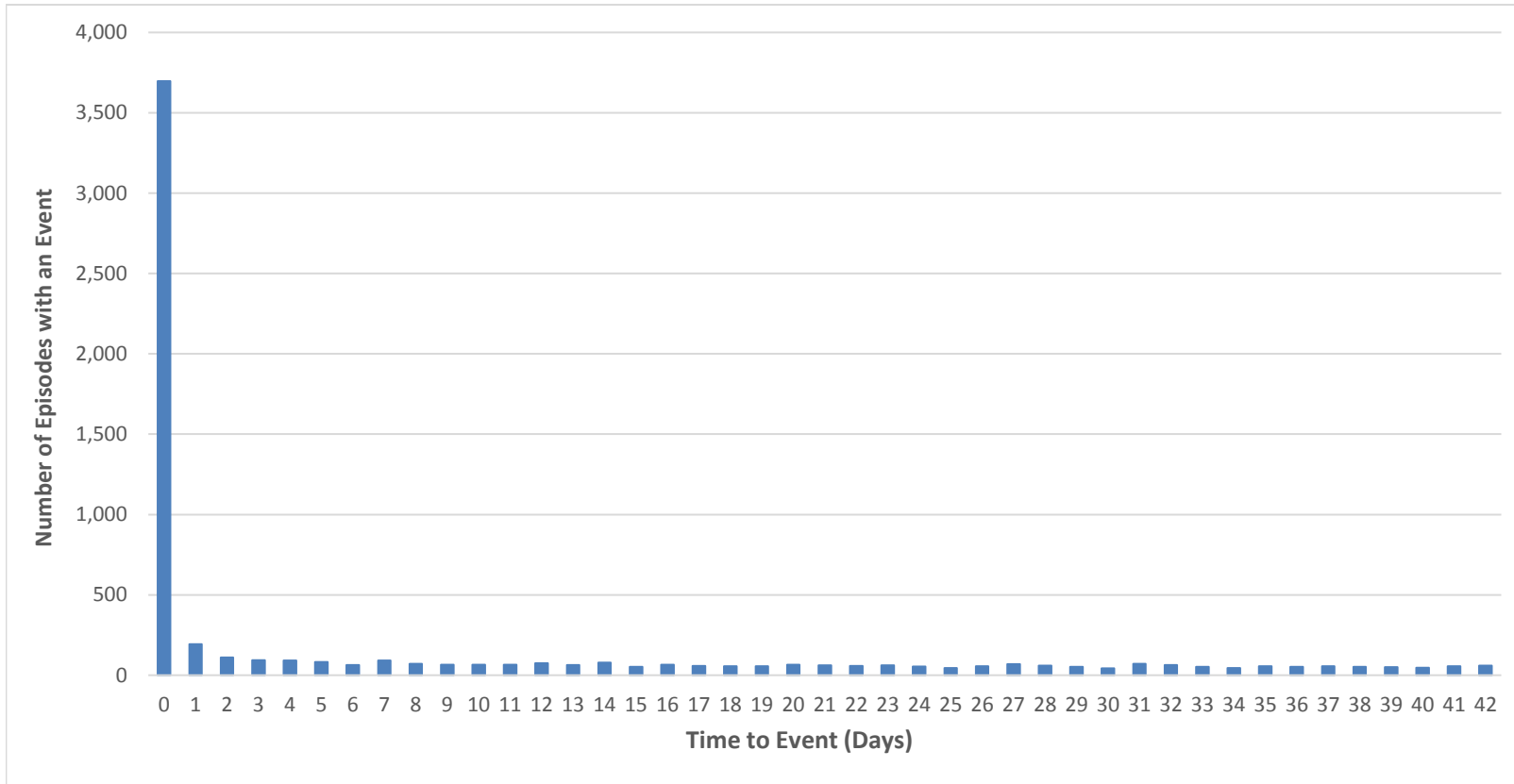
Figures 1a. Incident Extremity or Non-Extremity Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Sentinel Distributed Database, by MRI Location, Inclusion Criteria, and Time to Event



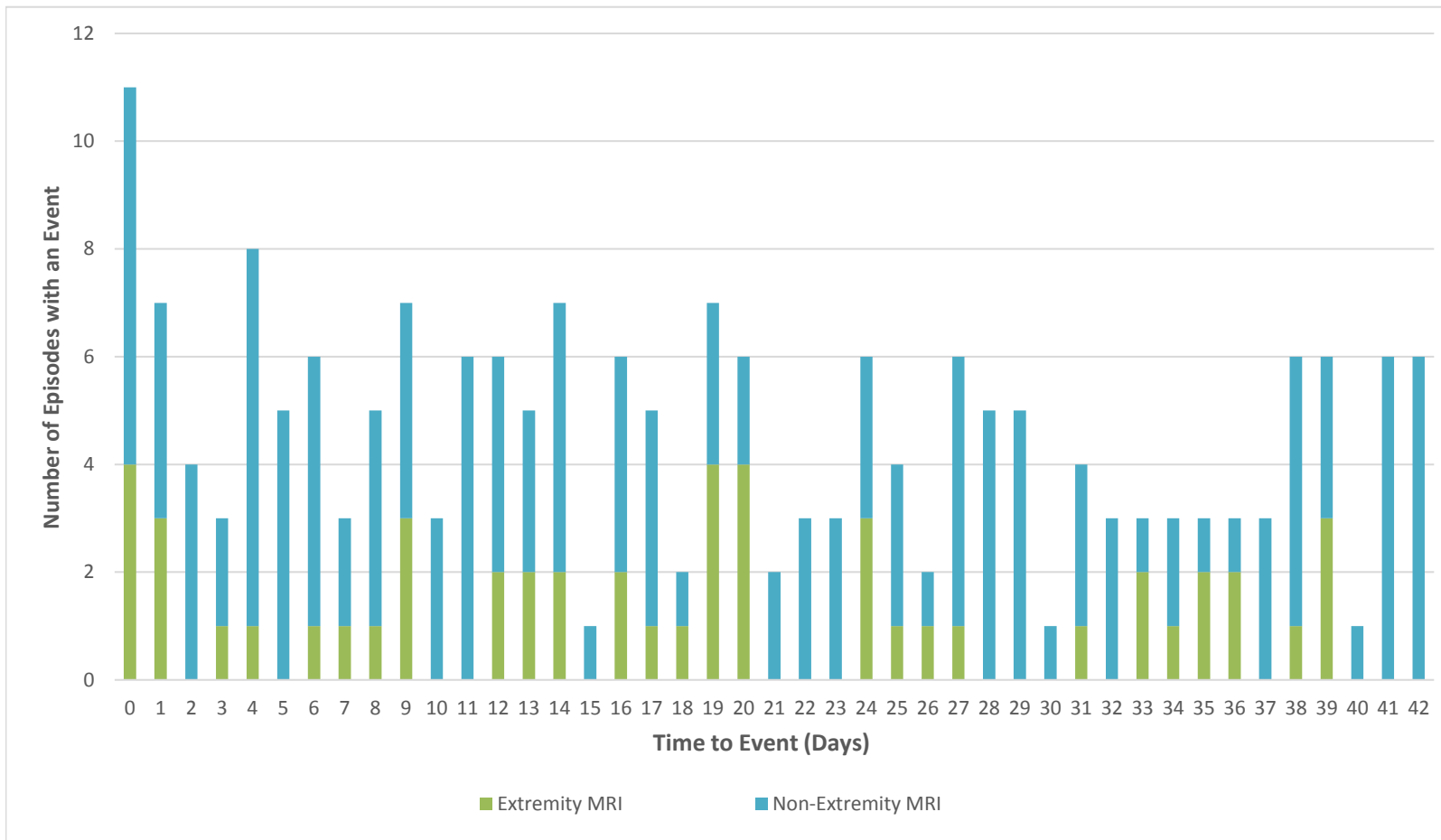
Figures 1b. Incident Extremity or Non-Extremity Magnetic Resonance Imaging (MRI) Exposures (Kidney Disease Inclusion) and Seizures in the Sentinel Distributed Database, by MRI Location, Inclusion Criteria, and Time to Event



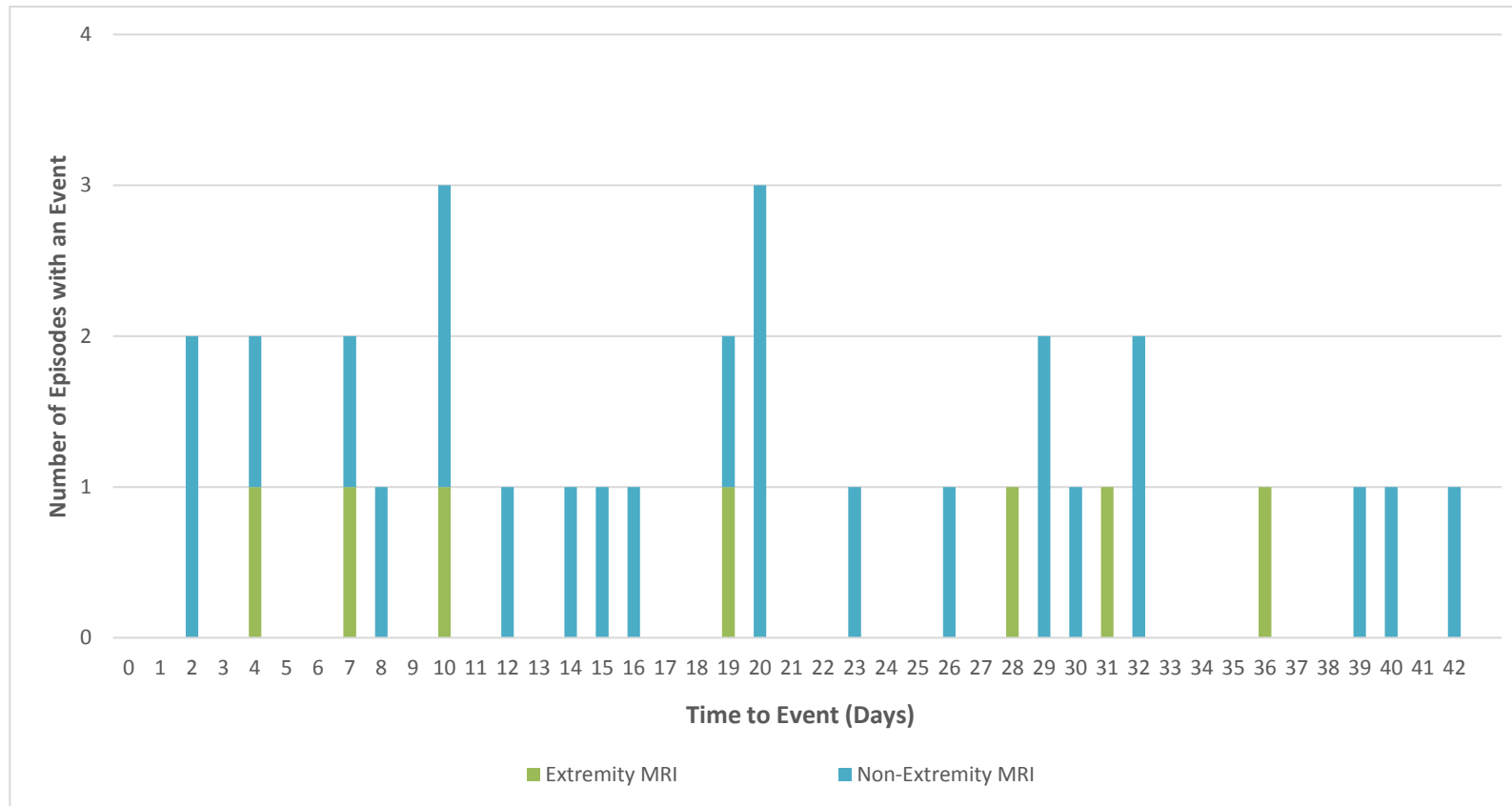
Figures 1c. Incident Head/Neck Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Sentinel Distributed Database, by MRI Location, Inclusion Criteria, and Time to Event



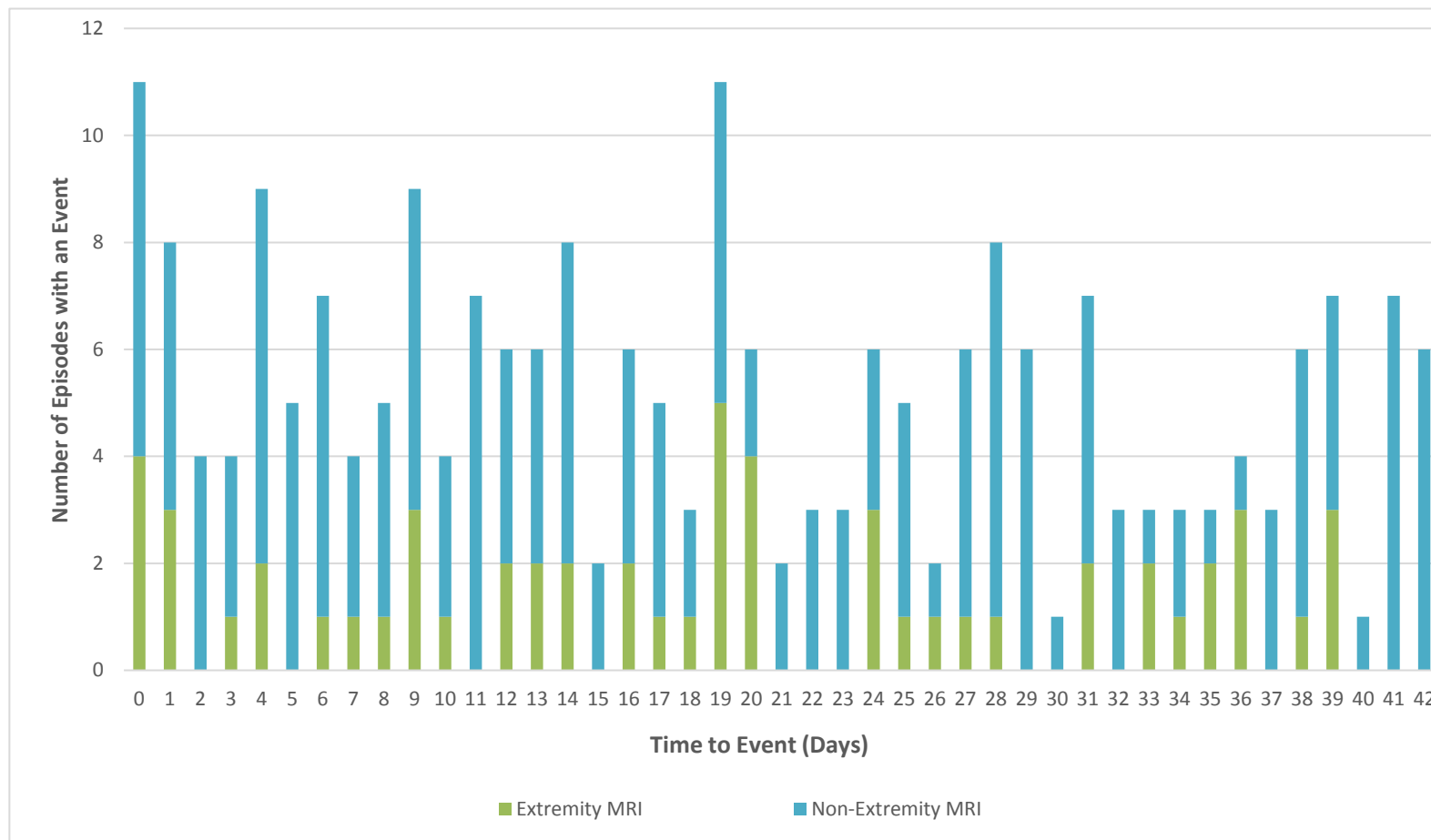
Figures 2a. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Emergency Department Setting in the Sentinel Distributed Database among those without a history of Epilepsy, by MRI Location, Care Setting of Outcome, and Time to Event



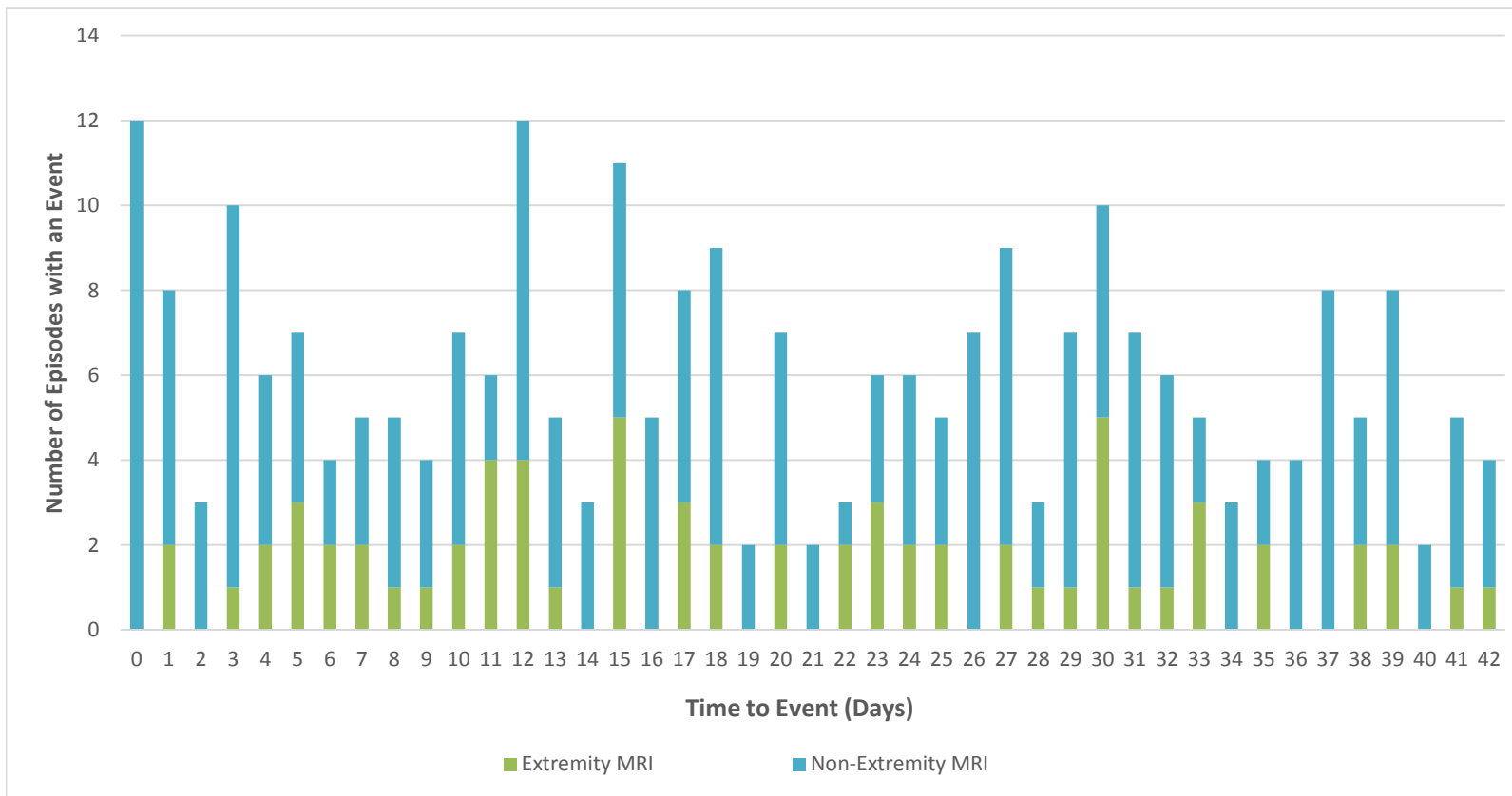
Figures 2b. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Inpatient Setting Sentinel Distributed Database among those without a history of Epilepsy, by MRI Location, Care Setting of Outcome, and Time to Event



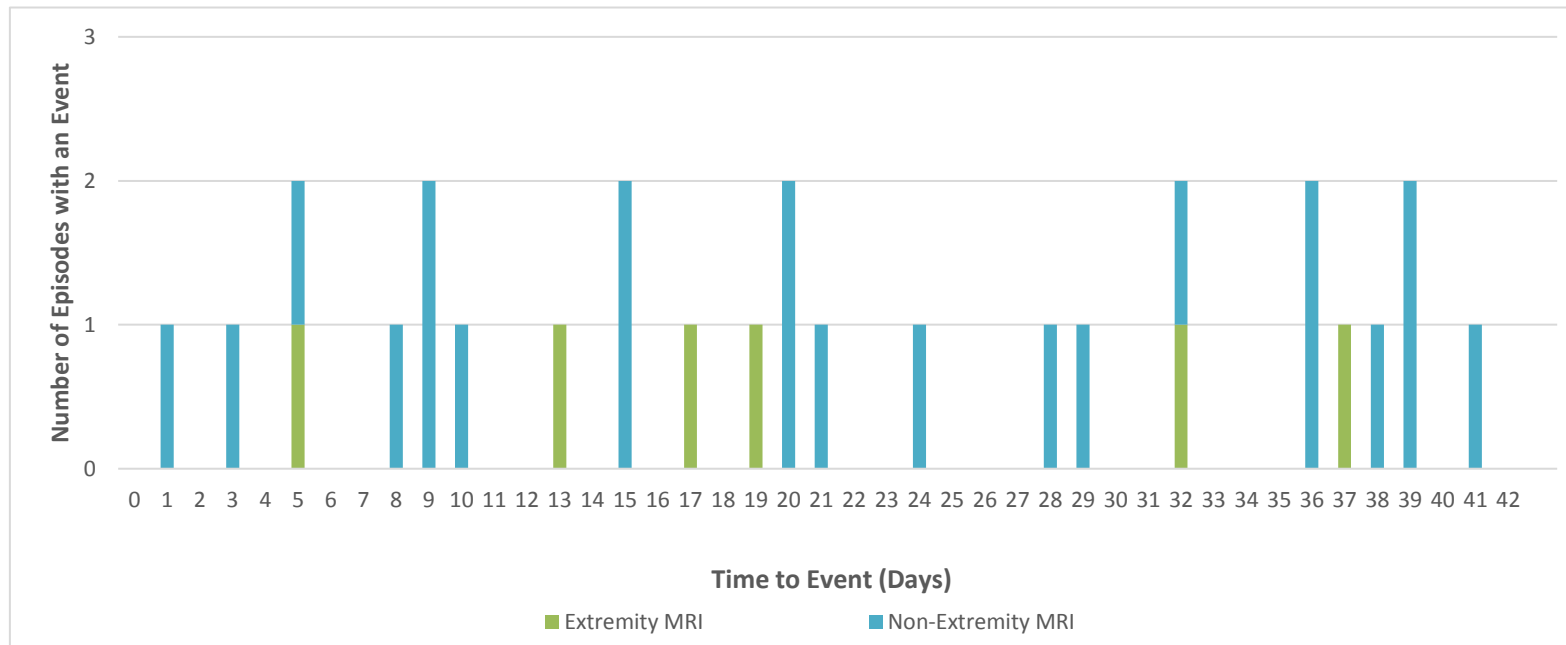
Figures 2c. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in Emergency Department or Inpatient Setting in the Sentinel Distributed Database among those without a history of Epilepsy, by MRI Location, Care Setting of Outcome, and Time to Event



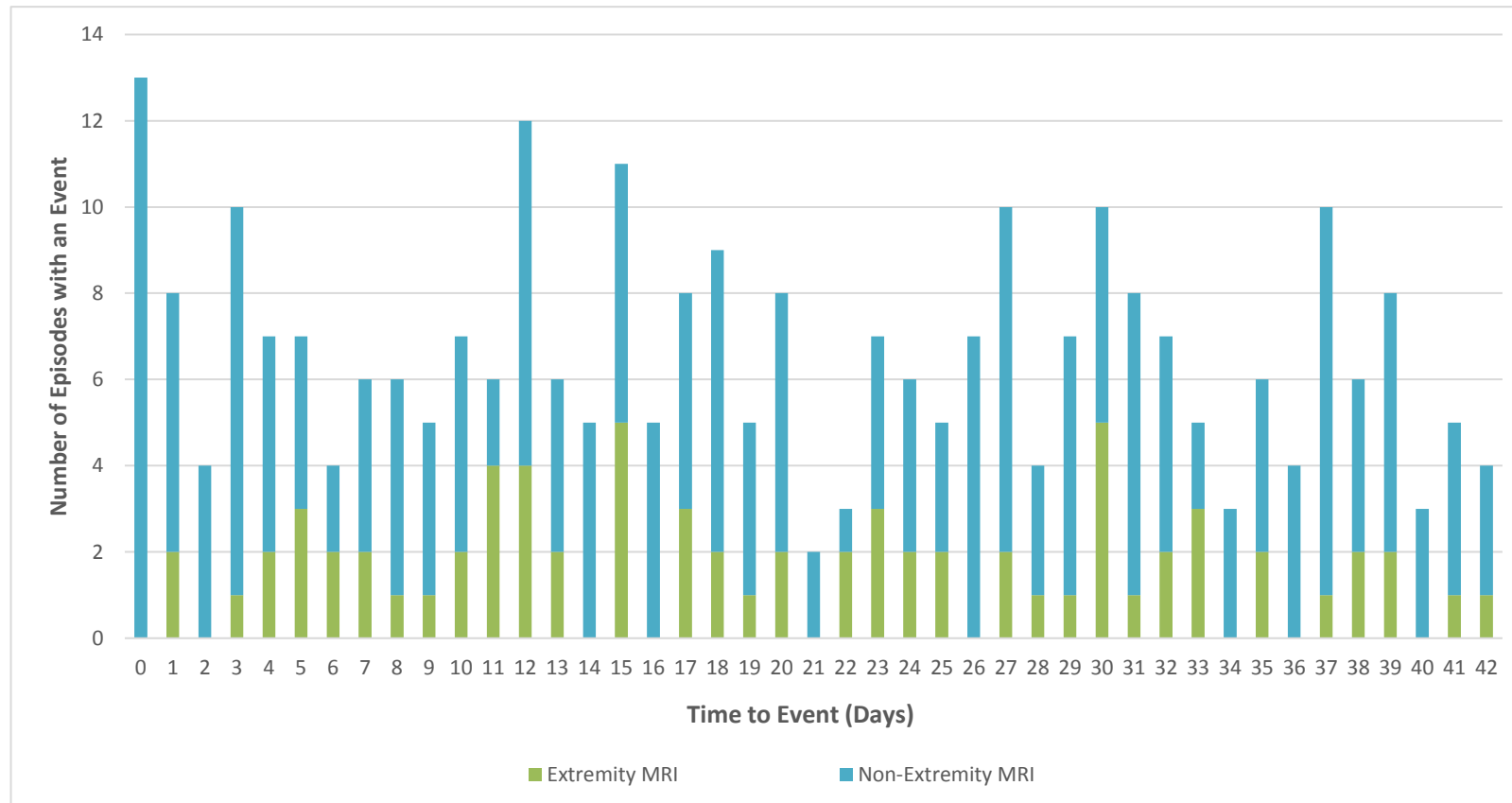
Figures 3a. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Emergency Department Setting in the Sentinel Distributed Database among those with a history of Epilepsy, by MRI Location, Care Setting of Outcome, and Time to Event



Figures 3b. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Inpatient Setting in the Sentinel Distributed Database among those with a history of Epilepsy, by MRI Location, Care Setting of Outcome, and Time to Event



Figures 3c. Incident Magnetic Resonance Imaging (MRI) Exposures and Seizures in the Emergency Department or Inpatient Setting in the Sentinel Distributed Database among those with a history of Epilepsy, by MRI Location, Care Setting of Outcome, and Time to Event



Appendix A. Data Completeness Dates and Exposure Identification Period End Dates for Each Data Partner

Data Partner ID	Exposure Assessment Period Start Date	Exposure Assessment Period End Date	Data Partner Data Completeness Date*
DP01	January 1, 2008	April 30, 2015	June 30, 2015
DP02	January 1, 2008	July 30, 2015	September 30, 2015
DP03	January 1, 2008	July 30, 2015	September 30, 2015
DP04	January 1, 2008	April 30, 2015	June 30, 2015
DP05	January 1, 2008	July 30, 2015	September 30, 2015
DP06	January 1, 2008	July 31, 2014	September 30, 2014
DP07	January 1, 2008	July 31, 2014	September 30, 2015
DP08	January 1, 2008	July 31, 2014	September 30, 2015
DP09	January 1, 2008	July 31, 2014	September 30, 2015
DP10	January 1, 2008	July 31, 2014	September 30, 2014
DP11	January 1, 2008	July 31, 2014	September 30, 2015
DP12	January 1, 2008	July 31, 2014	September 30, 2015
DP13	January 1, 2008	July 31, 2014	September 30, 2014

* The Exposure Identification Period End Date is the Data Partner Data Completeness Date minus the required follow-up period, rounded down to the nearest complete month.



Appendix B. List of Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes used to Define Magnetic Resonance Imaging (MRI) in this Request

Code	Code Type	Description
MRI Location: Extremity		
73222	CPT-4	MRI Upper extremity joint with contrast
73219	CPT-4	MRI Upper extremity other than joint w contrast
73722	CPT-4	MRI Lower extremity joint with contrast
73719	CPT-4	MRI Lower extremity joint with contrast
73223	CPT-4	MRI Upper extremity joint with & without contrast
73220	CPT-4	MRI Upper extremity other than joint with & without contrast
73723	CPT-4	MRI Lower extremity joint with & without contrast
73720	CPT-4	MRI Lower extremity other than joint with & without contrast
MRI Location: Head and Neck		
70552	CPT-4	MRI Head with contrast
70542	CPT-4	MRI Face, orbit, neck with contrast
70553	CPT-4	MRI Head with & without contrast
70543	CPT-4	MRI Face, orbit, neck with & without contrast
MRI Location: Non-Extremity		
72142	CPT-4	MRI Cervical spine with contrast
71551	CPT-4	MRI Chest w contrast
72147	CPT-4	MRI Thoracic spine with contrast
74182	CPT-4	MRI Abdomen with contrast
72149	CPT-4	MRI Lumbar spine with contrast
72196	CPT-4	MRI Pelvis with contrast
72156	CPT-4	MRI C Spine with & without contrast
71552	CPT-4	MRI Chest w & without contrast
72157	CPT-4	MRI T Spine with & without contrast
74183	CPT-4	MRI Abdomen with & without contrast
72158	CPT-4	MRI L Spine with & without contrast
72197	CPT-4	MRI Pelvis with & without contrast



Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code			
Code	Code Type	Category	Description
Alzheimer's disease			
331.0	ICD-9-CM	Diagnosis	Alzheimer's disease
Autism Spectrum			
299	ICD-9-CM	Diagnosis	Pervasive developmental disorders
299.0	ICD-9-CM	Diagnosis	Autistic disorder
299.00	ICD-9-CM	Diagnosis	Autistic disorder, current or active state
299.01	ICD-9-CM	Diagnosis	Autistic disorder, residual state
299.1	ICD-9-CM	Diagnosis	Childhood disintegrative disorder
299.10	ICD-9-CM	Diagnosis	Childhood disintegrative disorder, current or active state
299.11	ICD-9-CM	Diagnosis	Childhood disintegrative disorder, residual state
299.8	ICD-9-CM	Diagnosis	Other specified pervasive developmental disorders
299.80	ICD-9-CM	Diagnosis	Other specified pervasive developmental disorders, current or active state
299.81	ICD-9-CM	Diagnosis	Other specified pervasive developmental disorders, residual state
299.9	ICD-9-CM	Diagnosis	Unspecified pervasive developmental disorder
299.90	ICD-9-CM	Diagnosis	Unspecified pervasive developmental disorder, current or active state
299.91	ICD-9-CM	Diagnosis	Unspecified pervasive developmental disorder, residual state
Brain Tumor			
191	ICD-9-CM	Diagnosis	Malignant neoplasm of brain
191.0	ICD-9-CM	Diagnosis	Malignant neoplasm of cerebrum, except lobes and ventricles
191.1	ICD-9-CM	Diagnosis	Malignant neoplasm of frontal lobe of brain
191.2	ICD-9-CM	Diagnosis	Malignant neoplasm of temporal lobe of brain
191.3	ICD-9-CM	Diagnosis	Malignant neoplasm of parietal lobe of brain
191.4	ICD-9-CM	Diagnosis	Malignant neoplasm of occipital lobe of brain
191.5	ICD-9-CM	Diagnosis	Malignant neoplasm of ventricles of brain
191.6	ICD-9-CM	Diagnosis	Malignant neoplasm of cerebellum NOS
191.7	ICD-9-CM	Diagnosis	Malignant neoplasm of brain stem
191.8	ICD-9-CM	Diagnosis	Malignant neoplasm of other parts of brain
191.9	ICD-9-CM	Diagnosis	Malignant neoplasm of brain, unspecified site
239.6	ICD-9-CM	Diagnosis	Neoplasm of unspecified nature of brain

Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code	Code Type	Category	Description
Drug Overdose			
960	ICD-9-CM	Diagnosis	Poisoning by antibiotics
960.0	ICD-9-CM	Diagnosis	Poisoning by penicillins
960.1	ICD-9-CM	Diagnosis	Poisoning by antifungal antibiotics
960.2	ICD-9-CM	Diagnosis	Poisoning by chloramphenicol group
960.3	ICD-9-CM	Diagnosis	Poisoning by erythromycin and other macrolides
960.4	ICD-9-CM	Diagnosis	Poisoning by tetracycline group
960.5	ICD-9-CM	Diagnosis	Poisoning of cephalosporin group
960.6	ICD-9-CM	Diagnosis	Poisoning of antimycobacterial antibiotics
960.7	ICD-9-CM	Diagnosis	Poisoning by antineoplastic antibiotics
960.8	ICD-9-CM	Diagnosis	Poisoning by other specified antibiotics
960.9	ICD-9-CM	Diagnosis	Poisoning by unspecified antibiotic
961	ICD-9-CM	Diagnosis	Poisoning by other anti-infectives
961.0	ICD-9-CM	Diagnosis	Poisoning by sulfonamides
961.1	ICD-9-CM	Diagnosis	Poisoning by arsenical anti-infectives
961.2	ICD-9-CM	Diagnosis	Poisoning by heavy metal anti-infectives
961.3	ICD-9-CM	Diagnosis	Poisoning by quinoline and hydroxyquinoline derivatives
961.4	ICD-9-CM	Diagnosis	Poisoning by antimalarials and drugs acting on other blood protozoa
961.5	ICD-9-CM	Diagnosis	Poisoning by other antiprotozoal drugs
961.6	ICD-9-CM	Diagnosis	Poisoning by anthelmintics
961.7	ICD-9-CM	Diagnosis	Poisoning by antiviral drugs
961.8	ICD-9-CM	Diagnosis	Poisoning by other antimycobacterial drugs
961.9	ICD-9-CM	Diagnosis	Poisoning by other and unspecified anti-infectives
962	ICD-9-CM	Diagnosis	Poisoning by hormones and synthetic substitutes
962.0	ICD-9-CM	Diagnosis	Poisoning by adrenal cortical steroids
962.1	ICD-9-CM	Diagnosis	Poisoning by androgens and anabolic congeners
962.2	ICD-9-CM	Diagnosis	Poisoning by ovarian hormones and synthetic substitutes
962.3	ICD-9-CM	Diagnosis	Poisoning by insulins and antidiabetic agents
962.4	ICD-9-CM	Diagnosis	Poisoning by anterior pituitary hormones
962.5	ICD-9-CM	Diagnosis	Poisoning by posterior pituitary hormones
962.6	ICD-9-CM	Diagnosis	Poisoning by parathyroid and parathyroid derivatives
962.7	ICD-9-CM	Diagnosis	Poisoning by thyroid and thyroid derivatives
962.8	ICD-9-CM	Diagnosis	Poisoning by antithyroid agents
962.9	ICD-9-CM	Diagnosis	Poisoning by other and unspecified hormones and synthetic substitutes
963	ICD-9-CM	Diagnosis	Poisoning by primarily systemic agents
963.0	ICD-9-CM	Diagnosis	Poisoning by antiallergic and antiemetic drugs
963.1	ICD-9-CM	Diagnosis	Poisoning by antineoplastic and immunosuppressive drugs
963.2	ICD-9-CM	Diagnosis	Poisoning by acidifying agents
963.3	ICD-9-CM	Diagnosis	Poisoning by alkalizing agents
963.4	ICD-9-CM	Diagnosis	Poisoning by enzymes, not elsewhere classified
963.5	ICD-9-CM	Diagnosis	Poisoning by vitamins, not elsewhere classified
963.8	ICD-9-CM	Diagnosis	Poisoning by other specified systemic agents
963.9	ICD-9-CM	Diagnosis	Poisoning by unspecified systemic agent

Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code	Code Type	Category	Description
964	ICD-9-CM	Diagnosis	Poisoning by agents primarily affecting blood constituents
964.0	ICD-9-CM	Diagnosis	Poisoning by iron and its compounds
964.1	ICD-9-CM	Diagnosis	Poisoning by liver preparations and other antianemic agents
964.2	ICD-9-CM	Diagnosis	Poisoning by anticoagulants
964.3	ICD-9-CM	Diagnosis	Poisoning by vitamin K (phytonadione)
964.4	ICD-9-CM	Diagnosis	Poisoning by fibrinolysis-affecting drugs
964.5	ICD-9-CM	Diagnosis	Poisoning by anticoagulant antagonists and other coagulants
964.6	ICD-9-CM	Diagnosis	Poisoning by gamma globulin
964.7	ICD-9-CM	Diagnosis	Poisoning by natural blood and blood products
964.8	ICD-9-CM	Diagnosis	Poisoning by other specified agents affecting blood constituents
964.9	ICD-9-CM	Diagnosis	Poisoning by unspecified agent affecting blood constituents
965	ICD-9-CM	Diagnosis	Poisoning by analgesics, antipyretics, and antirheumatics
965.0	ICD-9-CM	Diagnosis	Poisoning by opiates and related narcotics
965.00	ICD-9-CM	Diagnosis	Poisoning by opium (alkaloids), unspecified
965.01	ICD-9-CM	Diagnosis	Poisoning by heroin
965.02	ICD-9-CM	Diagnosis	Poisoning by methadone
965.09	ICD-9-CM	Diagnosis	Poisoning by opiates and related narcotics, other
965.1	ICD-9-CM	Diagnosis	Poisoning by salicylates
965.4	ICD-9-CM	Diagnosis	Poisoning by aromatic analgesics, not elsewhere classified
965.5	ICD-9-CM	Diagnosis	Poisoning by pyrazole derivatives
965.6	ICD-9-CM	Diagnosis	Poisoning by antirheumatics (antiphlogistics)
965.61	ICD-9-CM	Diagnosis	Poisoning by propionic acid derivatives
965.69	ICD-9-CM	Diagnosis	Poisoning by other antirheumatics
965.7	ICD-9-CM	Diagnosis	Poisoning by other non-narcotic analgesics
965.8	ICD-9-CM	Diagnosis	Poisoning by other specified analgesics and antipyretics
965.9	ICD-9-CM	Diagnosis	Poisoning by unspecified analgesic and antipyretic
966	ICD-9-CM	Diagnosis	Poisoning by anticonvulsants and anti-Parkinsonism drugs
966.0	ICD-9-CM	Diagnosis	Poisoning by oxazolidine derivatives
966.1	ICD-9-CM	Diagnosis	Poisoning by hydantoin derivatives
966.2	ICD-9-CM	Diagnosis	Poisoning by succinimides
966.3	ICD-9-CM	Diagnosis	Poisoning by other and unspecified anticonvulsants
966.4	ICD-9-CM	Diagnosis	Poisoning by anti-Parkinsonism drugs
967	ICD-9-CM	Diagnosis	Poisoning by sedatives and hypnotics
967.0	ICD-9-CM	Diagnosis	Poisoning by barbiturates
967.1	ICD-9-CM	Diagnosis	Poisoning by chloral hydrate group
967.2	ICD-9-CM	Diagnosis	Poisoning by paraldehyde
967.3	ICD-9-CM	Diagnosis	Poisoning by bromine compounds
967.4	ICD-9-CM	Diagnosis	Poisoning by methaqualone compounds
967.5	ICD-9-CM	Diagnosis	Poisoning by glutethimide group
967.6	ICD-9-CM	Diagnosis	Poisoning by mixed sedatives, not elsewhere classified
967.8	ICD-9-CM	Diagnosis	Poisoning by other sedatives and hypnotics
967.9	ICD-9-CM	Diagnosis	Poisoning by unspecified sedative or hypnotic
968	ICD-9-CM	Diagnosis	Poisoning by other central nervous system depressants and anesthetics

Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code			
Code	Code Type	Category	Description
968.0	ICD-9-CM	Diagnosis	Poisoning by central nervous system muscle-tone depressants
968.1	ICD-9-CM	Diagnosis	Poisoning by halothane
968.2	ICD-9-CM	Diagnosis	Poisoning by other gaseous anesthetics
968.3	ICD-9-CM	Diagnosis	Poisoning by intravenous anesthetics
968.4	ICD-9-CM	Diagnosis	Poisoning by other and unspecified general anesthetics
968.5	ICD-9-CM	Diagnosis	Poisoning by other central nervous system depressants and anesthetics, Surface (topical) and infiltration anesthetics
968.6	ICD-9-CM	Diagnosis	Poisoning by peripheral nerve- and plexus-blocking anesthetics
968.7	ICD-9-CM	Diagnosis	Poisoning by spinal anesthetics
968.9	ICD-9-CM	Diagnosis	Poisoning by other and unspecified local anesthetics
969	ICD-9-CM	Diagnosis	Poisoning by psychotropic agents
969.0	ICD-9-CM	Diagnosis	Poisoning by antidepressants
969.00	ICD-9-CM	Diagnosis	Poisoning by antidepressant, unspecified
969.01	ICD-9-CM	Diagnosis	Poisoning by monoamine oxidase inhibitors
969.02	ICD-9-CM	Diagnosis	Poisoning by selective serotonin and norepinephrine reuptake inhibitors
969.03	ICD-9-CM	Diagnosis	Poisoning by selective serotonin reuptake inhibitors
969.04	ICD-9-CM	Diagnosis	Poisoning by tetracyclic antidepressants
969.05	ICD-9-CM	Diagnosis	Poisoning by tricyclic antidepressants
969.09	ICD-9-CM	Diagnosis	Poisoning by other antidepressants
969.1	ICD-9-CM	Diagnosis	Poisoning by phenothiazine-based tranquilizers
969.2	ICD-9-CM	Diagnosis	Poisoning by butyrophenone-based tranquilizers
969.3	ICD-9-CM	Diagnosis	Poisoning by other antipsychotics, neuroleptics, and major tranquilizers
969.4	ICD-9-CM	Diagnosis	Poisoning by benzodiazepine-based tranquilizers
969.5	ICD-9-CM	Diagnosis	Poisoning by other tranquilizers
969.6	ICD-9-CM	Diagnosis	Poisoning by psychodysleptics (hallucinogens)
969.7	ICD-9-CM	Diagnosis	Poisoning by psychostimulants
969.70	ICD-9-CM	Diagnosis	Poisoning by psychostimulant, unspecified
969.71	ICD-9-CM	Diagnosis	Poisoning by caffeine
969.72	ICD-9-CM	Diagnosis	Poisoning by amphetamines
969.73	ICD-9-CM	Diagnosis	Poisoning by methylphenidate
969.79	ICD-9-CM	Diagnosis	Poisoning by other psychostimulants
969.8	ICD-9-CM	Diagnosis	Poisoning by other specified psychotropic agents
969.9	ICD-9-CM	Diagnosis	Poisoning by unspecified psychotropic agent
970	ICD-9-CM	Diagnosis	Poisoning by central nervous system stimulants
970.0	ICD-9-CM	Diagnosis	Poisoning by analeptics
970.1	ICD-9-CM	Diagnosis	Poisoning by opiate antagonists
970.8	ICD-9-CM	Diagnosis	Poisoning by other specified central nervous system stimulants
970.81	ICD-9-CM	Diagnosis	Poisoning by cocaine
970.89	ICD-9-CM	Diagnosis	Poisoning by other central nervous system stimulants
970.9	ICD-9-CM	Diagnosis	Poisoning by unspecified central nervous system stimulant
971	ICD-9-CM	Diagnosis	Poisoning by drugs primarily affecting the autonomic nervous system
971.0	ICD-9-CM	Diagnosis	Poisoning by parasympathomimetics (cholinergics)

Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code			
Code	Code Type	Category	Description
971.1	ICD-9-CM	Diagnosis	Poisoning by parasympatholytics (anticholinergics and antimuscarinics) and spasmolytics
971.2	ICD-9-CM	Diagnosis	Poisoning by sympathomimetics (adrenergics)
971.3	ICD-9-CM	Diagnosis	Poisoning by sympatholytics (antiadrenergics)
971.9	ICD-9-CM	Diagnosis	Poisoning by unspecified drug primarily affecting autonomic nervous system
972	ICD-9-CM	Diagnosis	Poisoning by agents primarily affecting the cardiovascular system
972.0	ICD-9-CM	Diagnosis	Poisoning by cardiac rhythm regulators
972.1	ICD-9-CM	Diagnosis	Poisoning by cardiotoxic glycosides and drugs of similar action
972.2	ICD-9-CM	Diagnosis	Poisoning by antilipemic and antiarteriosclerotic drugs
972.3	ICD-9-CM	Diagnosis	Poisoning by ganglion-blocking agents
972.4	ICD-9-CM	Diagnosis	Poisoning by coronary vasodilators
972.5	ICD-9-CM	Diagnosis	Poisoning by other vasodilators
972.6	ICD-9-CM	Diagnosis	Poisoning by other antihypertensive agents
972.7	ICD-9-CM	Diagnosis	Poisoning by antivaricose drugs, including sclerosing agents
972.8	ICD-9-CM	Diagnosis	Poisoning by capillary-active drugs
972.9	ICD-9-CM	Diagnosis	Poisoning by other and unspecified agents primarily affecting the cardiovascular system
973	ICD-9-CM	Diagnosis	Poisoning by agents primarily affecting the gastrointestinal system
973.0	ICD-9-CM	Diagnosis	Poisoning by antacids and antigastric secretion drugs
973.1	ICD-9-CM	Diagnosis	Poisoning by irritant cathartics
973.2	ICD-9-CM	Diagnosis	Poisoning by emollient cathartics
973.3	ICD-9-CM	Diagnosis	Poisoning by other cathartics, including intestinal atonia drugs
973.4	ICD-9-CM	Diagnosis	Poisoning by digestants
973.5	ICD-9-CM	Diagnosis	Poisoning by antidiarrheal drugs
973.6	ICD-9-CM	Diagnosis	Poisoning by emetics
973.8	ICD-9-CM	Diagnosis	Poisoning by other specified agents primarily affecting the gastrointestinal system
973.9	ICD-9-CM	Diagnosis	Poisoning by unspecified agent primarily affecting the gastrointestinal system
974	ICD-9-CM	Diagnosis	Poisoning by water, mineral, and uric acid metabolism drugs
974.0	ICD-9-CM	Diagnosis	Poisoning by mercurial diuretics
974.1	ICD-9-CM	Diagnosis	Poisoning by purine derivative diuretics
974.2	ICD-9-CM	Diagnosis	Poisoning by carbonic acid anhydrase inhibitors
974.3	ICD-9-CM	Diagnosis	Poisoning by saluretics
974.4	ICD-9-CM	Diagnosis	Poisoning by other diuretics
974.5	ICD-9-CM	Diagnosis	Poisoning by electrolytic, caloric, and water-balance agents
974.6	ICD-9-CM	Diagnosis	Poisoning by other mineral salts, not elsewhere classified
974.7	ICD-9-CM	Diagnosis	Poisoning by uric acid metabolism drugs
975	ICD-9-CM	Diagnosis	Poisoning by agents primarily acting on the smooth and skeletal muscles and respiratory system
975.0	ICD-9-CM	Diagnosis	Poisoning by oxytocic agents
975.1	ICD-9-CM	Diagnosis	Poisoning by smooth muscle relaxants



Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code	Code Type	Code Category	Description
975.2	ICD-9-CM	Diagnosis	Poisoning by skeletal muscle relaxants
975.3	ICD-9-CM	Diagnosis	Poisoning by other and unspecified drugs acting on muscles
975.4	ICD-9-CM	Diagnosis	Poisoning by antitussives
975.5	ICD-9-CM	Diagnosis	Poisoning by expectorants
975.6	ICD-9-CM	Diagnosis	Poisoning by anti-common cold drugs
975.7	ICD-9-CM	Diagnosis	Poisoning by antiasthmatics
975.8	ICD-9-CM	Diagnosis	Poisoning by other and unspecified respiratory drugs
976	ICD-9-CM	Diagnosis	Poisoning by agents primarily affecting skin and mucous membrane, ophthalmological, otorhinolaryngological, and dental drugs
976.0	ICD-9-CM	Diagnosis	Poisoning by local anti-infectives and anti-inflammatory drugs
976.1	ICD-9-CM	Diagnosis	Poisoning by antipruritics
976.2	ICD-9-CM	Diagnosis	Poisoning by local astringents and local detergents
976.3	ICD-9-CM	Diagnosis	Poisoning by emollients, demulcents, and protectants
976.4	ICD-9-CM	Diagnosis	Poisoning by keratolytics, keratoplastics, other hair treatment drugs and preparations
976.5	ICD-9-CM	Diagnosis	Poisoning by eye anti-infectives and other eye drugs
976.6	ICD-9-CM	Diagnosis	Poisoning by anti-infectives and other drugs and preparations for ear, nose, and throat
976.7	ICD-9-CM	Diagnosis	Poisoning by dental drugs topically applied
976.8	ICD-9-CM	Diagnosis	Poisoning by other agents primarily affecting skin and mucous membrane
976.9	ICD-9-CM	Diagnosis	Poisoning by unspecified agent primarily affecting skin and mucous membrane
977	ICD-9-CM	Diagnosis	Poisoning by other and unspecified drugs and medicinal substances
977.0	ICD-9-CM	Diagnosis	Poisoning by dietetics
977.1	ICD-9-CM	Diagnosis	Poisoning by lipotropic drugs
977.2	ICD-9-CM	Diagnosis	Poisoning by antidotes and chelating agents, not elsewhere classified
977.3	ICD-9-CM	Diagnosis	Poisoning by alcohol deterrents
977.4	ICD-9-CM	Diagnosis	Poisoning by pharmaceutical excipients
977.8	ICD-9-CM	Diagnosis	Poisoning by other specified drugs and medicinal substances
977.9	ICD-9-CM	Diagnosis	Poisoning by unspecified drug or medicinal substance
978	ICD-9-CM	Diagnosis	Poisoning by bacterial vaccines
978.0	ICD-9-CM	Diagnosis	Poisoning by BCG vaccine
978.1	ICD-9-CM	Diagnosis	Poisoning by typhoid and paratyphoid vaccine
978.2	ICD-9-CM	Diagnosis	Poisoning by cholera vaccine
978.3	ICD-9-CM	Diagnosis	Poisoning by plague vaccine
978.4	ICD-9-CM	Diagnosis	Poisoning by tetanus vaccine
978.5	ICD-9-CM	Diagnosis	Poisoning by diphtheria vaccine
978.6	ICD-9-CM	Diagnosis	Poisoning by pertussis vaccine, including combinations with pertussis component
978.8	ICD-9-CM	Diagnosis	Poisoning by other and unspecified bacterial vaccines
978.9	ICD-9-CM	Diagnosis	Poisoning by mixed bacterial vaccines, except combinations with pertussis component
979	ICD-9-CM	Diagnosis	Poisoning by other vaccines and biological substances

Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code			
Code	Code Type	Category	Description
979.0	ICD-9-CM	Diagnosis	Poisoning by smallpox vaccine
979.1	ICD-9-CM	Diagnosis	Poisoning by rabies vaccine
979.2	ICD-9-CM	Diagnosis	Poisoning by typhus vaccine
979.3	ICD-9-CM	Diagnosis	Poisoning by yellow fever vaccine
979.4	ICD-9-CM	Diagnosis	Poisoning by measles vaccine
979.5	ICD-9-CM	Diagnosis	Poisoning by poliomyelitis vaccine
979.6	ICD-9-CM	Diagnosis	Poisoning by other and unspecified viral and rickettsial vaccines
979.7	ICD-9-CM	Diagnosis	Poisoning by mixed viral-rickettsial and bacterial vaccines, except combinations with pertussis component
979.9	ICD-9-CM	Diagnosis	Poisoning by other and unspecified vaccines and biological substances
980	ICD-9-CM	Diagnosis	Toxic effect of alcohol
980.0	ICD-9-CM	Diagnosis	Toxic effect of ethyl alcohol
980.1	ICD-9-CM	Diagnosis	Toxic effect of methyl alcohol
980.2	ICD-9-CM	Diagnosis	Toxic effect of isopropyl alcohol
980.3	ICD-9-CM	Diagnosis	Toxic effect of fusel oil
980.8	ICD-9-CM	Diagnosis	Toxic effect of other specified alcohols
980.9	ICD-9-CM	Diagnosis	Toxic effect of unspecified alcohol
981	ICD-9-CM	Diagnosis	Toxic effect of petroleum products
982	ICD-9-CM	Diagnosis	Toxic effect of solvents other than petroleum-based
982.0	ICD-9-CM	Diagnosis	Toxic effect of benzene and homologues
982.1	ICD-9-CM	Diagnosis	Toxic effect of carbon tetrachloride
982.2	ICD-9-CM	Diagnosis	Toxic effect of carbon disulfide
982.3	ICD-9-CM	Diagnosis	Toxic effect of other chlorinated hydrocarbon solvents
982.4	ICD-9-CM	Diagnosis	Toxic effect of nitroglycol
982.8	ICD-9-CM	Diagnosis	Toxic effect of other nonpetroleum-based solvents
983	ICD-9-CM	Diagnosis	Toxic effect of corrosive aromatics, acids, and caustic alkalis
983.0	ICD-9-CM	Diagnosis	Toxic effect of corrosive aromatics
983.1	ICD-9-CM	Diagnosis	Toxic effect of acids
983.2	ICD-9-CM	Diagnosis	Toxic effect of caustic alkalis
983.9	ICD-9-CM	Diagnosis	Toxic effect of caustic, unspecified
984	ICD-9-CM	Diagnosis	Toxic effect of lead and its compounds (including fumes)
984.0	ICD-9-CM	Diagnosis	Toxic effect of inorganic lead compounds
984.1	ICD-9-CM	Diagnosis	Toxic effect of organic lead compounds
984.8	ICD-9-CM	Diagnosis	Toxic effect of other lead compounds
984.9	ICD-9-CM	Diagnosis	Toxic effect of unspecified lead compound
985	ICD-9-CM	Diagnosis	Toxic effect of other metals
985.0	ICD-9-CM	Diagnosis	Toxic effect of mercury and its compounds
985.1	ICD-9-CM	Diagnosis	Toxic effect of arsenic and its compounds
985.2	ICD-9-CM	Diagnosis	Toxic effect of manganese and its compounds
985.3	ICD-9-CM	Diagnosis	Toxic effect of beryllium and its compounds
985.4	ICD-9-CM	Diagnosis	Toxic effect of antimony and its compounds
985.5	ICD-9-CM	Diagnosis	Toxic effect of cadmium and its compounds
985.6	ICD-9-CM	Diagnosis	Toxic effect of chromium

Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code			
Code	Code Type	Category	Description
985.8	ICD-9-CM	Diagnosis	Toxic effect of other specified metals
985.9	ICD-9-CM	Diagnosis	Toxic effect of unspecified metal
986	ICD-9-CM	Diagnosis	Toxic effect of carbon monoxide
987	ICD-9-CM	Diagnosis	Toxic effect of other gases, fumes, or vapors
987.0	ICD-9-CM	Diagnosis	Toxic effect of liquefied petroleum gases
987.1	ICD-9-CM	Diagnosis	Toxic effect of other hydrocarbon gas
987.2	ICD-9-CM	Diagnosis	Toxic effect of nitrogen oxides
987.3	ICD-9-CM	Diagnosis	Toxic effect of sulfur dioxide
987.4	ICD-9-CM	Diagnosis	Toxic effect of freon
987.5	ICD-9-CM	Diagnosis	Toxic effect of lacrimogenic gas
987.6	ICD-9-CM	Diagnosis	Toxic effect of chlorine gas
987.7	ICD-9-CM	Diagnosis	Toxic effect of hydrocyanic acid gas
987.8	ICD-9-CM	Diagnosis	Toxic effect of other specified gases, fumes, or vapors
987.9	ICD-9-CM	Diagnosis	Toxic effect of unspecified gas, fume, or vapor
988	ICD-9-CM	Diagnosis	Toxic effect of noxious substances eaten as food
988.0	ICD-9-CM	Diagnosis	Toxic effect of fish and shellfish
988.1	ICD-9-CM	Diagnosis	Toxic effect of mushrooms
988.2	ICD-9-CM	Diagnosis	Toxic effect of berries and other plants
988.8	ICD-9-CM	Diagnosis	Toxic effect of other specified noxious substances
988.9	ICD-9-CM	Diagnosis	Toxic effect of unspecified noxious substance
989	ICD-9-CM	Diagnosis	Toxic effect of other substances, chiefly nonmedicinal as to source
989.0	ICD-9-CM	Diagnosis	Toxic effect of hydrocyanic acid and cyanides
989.1	ICD-9-CM	Diagnosis	Toxic effect of strychnine and salts
989.2	ICD-9-CM	Diagnosis	Toxic effect of chlorinated hydrocarbons
989.3	ICD-9-CM	Diagnosis	Toxic effect of organophosphate and carbamate
989.4	ICD-9-CM	Diagnosis	Toxic effect of other pesticides, not elsewhere classified
989.5	ICD-9-CM	Diagnosis	Toxic effect of venom
989.6	ICD-9-CM	Diagnosis	Toxic effect of soaps and detergents
989.7	ICD-9-CM	Diagnosis	Toxic effect of aflatoxin and other mycotoxin (food contaminants)
989.8	ICD-9-CM	Diagnosis	Toxic effect of other substances, chiefly nonmedicinal as to source
989.81	ICD-9-CM	Diagnosis	Toxic effect of asbestos
989.82	ICD-9-CM	Diagnosis	Toxic effect of latex
989.83	ICD-9-CM	Diagnosis	Toxic effect of silicone
989.84	ICD-9-CM	Diagnosis	Toxic effect of tobacco
989.89	ICD-9-CM	Diagnosis	Toxic effect of other substances
989.9	ICD-9-CM	Diagnosis	Toxic effect of unspecified substance, chiefly nonmedicinal as to source
E850	ICD-9-CM	Diagnosis	Accidental poisoning by analgesics, antipyretics, and antirheumatics
E850.0	ICD-9-CM	Diagnosis	Accidental poisoning by heroin
E850.1	ICD-9-CM	Diagnosis	Accidental poisoning by methadone
E850.2	ICD-9-CM	Diagnosis	Accidental poisoning by other opiates and related narcotics
E850.3	ICD-9-CM	Diagnosis	Accidental poisoning by salicylates
E850.4	ICD-9-CM	Diagnosis	Accidental poisoning by aromatic analgesics, not elsewhere classified
E850.5	ICD-9-CM	Diagnosis	Accidental poisoning by pyrazole derivatives



Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code	Code Type	Category	Description
E850.6	ICD-9-CM	Diagnosis	Accidental poisoning by antirheumatics (antiphlogistics)
E850.7	ICD-9-CM	Diagnosis	Accidental poisoning by other non-narcotic analgesics
E850.8	ICD-9-CM	Diagnosis	Accidental poisoning by other specified analgesics and antipyretics
E850.9	ICD-9-CM	Diagnosis	Accidental poisoning by unspecified analgesic or antipyretic
E851	ICD-9-CM	Diagnosis	Accidental poisoning by barbiturates
E852	ICD-9-CM	Diagnosis	Accidental poisoning by other sedatives and hypnotics
E852.0	ICD-9-CM	Diagnosis	Accidental poisoning by chloral hydrate group
E852.1	ICD-9-CM	Diagnosis	Accidental poisoning by paraldehyde
E852.2	ICD-9-CM	Diagnosis	Accidental poisoning by bromine compounds
E852.3	ICD-9-CM	Diagnosis	Accidental poisoning by methaqualone compounds
E852.4	ICD-9-CM	Diagnosis	Accidental poisoning by glutethimide group
E852.5	ICD-9-CM	Diagnosis	Accidental poisoning by mixed sedatives, not elsewhere classified
E852.8	ICD-9-CM	Diagnosis	Accidental poisoning by other specified sedative and hypnotic
E852.9	ICD-9-CM	Diagnosis	Accidental poisoning by unspecified sedative or hypnotic
E853	ICD-9-CM	Diagnosis	Accidental poisoning by tranquilizers
E853.0	ICD-9-CM	Diagnosis	Accidental poisoning by phenothiazine-based tranquilizers
E853.1	ICD-9-CM	Diagnosis	Accidental poisoning by butyrophenone-based tranquilizers
E853.2	ICD-9-CM	Diagnosis	Accidental poisoning by benzodiazepine-based tranquilizers
E853.8	ICD-9-CM	Diagnosis	Accidental poisoning by other specified tranquilizers
E853.9	ICD-9-CM	Diagnosis	Accidental poisoning by unspecified tranquilizer
E854	ICD-9-CM	Diagnosis	Accidental poisoning by other psychotropic agents
E854.0	ICD-9-CM	Diagnosis	Accidental poisoning by antidepressants
E854.1	ICD-9-CM	Diagnosis	Accidental poisoning by psychodysleptics (hallucinogens)
E854.2	ICD-9-CM	Diagnosis	Accidental poisoning by psychostimulants
E854.3	ICD-9-CM	Diagnosis	Accidental poisoning by central nervous system stimulants
E854.8	ICD-9-CM	Diagnosis	Accidental poisoning by other psychotropic agents
E855	ICD-9-CM	Diagnosis	Accidental poisoning by other drugs acting on central and autonomic nervous system
E855.0	ICD-9-CM	Diagnosis	Accidental poisoning by anticonvulsant and anti-Parkinsonism drugs
E855.1	ICD-9-CM	Diagnosis	Accidental poisoning by other central nervous system depressants
E855.2	ICD-9-CM	Diagnosis	Accidental poisoning by local anesthetics
E855.3	ICD-9-CM	Diagnosis	Accidental poisoning by parasympathomimetics (cholinergics)
E855.4	ICD-9-CM	Diagnosis	Accidental poisoning by parasympatholytics (anticholinergics and antimuscarinics) and spasmolytics
E855.5	ICD-9-CM	Diagnosis	Accidental poisoning by sympathomimetics (adrenergics)
E855.6	ICD-9-CM	Diagnosis	Accidental poisoning by sympatholytics (antiadrenergics)
E855.8	ICD-9-CM	Diagnosis	Accidental poisoning by other specified drugs acting on central and autonomic nervous systems
E855.9	ICD-9-CM	Diagnosis	Accidental poisoning by unspecified drug acting on central and autonomic nervous systems
E856	ICD-9-CM	Diagnosis	Accidental poisoning by antibiotics
E857	ICD-9-CM	Diagnosis	Accidental poisoning by other anti-infectives
E858	ICD-9-CM	Diagnosis	Accidental poisoning by other drugs



Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code	Code Type	Code Category	Description
E858.0	ICD-9-CM	Diagnosis	Accidental poisoning by hormones and synthetic substitutes
E858.1	ICD-9-CM	Diagnosis	Accidental poisoning by primarily systemic agents
E858.2	ICD-9-CM	Diagnosis	Accidental poisoning by agents primarily affecting blood constituents
E858.3	ICD-9-CM	Diagnosis	Accidental poisoning by agents primarily affecting cardiovascular system
E858.4	ICD-9-CM	Diagnosis	Accidental poisoning by agents primarily affecting gastrointestinal system
E858.5	ICD-9-CM	Diagnosis	Accidental poisoning by water, mineral, and uric acid metabolism drugs
E858.6	ICD-9-CM	Diagnosis	Accidental poisoning by agents primarily acting on the smooth and skeletal muscles and respiratory system
E858.7	ICD-9-CM	Diagnosis	Accidental poisoning by agents primarily affecting skin and mucous membrane, ophthalmological, otorhinolaryngological, and dental drugs
E858.8	ICD-9-CM	Diagnosis	Accidental poisoning by other specified drugs
E858.9	ICD-9-CM	Diagnosis	Accidental poisoning by unspecified drug
E860	ICD-9-CM	Diagnosis	Accidental poisoning by alcohol, not elsewhere classified
E860.0	ICD-9-CM	Diagnosis	Accidental poisoning by alcoholic beverages
E860.1	ICD-9-CM	Diagnosis	Accidental poisoning by other and unspecified ethyl alcohol and its products
E860.2	ICD-9-CM	Diagnosis	Accidental poisoning by methyl alcohol
E860.3	ICD-9-CM	Diagnosis	Accidental poisoning by isopropyl alcohol
E860.4	ICD-9-CM	Diagnosis	Accidental poisoning by fusel oil
E860.8	ICD-9-CM	Diagnosis	Accidental poisoning by other specified alcohols
E860.9	ICD-9-CM	Diagnosis	Accidental poisoning by unspecified alcohol
E861	ICD-9-CM	Diagnosis	Accidental poisoning by cleansing and polishing agents, disinfectants, paints, and varnishes
E861.0	ICD-9-CM	Diagnosis	Accidental poisoning by synthetic detergents and shampoos
E861.1	ICD-9-CM	Diagnosis	Accidental poisoning by soap products
E861.2	ICD-9-CM	Diagnosis	Accidental poisoning by polishes
E861.3	ICD-9-CM	Diagnosis	Accidental poisoning by other cleansing and polishing agents
E861.4	ICD-9-CM	Diagnosis	Accidental poisoning by disinfectants
E861.5	ICD-9-CM	Diagnosis	Accidental poisoning by lead paints
E861.6	ICD-9-CM	Diagnosis	Accidental poisoning by other paints and varnishes
E861.9	ICD-9-CM	Diagnosis	Accidental poisonings by unspecified cleansing and polishing agents, disinfectants, paints, and varnishes
E862	ICD-9-CM	Diagnosis	Accidental poisoning by petroleum products, other solvents and their vapors, not elsewhere classified
E862.0	ICD-9-CM	Diagnosis	Accidental poisoning by petroleum solvents
E862.1	ICD-9-CM	Diagnosis	Accidental poisoning by petroleum fuels and cleaners
E862.2	ICD-9-CM	Diagnosis	Accidental poisoning by lubricating oils
E862.3	ICD-9-CM	Diagnosis	Accidental poisoning by petroleum solids
E862.4	ICD-9-CM	Diagnosis	Accidental poisoning by other specified solvents
E862.9	ICD-9-CM	Diagnosis	Accidental poisoning by unspecified solvent
E863	ICD-9-CM	Diagnosis	Accidental poisoning by agricultural and horticultural chemical and pharmaceutical preparations other than plant foods and fertilizers
E863.0	ICD-9-CM	Diagnosis	Accidental poisoning by insecticides of organochlorine compounds



Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code	Code Type	Code Category	Description
E863.1	ICD-9-CM	Diagnosis	Accidental poisoning by insecticides of organophosphorus compounds
E863.2	ICD-9-CM	Diagnosis	Accidental poisoning by carbamates
E863.3	ICD-9-CM	Diagnosis	Accidental poisoning by mixtures of insecticides
E863.4	ICD-9-CM	Diagnosis	Accidental poisoning by other and unspecified insecticides
E863.5	ICD-9-CM	Diagnosis	Accidental poisoning by herbicides
E863.6	ICD-9-CM	Diagnosis	Accidental poisoning by fungicides
E863.7	ICD-9-CM	Diagnosis	Accidental poisoning by rodenticides
E863.8	ICD-9-CM	Diagnosis	Accidental poisoning by fumigants
E863.9	ICD-9-CM	Diagnosis	Accidental poisoning by other and unspecified agricultural and horticultural chemical and pharmaceutical preparations other than plant foods and fertilizers
E864	ICD-9-CM	Diagnosis	Accidental poisoning by corrosives and caustics, not elsewhere classified
E864.0	ICD-9-CM	Diagnosis	Accidental poisoning by corrosive aromatics not elsewhere classified
E864.1	ICD-9-CM	Diagnosis	Accidental poisoning by acids not elsewhere classified
E864.2	ICD-9-CM	Diagnosis	Accidental poisoning by caustic alkalis not elsewhere classified
E864.3	ICD-9-CM	Diagnosis	Accidental poisoning by other specified corrosives and caustics not elsewhere classified
E864.4	ICD-9-CM	Diagnosis	Accidental poisoning by unspecified corrosives and caustics not elsewhere classified
E865	ICD-9-CM	Diagnosis	Accidental poisoning from poisonous foodstuffs and poisonous plants
E865.0	ICD-9-CM	Diagnosis	Accidental poisoning by meat
E865.1	ICD-9-CM	Diagnosis	Accidental poisoning by shellfish
E865.2	ICD-9-CM	Diagnosis	Accidental poisoning from other fish
E865.3	ICD-9-CM	Diagnosis	Accidental poisoning from berries and seeds
E865.4	ICD-9-CM	Diagnosis	Accidental poisoning from other specified plants
E865.5	ICD-9-CM	Diagnosis	Accidental poisoning from mushrooms and other fungi
E865.8	ICD-9-CM	Diagnosis	Accidental poisoning from other specified foods
E865.9	ICD-9-CM	Diagnosis	Accidental poisoning from unspecified foodstuff or poisonous plant
E866	ICD-9-CM	Diagnosis	Accidental poisoning by other and unspecified solid and liquid substances
E866.0	ICD-9-CM	Diagnosis	Accidental poisoning by lead and its compounds and fumes
E866.1	ICD-9-CM	Diagnosis	Accidental poisoning by mercury and its compounds and fumes
E866.2	ICD-9-CM	Diagnosis	Accidental poisoning by antimony and its compounds and fumes
E866.3	ICD-9-CM	Diagnosis	Accidental poisoning by arsenic and its compounds and fumes
E866.4	ICD-9-CM	Diagnosis	Accidental poisoning by other metals and their compounds and fumes
E866.5	ICD-9-CM	Diagnosis	Accidental poisoning by plant foods and fertilizers
E866.6	ICD-9-CM	Diagnosis	Accidental poisoning by glues and adhesives
E866.7	ICD-9-CM	Diagnosis	Accidental poisoning by cosmetics
E866.8	ICD-9-CM	Diagnosis	Accidental poisoning by other specified solid or liquid substances
E866.9	ICD-9-CM	Diagnosis	Accidental poisoning by unspecified solid or liquid substance
E867	ICD-9-CM	Diagnosis	Accidental poisoning by gas distributed by pipeline
E868	ICD-9-CM	Diagnosis	Accidental poisoning by other utility gas and other carbon monoxide
E868.0	ICD-9-CM	Diagnosis	Accidental poisoning by liquefied petroleum gas distributed in mobile containers

Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code			
Code	Code Type	Category	Description
E868.1	ICD-9-CM	Diagnosis	Accidental poisoning by other and unspecified utility gas
E868.2	ICD-9-CM	Diagnosis	Accidental poisoning by motor vehicle exhaust gas
E868.3	ICD-9-CM	Diagnosis	Accidental poisoning by carbon monoxide from incomplete combustion of other domestic fuels
E868.8	ICD-9-CM	Diagnosis	Accidental poisoning by carbon monoxide from other sources
E868.9	ICD-9-CM	Diagnosis	Accidental poisoning by unspecified carbon monoxide
E869	ICD-9-CM	Diagnosis	Accidental poisoning by other gases and vapors
E869.0	ICD-9-CM	Diagnosis	Accidental poisoning by nitrogen oxides
E869.1	ICD-9-CM	Diagnosis	Accidental poisoning by sulfur dioxide
E869.2	ICD-9-CM	Diagnosis	Accidental poisoning by freon
E869.3	ICD-9-CM	Diagnosis	Accidental poisoning by lacrimogenic gas (tear gas)
E869.4	ICD-9-CM	Diagnosis	Accidental poisoning by second-hand tobacco smoke
E869.8	ICD-9-CM	Diagnosis	Accidental poisoning by other specified gases and vapors
E869.9	ICD-9-CM	Diagnosis	Accidental poisoning by unspecified gases and vapors
E950	ICD-9-CM	Diagnosis	Suicide and self-inflicted poisoning by solid or liquid substances
E950.0	ICD-9-CM	Diagnosis	Suicide and self-inflicted poisoning by analgesics, antipyretics, and antirheumatics
E950.1	ICD-9-CM	Diagnosis	Suicide and self-inflicted poisoning by barbiturates
E950.2	ICD-9-CM	Diagnosis	Suicide and self-inflicted poisoning by other sedatives and hypnotics
E950.3	ICD-9-CM	Diagnosis	Suicide and self-inflicted poisoning by tranquilizers and other psychotropic agents
E950.4	ICD-9-CM	Diagnosis	Suicide and self-inflicted poisoning by other specified drugs and medicinal substances
E950.5	ICD-9-CM	Diagnosis	Suicide and self-inflicted poisoning by unspecified drug or medicinal substance
E950.6	ICD-9-CM	Diagnosis	Suicide and self-inflicted poisoning by agricultural and horticultural chemical and pharmaceutical preparations other than plant foods and fertilizers
E950.7	ICD-9-CM	Diagnosis	Suicide and self-inflicted poisoning by corrosive and caustic substances
E950.8	ICD-9-CM	Diagnosis	Suicide and self-inflicted poisoning by arsenic and its compounds
E950.9	ICD-9-CM	Diagnosis	Suicide and self-inflicted poisoning by other and unspecified solid and liquid substances
E951	ICD-9-CM	Diagnosis	Suicide and self-inflicted poisoning by gases in domestic use
E951.0	ICD-9-CM	Diagnosis	Suicide and self-inflicted poisoning by gas distributed by pipeline
E951.1	ICD-9-CM	Diagnosis	Suicide and self-inflicted poisoning by liquefied petroleum gas distributed in mobile containers
E951.8	ICD-9-CM	Diagnosis	Suicide and self-inflicted poisoning by other utility gas
E952	ICD-9-CM	Diagnosis	Suicide and self-inflicted poisoning by other gases and vapors
E952.0	ICD-9-CM	Diagnosis	Suicide and self-inflicted poisoning by motor vehicle exhaust gas
E952.1	ICD-9-CM	Diagnosis	Suicide and self-inflicted poisoning by other carbon monoxide
E952.8	ICD-9-CM	Diagnosis	Suicide and self-inflicted poisoning by other specified gases and vapors
E952.9	ICD-9-CM	Diagnosis	Suicide and self-inflicted poisoning by unspecified gases and vapors
E962	ICD-9-CM	Diagnosis	Assault by poisoning

Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code			
Code	Code Type	Category	Description
E962.0	ICD-9-CM	Diagnosis	Assault by drugs and medicinal substances
E962.1	ICD-9-CM	Diagnosis	Assault by other solid and liquid substances
E962.2	ICD-9-CM	Diagnosis	Assault by other gases and vapors
E962.9	ICD-9-CM	Diagnosis	Assault by unspecified poisoning
E972	ICD-9-CM	Diagnosis	Injury due to legal intervention by gas
E975	ICD-9-CM	Diagnosis	Injury due to legal intervention by other specified means
E976	ICD-9-CM	Diagnosis	Injury due to legal intervention by unspecified means
E980	ICD-9-CM	Diagnosis	Poisoning by solid or liquid substances, undetermined whether accidentally or purposely inflicted
E980.0	ICD-9-CM	Diagnosis	Poisoning by analgesics, antipyretics, and antirheumatics, undetermined whether accidentally or purposely inflicted
E980.1	ICD-9-CM	Diagnosis	Poisoning by barbiturates, undetermined whether accidentally or purposely inflicted
E980.2	ICD-9-CM	Diagnosis	Poisoning by other sedatives and hypnotics, undetermined whether accidentally or purposely inflicted
E980.3	ICD-9-CM	Diagnosis	Poisoning by tranquilizers and other psychotropic agents, undetermined whether accidentally or purposely inflicted
E980.4	ICD-9-CM	Diagnosis	Poisoning by other specified drugs and medicinal substances, undetermined whether accidentally or purposely inflicted
E980.5	ICD-9-CM	Diagnosis	Poisoning by unspecified drug or medicinal substance, undetermined whether accidentally or purposely inflicted
E980.6	ICD-9-CM	Diagnosis	Poisoning by corrosive and caustic substances, undetermined whether accidentally or purposely inflicted
E980.7	ICD-9-CM	Diagnosis	Poisoning by agricultural and horticultural chemical and pharmaceutical preparations other than plant foods and fertilizers, undetermined whether accidentally or purposely inflicted
E980.8	ICD-9-CM	Diagnosis	Poisoning by arsenic and its compounds, undetermined whether accidentally or
E980.9	ICD-9-CM	Diagnosis	Poisoning by other and unspecified solid and liquid substances, undetermined whether accidentally or purposely inflicted
E981	ICD-9-CM	Diagnosis	Poisoning by gases in domestic use, undetermined whether accidentally or purposely inflicted
E981.0	ICD-9-CM	Diagnosis	Poisoning by gas distributed by pipeline, undetermined whether accidentally or
E981.1	ICD-9-CM	Diagnosis	Poisoning by liquefied petroleum gas distributed in mobile containers, undetermined whether accidentally or purposely inflicted
E981.8	ICD-9-CM	Diagnosis	Poisoning by other utility gas, undetermined whether accidentally or purposely inflicted
E982	ICD-9-CM	Diagnosis	Poisoning by other gases, undetermined whether accidentally or purposely inflicted
E982.0	ICD-9-CM	Diagnosis	Poisoning by motor vehicle exhaust gas, undetermined whether accidentally or
E982.1	ICD-9-CM	Diagnosis	Poisoning by other carbon monoxide, undetermined whether accidentally or purposely inflicted
E982.8	ICD-9-CM	Diagnosis	Poisoning by other specified gases and vapors, undetermined whether accidentally or purposely inflicted



Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code			
Code	Code Type	Category	Description
E982.9	ICD-9-CM	Diagnosis	Poisoning by unspecified gases and vapors, undetermined whether accidentally or purposely inflicted
Head Injury			
851.46	ICD-9-CM	Diagnosis	Cerebellar or brain stem contusion without mention of open intracranial wound, loss of consciousness of unspecified duration
851.45	ICD-9-CM	Diagnosis	Cerebellar or brain stem contusion without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-
851.16	ICD-9-CM	Diagnosis	Cortex (cerebral) contusion with open intracranial wound, loss of consciousness of unspecified duration
854.15	ICD-9-CM	Diagnosis	Intracranial injury of other and unspecified nature, with open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level
851.50	ICD-9-CM	Diagnosis	Cerebellar or brain stem contusion with open intracranial wound, unspecified state of consciousness
851.92	ICD-9-CM	Diagnosis	Other and unspecified cerebral laceration and contusion, with open intracranial wound, brief (less than 1 hour) loss of consciousness
854.14	ICD-9-CM	Diagnosis	Intracranial injury of other and unspecified nature, with open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level
854.04	ICD-9-CM	Diagnosis	Intracranial injury of other and unspecified nature, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level
854.02	ICD-9-CM	Diagnosis	Intracranial injury of other and unspecified nature, without mention of open intracranial wound, brief (less than 1 hour) loss of consciousness
852.42	ICD-9-CM	Diagnosis	Extradural hemorrhage following injury, without mention of open intracranial wound, brief (less than 1 hour) loss of consciousness
850.3	ICD-9-CM	Diagnosis	Concussion with prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level
854.0	ICD-9-CM	Diagnosis	Intracranial injury of other and unspecified nature without mention of open intracranial wound
851.72	ICD-9-CM	Diagnosis	Cerebellar or brain stem laceration with open intracranial wound, brief (less than one hour) loss of consciousness
851.39	ICD-9-CM	Diagnosis	Cortex (cerebral) laceration with open intracranial wound, unspecified concussion
851.73	ICD-9-CM	Diagnosis	Cerebellar or brain stem laceration with open intracranial wound, moderate (1-24 hours) loss of consciousness
852.02	ICD-9-CM	Diagnosis	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, brief (less than 1 hour) loss of consciousness
852.50	ICD-9-CM	Diagnosis	Extradural hemorrhage following injury, with open intracranial wound, state of consciousness unspecified
851.00	ICD-9-CM	Diagnosis	Cortex (cerebral) contusion without mention of open intracranial wound, state of consciousness unspecified

Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code			
Code	Code Type	Category	Description
851.33	ICD-9-CM	Diagnosis	Cortex (cerebral) laceration with open intracranial wound, moderate (1-24 hours) loss of consciousness
851.21	ICD-9-CM	Diagnosis	Cortex (cerebral) laceration without mention of open intracranial wound, no loss
851.56	ICD-9-CM	Diagnosis	Cerebellar or brain stem contusion with open intracranial wound, loss of consciousness of unspecified duration
852.25	ICD-9-CM	Diagnosis	Subdural hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level
852.33	ICD-9-CM	Diagnosis	Subdural hemorrhage following injury, with open intracranial wound, moderate (1-24 hours) loss of consciousness
851.36	ICD-9-CM	Diagnosis	Cortex (cerebral) laceration with open intracranial wound, loss of consciousness of unspecified duration
853.01	ICD-9-CM	Diagnosis	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, no loss of consciousness
851	ICD-9-CM	Diagnosis	Cerebral laceration and contusion
852.19	ICD-9-CM	Diagnosis	Subarachnoid hemorrhage following injury, with open intracranial wound, unspecified concussion
853.04	ICD-9-CM	Diagnosis	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to preexisting conscious level
852.05	ICD-9-CM	Diagnosis	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level
851.65	ICD-9-CM	Diagnosis	Cerebellar or brain stem laceration without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level
851.0	ICD-9-CM	Diagnosis	Cortex (cerebral) contusion without mention of open intracranial wound
851.69	ICD-9-CM	Diagnosis	Cerebellar or brain stem laceration without mention of open intracranial wound, unspecified concussion
851.35	ICD-9-CM	Diagnosis	Cortex (cerebral) laceration with open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level
852.2	ICD-9-CM	Diagnosis	Subdural hemorrhage following injury without mention of open intracranial wound
851.70	ICD-9-CM	Diagnosis	Cerebellar or brain stem laceration with open intracranial wound, state of consciousness unspecified
851.52	ICD-9-CM	Diagnosis	Cerebellar or brain stem contusion with open intracranial wound, brief (less than 1 hour) loss of consciousness
851.93	ICD-9-CM	Diagnosis	Other and unspecified cerebral laceration and contusion, with open intracranial wound, moderate (1-24 hours) loss of consciousness
852.14	ICD-9-CM	Diagnosis	Subarachnoid hemorrhage following injury, with open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level

Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code			
Code	Code Type	Category	Description
851.64	ICD-9-CM	Diagnosis	Cerebellar or brain stem laceration without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level
851.82	ICD-9-CM	Diagnosis	Other and unspecified cerebral laceration and contusion, without mention of open intracranial wound, brief (less than 1 hour) loss of consciousness
853.19	ICD-9-CM	Diagnosis	Other and unspecified intracranial hemorrhage following injury, with open intracranial wound, unspecified concussion
850.4	ICD-9-CM	Diagnosis	Concussion with prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level
850.5	ICD-9-CM	Diagnosis	Concussion with loss of consciousness of unspecified duration
851.66	ICD-9-CM	Diagnosis	Cerebellar or brain stem laceration without mention of open intracranial wound, loss of consciousness of unspecified duration
853.0	ICD-9-CM	Diagnosis	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound
851.14	ICD-9-CM	Diagnosis	Cortex (cerebral) contusion with open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level
851.15	ICD-9-CM	Diagnosis	Cortex (cerebral) contusion with open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level
853.02	ICD-9-CM	Diagnosis	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, brief (less than 1 hour) loss of consciousness
852.06	ICD-9-CM	Diagnosis	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, loss of consciousness of unspecified duration
852.44	ICD-9-CM	Diagnosis	Extradural hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level
853.15	ICD-9-CM	Diagnosis	Other and unspecified intracranial hemorrhage following injury, with open
852.01	ICD-9-CM	Diagnosis	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, no loss of consciousness
850.1	ICD-9-CM	Diagnosis	Concussion with brief (less than one hour) loss of consciousness
851.54	ICD-9-CM	Diagnosis	Cerebellar or brain stem contusion with open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level
851.76	ICD-9-CM	Diagnosis	Cerebellar or brain stem laceration with open intracranial wound, loss of consciousness of unspecified duration
852.31	ICD-9-CM	Diagnosis	Subdural hemorrhage following injury, with open intracranial wound, no loss of consciousness
853.14	ICD-9-CM	Diagnosis	Other and unspecified intracranial hemorrhage following injury, with open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level

Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code			
Code	Code Type	Category	Description
851.19	ICD-9-CM	Diagnosis	Cortex (cerebral) contusion with open intracranial wound, unspecified concussion
851.83	ICD-9-CM	Diagnosis	Other and unspecified cerebral laceration and contusion, without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness
851.95	ICD-9-CM	Diagnosis	Other and unspecified cerebral laceration and contusion, with open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level
852.29	ICD-9-CM	Diagnosis	Subdural hemorrhage following injury, without mention of open intracranial wound, unspecified concussion
851.8	ICD-9-CM	Diagnosis	Other and unspecified cerebral laceration and contusion, without mention of open intracranial wound
852.24	ICD-9-CM	Diagnosis	Subdural hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level
852.45	ICD-9-CM	Diagnosis	Extradural hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level
852.03	ICD-9-CM	Diagnosis	Subarachnoid hemorrhage following injury, without mention of open intracranial
853.09	ICD-9-CM	Diagnosis	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, unspecified concussion
852.55	ICD-9-CM	Diagnosis	Extradural hemorrhage following injury, with open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level
852.34	ICD-9-CM	Diagnosis	Subdural hemorrhage following injury, with open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level
850.2	ICD-9-CM	Diagnosis	Concussion with moderate (1-24 hours) loss of consciousness
852.39	ICD-9-CM	Diagnosis	Subdural hemorrhage following injury, with open intracranial wound, unspecified concussion
854.01	ICD-9-CM	Diagnosis	Intracranial injury of other and unspecified nature, without mention of open intracranial wound, no loss of consciousness
851.63	ICD-9-CM	Diagnosis	Cerebellar or brain stem laceration without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness
851.12	ICD-9-CM	Diagnosis	Cortex (cerebral) contusion with open intracranial wound, brief (less than 1 hour) loss of consciousness
850.9	ICD-9-CM	Diagnosis	Unspecified concussion
851.49	ICD-9-CM	Diagnosis	Cerebellar or brain stem contusion without mention of open intracranial wound, unspecified concussion
853.16	ICD-9-CM	Diagnosis	Other and unspecified intracranial hemorrhage following injury, with open intracranial wound, loss of consciousness of unspecified duration
851.80	ICD-9-CM	Diagnosis	Other and unspecified cerebral laceration and contusion, without mention of open intracranial wound, unspecified state of consciousness

Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code			
Code	Code Type	Category	Description
852.23	ICD-9-CM	Diagnosis	Subdural hemorrhage following injury, without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness
851.1	ICD-9-CM	Diagnosis	Cortex (cerebral) contusion with open intracranial wound
851.24	ICD-9-CM	Diagnosis	Cortex (cerebral) laceration without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level
854.09	ICD-9-CM	Diagnosis	Intracranial injury of other and unspecified nature, without mention of open intracranial wound, unspecified concussion
851.2	ICD-9-CM	Diagnosis	Cortex (cerebral) laceration without mention of open intracranial wound
852.21	ICD-9-CM	Diagnosis	Subdural hemorrhage following injury, without mention of open intracranial wound, no loss of consciousness
851.75	ICD-9-CM	Diagnosis	Cerebellar or brain stem laceration with open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level
851.22	ICD-9-CM	Diagnosis	Cortex (cerebral) laceration without mention of open intracranial wound, brief (less than 1 hour) loss of consciousness
852.54	ICD-9-CM	Diagnosis	Extradural hemorrhage following injury, with open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level
851.84	ICD-9-CM	Diagnosis	Other and unspecified cerebral laceration and contusion, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to preexisting conscious level
854.06	ICD-9-CM	Diagnosis	Intracranial injury of other and unspecified nature, without mention of open intracranial wound, loss of consciousness of unspecified duration
851.79	ICD-9-CM	Diagnosis	Cerebellar or brain stem laceration with open intracranial wound, unspecified
851.6	ICD-9-CM	Diagnosis	Cerebellar or brain stem laceration without mention of open intracranial wound
852.30	ICD-9-CM	Diagnosis	Subdural hemorrhage following injury, with open intracranial wound, state of consciousness unspecified
854.1	ICD-9-CM	Diagnosis	Intracranial injury of other and unspecified nature with open intracranial wound
851.23	ICD-9-CM	Diagnosis	Cortex (cerebral) laceration without mention of open intracranial wound,
851.10	ICD-9-CM	Diagnosis	Cortex (cerebral) contusion with open intracranial wound, unspecified state of consciousness
853.10	ICD-9-CM	Diagnosis	Other and unspecified intracranial hemorrhage following injury, with open intracranial wound, unspecified state of consciousness
852.20	ICD-9-CM	Diagnosis	Subdural hemorrhage following injury, without mention of open intracranial wound, unspecified state of consciousness
851.20	ICD-9-CM	Diagnosis	Cortex (cerebral) laceration without mention of open intracranial wound, unspecified state of consciousness
852.59	ICD-9-CM	Diagnosis	Extradural hemorrhage following injury, with open intracranial wound, unspecified concussion

Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code	Code Type	Code Category	Description
854.12	ICD-9-CM	Diagnosis	Intracranial injury of other and unspecified nature, with open intracranial wound, brief (less than 1 hour) loss of consciousness
850.11	ICD-9-CM	Diagnosis	Concussion, with loss of consciousness of 30 minutes or less
852.3	ICD-9-CM	Diagnosis	Subdural hemorrhage following injury, with open intracranial wound
854.00	ICD-9-CM	Diagnosis	Intracranial injury of other and unspecified nature, without mention of open intracranial wound, unspecified state of consciousness
851.99	ICD-9-CM	Diagnosis	Other and unspecified cerebral laceration and contusion, with open intracranial wound, unspecified concussion
852.04	ICD-9-CM	Diagnosis	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level
852.10	ICD-9-CM	Diagnosis	Subarachnoid hemorrhage following injury, with open intracranial wound, unspecified state of consciousness
851.55	ICD-9-CM	Diagnosis	Cerebellar or brain stem contusion with open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level
852.51	ICD-9-CM	Diagnosis	Extradural hemorrhage following injury, with open intracranial wound, no loss of consciousness
853.11	ICD-9-CM	Diagnosis	Other and unspecified intracranial hemorrhage following injury, with open intracranial wound, no loss of consciousness
851.40	ICD-9-CM	Diagnosis	Cerebellar or brain stem contusion without mention of open intracranial wound, unspecified state of consciousness
851.05	ICD-9-CM	Diagnosis	Cortex (cerebral) contusion without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level
851.74	ICD-9-CM	Diagnosis	Cerebellar or brain stem laceration with open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level
851.25	ICD-9-CM	Diagnosis	Cortex (cerebral) laceration without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level
851.85	ICD-9-CM	Diagnosis	Other and unspecified cerebral laceration and contusion, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level
852.49	ICD-9-CM	Diagnosis	Extradural hemorrhage following injury, without mention of open intracranial wound, unspecified concussion
852.5	ICD-9-CM	Diagnosis	Extradural hemorrhage following injury with open intracranial wound
851.32	ICD-9-CM	Diagnosis	Cortex (cerebral) laceration with open intracranial wound, brief (less than 1 hour) loss of consciousness
851.34	ICD-9-CM	Diagnosis	Cortex (cerebral) laceration with open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level

Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code			
Code	Code Type	Category	Description
851.13	ICD-9-CM	Diagnosis	Cortex (cerebral) contusion with open intracranial wound, moderate (1-24 hours) loss of consciousness
854.11	ICD-9-CM	Diagnosis	Intracranial injury of other and unspecified nature, with open intracranial wound, no loss of consciousness
852	ICD-9-CM	Diagnosis	Subarachnoid, subdural, and extradural hemorrhage, following injury
853.05	ICD-9-CM	Diagnosis	Other and unspecified intracranial hemorrhage following injury. Without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level
852.12	ICD-9-CM	Diagnosis	Subarachnoid hemorrhage following injury, with open intracranial wound, brief (less than 1 hour) loss of consciousness
852.43	ICD-9-CM	Diagnosis	Extradural hemorrhage following injury, without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness
854.05	ICD-9-CM	Diagnosis	Intracranial injury of other and unspecified nature, without mention of open
851.03	ICD-9-CM	Diagnosis	Cortex (cerebral) contusion without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness
853.03	ICD-9-CM	Diagnosis	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness
852.4	ICD-9-CM	Diagnosis	Extradural hemorrhage following injury without mention of open intracranial wound
851.94	ICD-9-CM	Diagnosis	Other and unspecified cerebral laceration and contusion, with open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level
851.30	ICD-9-CM	Diagnosis	Cortex (cerebral) laceration with open intracranial wound, unspecified state of consciousness
851.42	ICD-9-CM	Diagnosis	Cerebellar or brain stem contusion without mention of open intracranial wound, brief (less than 1 hour) loss of consciousness
851.62	ICD-9-CM	Diagnosis	Cerebellar or brain stem laceration without mention of open intracranial wound, brief (less than 1 hour) loss of consciousness
851.3	ICD-9-CM	Diagnosis	Cortex (cerebral) laceration with open intracranial wound
851.9	ICD-9-CM	Diagnosis	Other and unspecified cerebral laceration and contusion, with open intracranial wound
851.91	ICD-9-CM	Diagnosis	Other and unspecified cerebral laceration and contusion, with open intracranial wound, no loss of consciousness
854	ICD-9-CM	Diagnosis	Intracranial injury of other and unspecified nature
851.31	ICD-9-CM	Diagnosis	Cortex (cerebral) laceration with open intracranial wound, no loss of consciousness
852.00	ICD-9-CM	Diagnosis	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, unspecified state of consciousness
852.15	ICD-9-CM	Diagnosis	Subarachnoid hemorrhage following injury, with open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level

Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code			
Code	Code Type	Category	Description
851.01	ICD-9-CM	Diagnosis	Cortex (cerebral) contusion without mention of open intracranial wound, no loss of consciousness
851.02	ICD-9-CM	Diagnosis	Cortex (cerebral) contusion without mention of open intracranial wound, brief (less than 1 hour) loss of consciousness
851.81	ICD-9-CM	Diagnosis	Other and unspecified cerebral laceration and contusion, without mention of open intracranial wound, no loss of consciousness
854.03	ICD-9-CM	Diagnosis	Intracranial injury of other and unspecified nature, without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness
851.7	ICD-9-CM	Diagnosis	Cerebellar or brain stem laceration with open intracranial wound
852.36	ICD-9-CM	Diagnosis	Subdural hemorrhage following injury, with open intracranial wound, loss of consciousness of unspecified duration
851.90	ICD-9-CM	Diagnosis	Other and unspecified cerebral laceration and contusion, with open intracranial wound, unspecified state of consciousness
852.26	ICD-9-CM	Diagnosis	Subdural hemorrhage following injury, without mention of open intracranial wound, loss of consciousness of unspecified duration
852.52	ICD-9-CM	Diagnosis	Extradural hemorrhage following injury, with open intracranial wound, brief (less than 1 hour) loss of consciousness
854.19	ICD-9-CM	Diagnosis	Intracranial injury of other and unspecified nature, with open intracranial wound, with unspecified concussion
852.32	ICD-9-CM	Diagnosis	Subdural hemorrhage following injury, with open intracranial wound, brief (less than 1 hour) loss of consciousness
851.5	ICD-9-CM	Diagnosis	Cerebellar or brain stem contusion with open intracranial wound
851.43	ICD-9-CM	Diagnosis	Cerebellar or brain stem contusion without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness
853.06	ICD-9-CM	Diagnosis	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, loss of consciousness of unspecified duration
851.60	ICD-9-CM	Diagnosis	Cerebellar or brain stem laceration without mention of open intracranial wound, unspecified state of consciousness
851.51	ICD-9-CM	Diagnosis	Cerebellar or brain stem contusion with open intracranial wound, no loss of consciousness
851.59	ICD-9-CM	Diagnosis	Cerebellar or brain stem contusion with open intracranial wound, unspecified concussion
851.89	ICD-9-CM	Diagnosis	Other and unspecified cerebral laceration and contusion, without mention of open intracranial wound, unspecified concussion
851.09	ICD-9-CM	Diagnosis	Cortex (cerebral) contusion without mention of open intracranial wound, unspecified concussion
851.11	ICD-9-CM	Diagnosis	Cortex (cerebral) contusion with open intracranial wound, no loss of consciousness
851.61	ICD-9-CM	Diagnosis	Cerebellar or brain stem laceration without mention of open intracranial wound, no loss of consciousness
852.0	ICD-9-CM	Diagnosis	Subarachnoid hemorrhage following injury without mention of open intracranial wound

Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code	Code Type	Code Category	Description
851.29	ICD-9-CM	Diagnosis	Cortex (cerebral) laceration without mention of open intracranial wound, unspecified concussion
851.86	ICD-9-CM	Diagnosis	Other and unspecified cerebral laceration and contusion, without mention of open intracranial wound, loss of consciousness of unspecified duration
852.53	ICD-9-CM	Diagnosis	Extradural hemorrhage following injury, with open intracranial wound, moderate (1-24 hours) loss of consciousness
852.11	ICD-9-CM	Diagnosis	Subarachnoid hemorrhage following injury, with open intracranial wound, no loss of consciousness
852.41	ICD-9-CM	Diagnosis	Extradural hemorrhage following injury, without mention of open intracranial wound, no loss of consciousness
854.16	ICD-9-CM	Diagnosis	Intracranial injury of other and unspecified nature, with open intracranial wound, loss of consciousness of unspecified duration
851.06	ICD-9-CM	Diagnosis	Cortex (cerebral) contusion without mention of open intracranial wound, loss of consciousness of unspecified duration
852.1	ICD-9-CM	Diagnosis	Subarachnoid hemorrhage following injury, with open intracranial wound
853.12	ICD-9-CM	Diagnosis	Other and unspecified intracranial hemorrhage following injury, with open intracranial wound, brief (less than 1 hour) loss of consciousness
851.71	ICD-9-CM	Diagnosis	Cerebellar or brain stem laceration with open intracranial wound, no loss of consciousness
852.46	ICD-9-CM	Diagnosis	Extradural hemorrhage following injury, without mention of open intracranial wound, loss of consciousness of unspecified duration
854.10	ICD-9-CM	Diagnosis	Intracranial injury of other and unspecified nature, with open intracranial wound, unspecified state of consciousness
851.04	ICD-9-CM	Diagnosis	Cortex (cerebral) contusion without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level
854.13	ICD-9-CM	Diagnosis	Intracranial injury of other and unspecified nature, with open intracranial wound, moderate (1-24 hours) loss of consciousness
851.96	ICD-9-CM	Diagnosis	Other and unspecified cerebral laceration and contusion, with open intracranial wound, loss of consciousness of unspecified duration
853	ICD-9-CM	Diagnosis	Other and unspecified intracranial hemorrhage following injury
851.26	ICD-9-CM	Diagnosis	Cortex (cerebral) laceration without mention of open intracranial wound, loss of consciousness of unspecified duration
850	ICD-9-CM	Diagnosis	Concussion
853.00	ICD-9-CM	Diagnosis	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, unspecified state of consciousness
850.0	ICD-9-CM	Diagnosis	Concussion with no loss of consciousness
852.16	ICD-9-CM	Diagnosis	Subarachnoid hemorrhage following injury, with open intracranial wound, loss of consciousness of unspecified duration
852.40	ICD-9-CM	Diagnosis	Extradural hemorrhage following injury, without mention of open intracranial wound, unspecified state of consciousness
851.4	ICD-9-CM	Diagnosis	Cerebellar or brain stem contusion without mention of open intracranial wound

Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code			
Code	Code Type	Category	Description
851.44	ICD-9-CM	Diagnosis	Cerebellar or brain stem contusion without mention of open intracranial wound, prolonged (more than 24 hours) loss consciousness and return to pre-existing conscious level
959.01	ICD-9-CM	Diagnosis	Head injury, unspecified
852.35	ICD-9-CM	Diagnosis	Subdural hemorrhage following injury, with open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level
852.13	ICD-9-CM	Diagnosis	Subarachnoid hemorrhage following injury, with open intracranial wound, moderate (1-24 hours) loss of consciousness
851.53	ICD-9-CM	Diagnosis	Cerebellar or brain stem contusion with open intracranial wound, moderate (1-24 hours) loss of consciousness
852.09	ICD-9-CM	Diagnosis	Subarachnoid hemorrhage following injury, without mention of open intracranial
853.13	ICD-9-CM	Diagnosis	Other and unspecified intracranial hemorrhage following injury, with open intracranial wound, moderate (1-24 hours) loss of consciousness
852.22	ICD-9-CM	Diagnosis	Subdural hemorrhage following injury, without mention of open intracranial wound, brief (less than one hour) loss of consciousness
850.12	ICD-9-CM	Diagnosis	Concussion, with loss of consciousness 31 to 59 minutes
852.56	ICD-9-CM	Diagnosis	Extradural hemorrhage following injury, with open intracranial wound, loss of consciousness of unspecified duration
853.1	ICD-9-CM	Diagnosis	Other and unspecified intracranial hemorrhage following injury with open intracranial wound
851.41	ICD-9-CM	Diagnosis	Cerebellar or brain stem contusion without mention of open intracranial wound, no loss of consciousness
907.0	ICD-9-CM	Diagnosis	Late effect of intracranial injury without mention of skull fracture
Myocardial Infarction			
410	ICD-9-CM	Diagnosis	Acute myocardial infarction
410.0	ICD-9-CM	Diagnosis	Acute myocardial infarction of anterolateral wall
410.00	ICD-9-CM	Diagnosis	Acute myocardial infarction of anterolateral wall, episode of care unspecified
410.01	ICD-9-CM	Diagnosis	Acute myocardial infarction of anterolateral wall, initial episode of care
410.02	ICD-9-CM	Diagnosis	Acute myocardial infarction of anterolateral wall, subsequent episode of care
410.1	ICD-9-CM	Diagnosis	Acute myocardial infarction of other anterior wall
410.10	ICD-9-CM	Diagnosis	Acute myocardial infarction of other anterior wall, episode of care unspecified
410.11	ICD-9-CM	Diagnosis	Acute myocardial infarction of other anterior wall, initial episode of care
410.12	ICD-9-CM	Diagnosis	Acute myocardial infarction of other anterior wall, subsequent episode of care
410.2	ICD-9-CM	Diagnosis	Acute myocardial infarction of inferolateral wall
410.20	ICD-9-CM	Diagnosis	Acute myocardial infarction of inferolateral wall, episode of care unspecified
410.21	ICD-9-CM	Diagnosis	Acute myocardial infarction of inferolateral wall, initial episode of care

Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code			
Code	Code Type	Category	Description
410.22	ICD-9-CM	Diagnosis	Acute myocardial infarction of inferolateral wall, subsequent episode of care
410.3	ICD-9-CM	Diagnosis	Acute myocardial infarction of inferoposterior wall
410.30	ICD-9-CM	Diagnosis	Acute myocardial infarction of inferoposterior wall, episode of care unspecified
410.31	ICD-9-CM	Diagnosis	Acute myocardial infarction of inferoposterior wall, initial episode of care
410.32	ICD-9-CM	Diagnosis	Acute myocardial infarction of inferoposterior wall, subsequent episode of care
410.4	ICD-9-CM	Diagnosis	Acute myocardial infarction of other inferior wall
410.40	ICD-9-CM	Diagnosis	Acute myocardial infarction of other inferior wall, episode of care unspecified
410.41	ICD-9-CM	Diagnosis	Acute myocardial infarction of other inferior wall, initial episode of care
410.42	ICD-9-CM	Diagnosis	Acute myocardial infarction of other inferior wall, subsequent episode of care
410.5	ICD-9-CM	Diagnosis	Acute myocardial infarction of other lateral wall
410.50	ICD-9-CM	Diagnosis	Acute myocardial infarction of other lateral wall, episode of care unspecified
410.51	ICD-9-CM	Diagnosis	Acute myocardial infarction of other lateral wall, initial episode of care
410.52	ICD-9-CM	Diagnosis	Acute myocardial infarction of other lateral wall, subsequent episode of care
410.6	ICD-9-CM	Diagnosis	Acute myocardial infarction, true posterior wall infarction
410.60	ICD-9-CM	Diagnosis	Acute myocardial infarction, true posterior wall infarction, episode of care unspecified
410.61	ICD-9-CM	Diagnosis	Acute myocardial infarction, true posterior wall infarction, initial episode of care
410.62	ICD-9-CM	Diagnosis	Acute myocardial infarction, true posterior wall infarction, subsequent episode of care
410.7	ICD-9-CM	Diagnosis	Acute myocardial infarction, subendocardial infarction
410.70	ICD-9-CM	Diagnosis	Acute myocardial infarction, subendocardial infarction, episode of care unspecified
410.71	ICD-9-CM	Diagnosis	Acute myocardial infarction, subendocardial infarction, initial episode of care
410.72	ICD-9-CM	Diagnosis	Acute myocardial infarction, subendocardial infarction, subsequent episode of care
410.8	ICD-9-CM	Diagnosis	Acute myocardial infarction of other specified sites
410.80	ICD-9-CM	Diagnosis	Acute myocardial infarction of other specified sites, episode of care unspecified
410.81	ICD-9-CM	Diagnosis	Acute myocardial infarction of other specified sites, initial episode of care
410.82	ICD-9-CM	Diagnosis	Acute myocardial infarction of other specified sites, subsequent episode of care
410.9	ICD-9-CM	Diagnosis	Acute myocardial infarction, unspecified site
410.90	ICD-9-CM	Diagnosis	Acute myocardial infarction, unspecified site, episode of care unspecified
410.91	ICD-9-CM	Diagnosis	Acute myocardial infarction, unspecified site, initial episode of care

Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code			
Code	Code Type	Category	Description
410.92	ICD-9-CM	Diagnosis	Acute myocardial infarction, unspecified site, subsequent episode of care
Stroke			
433.01	ICD-9-CM	Diagnosis	Occlusion and stenosis of basilar artery with cerebral infarction
433.11	ICD-9-CM	Diagnosis	Occlusion and stenosis of carotid artery with cerebral infarction
433.21	ICD-9-CM	Diagnosis	Occlusion and stenosis of vertebral artery with cerebral infarction
433.31	ICD-9-CM	Diagnosis	Occlusion and stenosis of multiple and bilateral precerebral arteries with cerebral infarction
433.81	ICD-9-CM	Diagnosis	Occlusion and stenosis of other specified precerebral artery with cerebral infarction
433.91	ICD-9-CM	Diagnosis	Occlusion and stenosis of unspecified precerebral artery with cerebral infarction
434.01	ICD-9-CM	Diagnosis	Cerebral thrombosis with cerebral infarction
434.11	ICD-9-CM	Diagnosis	Cerebral embolism with cerebral infarction
434.91	ICD-9-CM	Diagnosis	Cerebral artery occlusion, unspecified, with cerebral infarction
436	ICD-9-CM	Diagnosis	Acute, but ill-defined, cerebrovascular disease
Kidney Disease			
584.5	ICD-9-CM	Diagnosis	Acute kidney failure with lesion of tubular necrosis
585.9	ICD-9-CM	Diagnosis	Chronic kidney disease, unspecified
584	ICD-9-CM	Diagnosis	Acute kidney failure
585.3	ICD-9-CM	Diagnosis	Chronic kidney disease, Stage III (moderate)
586	ICD-9-CM	Diagnosis	Unspecified renal failure
584.7	ICD-9-CM	Diagnosis	Acute kidney failure with lesion of medullary [papillary] necrosis
V45.11	ICD-9-CM	Diagnosis	Renal dialysis status
584.9	ICD-9-CM	Diagnosis	Acute kidney failure, unspecified
585.5	ICD-9-CM	Diagnosis	Chronic kidney disease, Stage V
585.4	ICD-9-CM	Diagnosis	Chronic kidney disease, Stage IV (severe)
584.8	ICD-9-CM	Diagnosis	Acute kidney failure with other specified pathological lesion in kidney
585	ICD-9-CM	Diagnosis	Chronic kidney disease (CKD)
585.1	ICD-9-CM	Diagnosis	Chronic kidney disease, Stage I
584.6	ICD-9-CM	Diagnosis	Acute kidney failure with lesion of renal cortical necrosis
585.2	ICD-9-CM	Diagnosis	Chronic kidney disease, Stage II (mild)
90960	ICD-9-CM	Procedure	End-stage renal disease (ESRD) related services monthly, for patients 20 years of age and older; with 4 or more face-to-face visits by a physician or other qualified health care professional per month
90970	ICD-9-CM	Procedure	End-stage renal disease (ESRD) related services for dialysis less than a full month of service, per day; for patients 20 years of age and older
90953	ICD-9-CM	Procedure	End-stage renal disease (ESRD) related services monthly, for patients younger than 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 1 face-to-face visit by a physician or other qualified health care professional per month



Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code			
Code	Code Type	Category	Description
90964	ICD-9-CM	Procedure	End-stage renal disease (ESRD) related services for home dialysis per full month, for patients 2-11 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents
90945	ICD-9-CM	Procedure	Dialysis procedure other than hemodialysis (eg, peritoneal dialysis, hemofiltration, or other continuous renal replacement therapies), with single evaluation by a physician or other qualified health care professional
90959	ICD-9-CM	Procedure	End-stage renal disease (ESRD) related services monthly, for patients 12-19 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 1 face-to-face visit by a physician or other qualified health care professional per month
90947	ICD-9-CM	Procedure	Dialysis procedure other than hemodialysis (eg, peritoneal dialysis, hemofiltration, or other continuous renal replacement therapies) requiring repeated evaluations by a physician or other qualified health care professional, with or without substantial revision of dialysis prescription
90954	ICD-9-CM	Procedure	End-stage renal disease (ESRD) related services monthly, for patients 2-11 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 4 or more face-to-face visits by a physician or other qualified health care professional per month
90966	ICD-9-CM	Procedure	End-stage renal disease (ESRD) related services for home dialysis per full month, for patients 20 years of age and older
90957	ICD-9-CM	Procedure	End-stage renal disease (ESRD) related services monthly, for patients 12-19 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 4 or more face-to-face visits by a physician or other qualified health care professional per month
90968	ICD-9-CM	Procedure	End-stage renal disease (ESRD) related services for dialysis less than a full month of service, per day; for patients 2-11 years of age



Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code			
Code	Code Type	Category	Description
90958	ICD-9-CM	Procedure	End-stage renal disease (ESRD) related services monthly, for patients 12-19 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 2-3 face-to-face visits by a physician or other qualified health care professional per month
90997	ICD-9-CM	Procedure	Hemoperfusion (eg, with activated charcoal or resin)
90967	ICD-9-CM	Procedure	End-stage renal disease (ESRD) related services for dialysis less than a full month of service, per day; for patients younger than 2 years of age
90951	ICD-9-CM	Procedure	End-stage renal disease (ESRD) related services monthly, for patients younger than 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 4 or more face-to-face visits by a physician or other qualified health care professional per month
90935	ICD-9-CM	Procedure	Hemodialysis procedure with single evaluation by a physician or other qualified health care professional
90952	ICD-9-CM	Procedure	End-stage renal disease (ESRD) related services monthly, for patients younger than 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 2-3 face-to-face visits by a physician or other qualified health care professional per month
90956	ICD-9-CM	Procedure	End-stage renal disease (ESRD) related services monthly, for patients 2-11 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 1 face-to-face visit by a physician or other qualified health care professional per month
90962	ICD-9-CM	Procedure	End-stage renal disease (ESRD) related services monthly, for patients 20 years of age and older; with 1 face-to-face visit by a physician or other qualified health care professional per month
90955	ICD-9-CM	Procedure	End-stage renal disease (ESRD) related services monthly, for patients 2-11 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 2-3 face-to-face visits by a physician or other qualified health care professional per month
90963	ICD-9-CM	Procedure	End-stage renal disease (ESRD) related services for home dialysis per full month, for patients younger than 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents
90937	ICD-9-CM	Procedure	Hemodialysis procedure requiring repeated evaluation(s) with or without substantial revision of dialysis prescription
G0257	ICD-9-CM	Procedure	Unscheduled or emergency dialysis treatment for an ESRD patient in a hospital outpatient department that is not certified as an ESRD facility
90999	ICD-9-CM	Procedure	Unlisted dialysis procedure, inpatient or outpatient



Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnosis and Procedure Codes used to Define Exclusions, in Any Care Setting, and Any Diagnosis Position, in this Request

Code			
Code	Code Type	Category	Description
90965	ICD-9-CM	Procedure	End-stage renal disease (ESRD) related services for home dialysis per full month, for patients 12-19 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents
90969	ICD-9-CM	Procedure	End-stage renal disease (ESRD) related services for dialysis less than a full month of service, per day; for patients 12-19 years of age

Head/Neck MRI

70551	ICD-9-CM	Procedure	MRI Head w/o contrast
70540	ICD-9-CM	Procedure	MRI Face, orbit, neck w/o contrast
70552	ICD-9-CM	Procedure	MRI Head w/ contrast
70542	ICD-9-CM	Procedure	MRI Face, orbit, neck with contrast
70553	ICD-9-CM	Procedure	MRI Head w/ & w/o contrast
70543	ICD-9-CM	Procedure	MRI Face, orbit, neck w/ & w/o contrast



Appendix D. List of Generic and Brand Names of Drugs used to Define Epilepsy Inclusion and Exclusions in this Request

Generic Name	Brand Name
ACETAZOLAMIDE	acetazolamide (bulk)
ACETAZOLAMIDE	Diamox Sequels
ACETAZOLAMIDE	acetazolamide
ACETAZOLAMIDE SODIUM	acetazolamide sodium
CARBAMAZEPINE	carbamazepine (bulk)
CARBAMAZEPINE	Tegretol XR
CARBAMAZEPINE	carbamazepine
CARBAMAZEPINE	Carbatrol
CARBAMAZEPINE	Tegretol
CARBAMAZEPINE	Epitol
CARBAMAZEPINE	Equetro
CLOBAZAM	Onfi
CLONAZEPAM	clonazepam (bulk)
CLONAZEPAM	clonazepam
CLONAZEPAM	Klonopin
CLORAZEPATE DIPOTASSIUM	clorazepate dipotassium
CLORAZEPATE DIPOTASSIUM	Tranxene-SD
CLORAZEPATE DIPOTASSIUM	Tranxene T-Tab
DIAZEPAM	Valium
DIAZEPAM	diazepam
DIAZEPAM	diazepam (bulk)
DIAZEPAM	Diazepam Intensol
DIAZEPAM	Diastat
DIAZEPAM	Diastat AcuDial
DIVALPROEX SODIUM	divalproex
DIVALPROEX SODIUM	Depakote
DIVALPROEX SODIUM	Depakote ER
DIVALPROEX SODIUM	Depakote Sprinkles
ESLICARBAZEPINE ACETATE	Aptiom



Appendix D. List of Generic and Brand Names of Drugs used to Define Epilepsy Inclusion and Exclusions in this Request

Generic Name	Brand Name
ETHOSUXIMIDE	ethosuximide (bulk)
ETHOSUXIMIDE	ethosuximide
ETHOSUXIMIDE	Zarontin
ETHOTOIN	Peganone
EZOGABINE	Potiga
FELBAMATE	Felbatol
FELBAMATE	felbamate
GABAPENTIN	gabapentin (bulk)
GABAPENTIN	Gralise 30-Day Starter Pack
GABAPENTIN	Gralise
GABAPENTIN	gabapentin
GABAPENTIN	Neurontin
GABAPENTIN	Fanatrex
GABAPENTIN	Gabarone
GABAPENTIN ENACARBIL	Horizant
GABAPENTIN/DIETARY SUPPLEMENT, MISC COMBO NO.11	Therapentin-90
GABAPENTIN/DIETARY SUPPLEMENT, MISC COMBO NO.11	Therapentin-60
LACOSAMIDE	Vimpat
LAMOTRIGINE	lamotrigine (bulk)
LAMOTRIGINE	Lamictal Starter (Orange) Kit
LAMOTRIGINE	Lamictal XR Starter (Blue)
LAMOTRIGINE	Lamictal Starter (Green) Kit
LAMOTRIGINE	lamotrigine
LAMOTRIGINE	Lamictal
LAMOTRIGINE	Lamictal XR
LAMOTRIGINE	Lamictal ODT
LAMOTRIGINE	Lamictal ODT Starter (Green)
LAMOTRIGINE	Lamictal Starter (Blue) Kit
LAMOTRIGINE	Lamictal ODT Starter (Blue)
LAMOTRIGINE	Lamictal XR Starter (Green)
LAMOTRIGINE	Lamictal XR Starter (Orange)
LAMOTRIGINE	Lamictal ODT Starter (Orange)
LEVETIRACETAM	levetiracetam
LEVETIRACETAM	Keppra
LEVETIRACETAM	levetiracetam (bulk)
LEVETIRACETAM	Keppra XR
LEVETIRACETAM IN SODIUM CHLORIDE, ISO-OSMOTIC	levetiracetam in NaCl (iso-os)
LORAZEPAM	lorazepam
LORAZEPAM	Ativan
LORAZEPAM	lorazepam (bulk)
LORAZEPAM	Lorazepam Intensol
LORAZEPAM IN 0.9 % SODIUM CHLORIDE	lorazepam in 0.9% sod chloride
LORAZEPAM/DEXTROSE 5 % IN WATER	lorazepam in dextrose 5 %



Appendix D. List of Generic and Brand Names of Drugs used to Define Epilepsy Inclusion and Exclusions in this Request

Generic Name	Brand Name
METHAZOLAMIDE	methazolamide
METHAZOLAMIDE	Neptazane
MIDAZOLAM HCL	midazolam
MIDAZOLAM HCL IN 0.9 % SODIUM CHLORIDE	midazolam in 0.9 % NaCl
MIDAZOLAM HCL IN 0.9 % SODIUM CHLORIDE/PF	midazolam (PF) in 0.9 % NaCl
MIDAZOLAM HCL IN DEXTROSE 5% IN WATER	midazolam in dextrose 5 %
MIDAZOLAM HCL/DEXTROSE 5%-WATER/PF	midazolam in dextrose 5 % (PF)
MIDAZOLAM HCL/PF	midazolam (PF)
OXCARBAZEPINE	Oxtellar XR
OXCARBAZEPINE	oxcarbazepine
OXCARBAZEPINE	Trileptal
PERAMPANEL	Fycompa
PHENOBARBITAL	phenobarbital (bulk)
PHENOBARBITAL	phenobarbital
PHENOBARBITAL SODIUM	phenobarbital sodium
PHENOBARBITAL SODIUM	Luminal
PHENOBARBITAL SODIUM IN 0.9 % SODIUM CHLORIDE	phenobarbital in 0.9 % Sod Chl
PHENTERMINE HCL/TOPIRAMATE	Qsymia
PHENYTOIN	phenytoin (bulk)
PHENYTOIN	phenytoin
PHENYTOIN	Dilantin Infatabs
PHENYTOIN	Dilantin-125
PHENYTOIN SODIUM	phenytoin sodium
PHENYTOIN SODIUM	phenytoin sodium (bulk)
PHENYTOIN SODIUM EXTENDED	phenytoin sodium extended
PHENYTOIN SODIUM EXTENDED	Dilantin
PHENYTOIN SODIUM EXTENDED	Dilantin Kapseal
PHENYTOIN SODIUM EXTENDED	Phenytek
PHENYTOIN SODIUM EXTENDED	Dilantin Extended
PREGABALIN	pregabalin (bulk)
PREGABALIN	Lyrica
PRIMIDONE	primidone (bulk)
PRIMIDONE	primidone
PRIMIDONE	Mysoline
RUFINAMIDE	Banzel
TEMAZEPAM	Restoril
TEMAZEPAM	temazepam
TEMAZEPAM/DIETARY SUPPLEMENT,MISC.COMBO8	Strazepam
TIAGABINE HCL	Gabitril
TIAGABINE HCL	tiagabine
TOPIRAMATE	topiramate (bulk)
TOPIRAMATE	Topiragen
TOPIRAMATE	topiramate



Appendix D. List of Generic and Brand Names of Drugs used to Define Epilepsy Inclusion and Exclusions in this Request

Generic Name	Brand Name
TOPIRAMATE	Qudexy XR
TOPIRAMATE	Topamax
TOPIRAMATE	Trokendi XR
VALPROIC ACID	valproic acid (bulk)
VALPROIC ACID	valproic acid
VALPROIC ACID	Depakene
VALPROIC ACID	Stavzor
VALPROIC ACID (AS SODIUM SALT) (VALPROATE SODIUM)	Depacon
VALPROIC ACID (AS SODIUM SALT) (VALPROATE SODIUM)	valproate sodium
VALPROIC ACID (AS SODIUM SALT) (VALPROATE SODIUM)	valproate sodium (bulk)
VALPROIC ACID (AS SODIUM SALT) (VALPROATE SODIUM)	valproic acid (as sodium salt)
VIGABATRIN	Sabril
ZONISAMIDE	zonisamide (bulk)
ZONISAMIDE	Zonegran
ZONISAMIDE	zonisamide

**Appendix E. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)
Diagnosis Codes used to Define Epilepsy Inclusion and Outcomes in this Request**

Code	Code Type	Code Category	Description
Epilepsy			
345	ICD-9-CM	Diagnosis	Epilepsy and recurrent seizures
Convulsions			
780.3	ICD-9-CM	Diagnosis	Convulsions
780.31	ICD-9-CM	Diagnosis	Febrile convulsions (simple), unspecified
780.32	ICD-9-CM	Diagnosis	Complex febrile convulsions
780.33	ICD-9-CM	Diagnosis	Post traumatic seizures
780.39	ICD-9-CM	Diagnosis	Other convulsions

Appendix F. Specifications for Request cder_ahr_wp007

This request executed the Cohort Identification and Descriptive Analysis (CIDA) tool, version 3.0.3 with ad hoc coding, to evaluate the rate of seizures occurring on the day of gadolinium based contrast agent (GBCA) receipt (exposure risk window) versus the following 42 days (referent window) in the Sentinel Distributed Database (SDD) using a self-controlled risk interval (SCRI) design.

Age Groups: 2-17, 18-44, 45-64, 65+ Years
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Coverage Requirement: Medical and Drug coverage
Enrollment Gap (days): 45 Days
Pre-exposure enrollment (days): 183 Days
Post-exposure enrollment (days): Post-exposure enrollment is not required. Ad hoc code is written to allow for variable censoring.
 Ad hoc code is also written to turn off the envelope macro.

	Exposure					Outcome Assessment Windows		
	MRI Location	Care Setting	Incident with respect to	Washout (days)	Cohort Definition	Censor at Evidence of Death	Risk Window	Control Window
1	Extremity or Non-Extremity	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42
2	Extremity or Non-Extremity	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42
3	Head/Neck	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42

Appendix F. Specifications for Request cder_ahr_wp007

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	Exposure						Outcome Assessment Windows	
	MRI Location	Care Setting	Incident with respect to	Washout (days)	Cohort Definition	Censor at Evidence of Death	Risk Window	Control Window
4	Extremity or Non-Extremity	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42
5	Extremity or Non-Extremity	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42
6	Extremity or Non-Extremity	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42
7	Extremity	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42
8	Extremity	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42
9	Extremity	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42
10	Non-Extremity	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42
11	Non-Extremity	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42
12	Non-Extremity	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42

Appendix F. Specifications for Request cder_ahr_wp007

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	Exposure						Outcome Assessment Windows	
	MRI Location	Care Setting	Incident with respect to	Washout (days)	Cohort Definition	Censor at Evidence of Death	Risk Window	Control Window
13	Extremity or Non-Extremity	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42
14	Extremity or Non-Extremity	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42
15	Extremity or Non-Extremity	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42
16	Extremity	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42
17	Extremity	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42
18	Extremity	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42
19	Non-Extremity	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42
20	Non-Extremity	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42
21	Non-Extremity	Outpatient	Any MRI with contrast or with or without contrast	183	Retain all valid incident exposure episodes	Yes	0,0	1, 42

International Classification of Diseases, Ninth Revision (ICD-9), International Classification of Diseases, Tenth Revision (ICD-10), Healthcare Common Procedure Coding System (HCPCS), and Current Procedural Terminology (CPT) codes are provided by Optum360.

Appendix F. Specifications for Request: cder_ahr_wp007

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Post-exposure enrollment (days): Post-exposure enrollment is not required. Ad hoc code is written to allow for variable censoring.
 Ad hoc code is also written to turn off the envelope macro.

Event/Outcome					Inclusion/Exclusion Criteria				
Event	Care Setting/ DX Position	Incident with respect to	Incidence Care Setting/ DX Position	Washout (days)	Pre-existing Condition	Care Setting	Include/ Exclude	Lookback Period	
1	Epilepsy or convulsions	ED* or IPP	Epilepsy or convulsions	ED* or IP*	183	MI, stroke, brain tumor, alzheimer's, autism spectrum disorder, illegal or legal drug overdose, head injury, kidney disease*	Any	Exclude	-183, -1
						Head/neck MRI	Any	Exclude	0, 0
2	Epilepsy or convulsions	ED* or IPP	Epilepsy or convulsions	ED* or IP*	183	MI, stroke, brain tumor, alzheimer's, autism spectrum disorder, illegal or legal drug overdose, head injury	Any	Exclude	-183, -1
						Kidney disease	Any	Include	-183, -1
						Head/neck MRI	Any	Exclude	0, 0
3	Epilepsy or convulsions	ED* or IPP	Epilepsy or convulsions	ED* or IP*	183	*Same as Scenario 1	Any	Exclude	-183, -1

Appendix F. Specifications for Request: cder_ahr_wp007

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Post-exposure enrollment (days): Post-exposure enrollment is not required. Ad hoc code is written to allow for variable censoring.
 Ad hoc code is also written to turn off the envelope macro.

Event/Outcome					Inclusion/Exclusion Criteria				
Event	Care Setting/ DX Position	Incident with respect to	Incidence Care Setting/ DX Position	Washout (days)	Pre-existing Condition	Care Setting	Include/ Exclude	Lookback Period	
4	Epilepsy or convulsions	ED* or IPP	Epilepsy or convulsions	ED* or IP*	183	*Same as Scenario 1 Head/neck MRI	Any Exclude	-183, -1 0, 0	
5	Epilepsy or convulsions	ED*	Epilepsy or convulsions	ED* or IP*	183	*Same as Scenario 1 Head/neck MRI	Any Exclude	-183, -1 0, 0	
6	Epilepsy or convulsions	IPP	Epilepsy or convulsions	ED* or IP*	183	*Same as Scenario 1 Head/neck MRI	Any Exclude	-183, -1 0, 0	
7	Epilepsy or convulsions	ED* or IPP	Epilepsy or convulsions	ED* or IP*	183	*Same as Scenario 1 Head/neck MRI	Any Exclude	-183, -1 0, 0	
8	Epilepsy or convulsions	ED*	Epilepsy or convulsions	ED* or IP*	183	*Same as Scenario 1 Head/neck MRI	Any Exclude	-183, -1 0, 0	
9	Epilepsy or convulsions	IPP	Epilepsy or convulsions	ED* or IP*	183	*Same as Scenario 1 Head/neck MRI	Any Exclude	-183, -1 0, 0	
10	Epilepsy or convulsions	ED* or IPP	Epilepsy or convulsions	ED* or IP*	183	*Same as Scenario 1 Head/neck MRI	Any Exclude	-183, -1 0, 0	
11	Epilepsy or convulsions	ED*	Epilepsy or convulsions	ED* or IP*	183	*Same as Scenario 1 Head/neck MRI	Any Exclude	-183, -1 0, 0	
12	Epilepsy or convulsions	IPP	Epilepsy or convulsions	ED* or IP*	183	*Same as Scenario 1 Head/neck MRI	Any Exclude	-183, -1 0, 0	

*Scenario 1: MI, stroke, brain tumor, alzheimer's, autism spectrum disorder, illegal or legal drug overdose, head injury, kidney disease

Appendix F. Specifications for Request: cder_ahr_wp007

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Post-exposure enrollment (days): Post-exposure enrollment is not required. Ad hoc code is written to allow for variable censoring.
 Ad hoc code is also written to turn off the envelope macro.

Event/Outcome					Inclusion/Exclusion Criteria				
Event	Care Setting/ DX Position	Incident with respect to	Incidence Care Setting/ DX Position	Washout (days)	Pre-existing Condition	Care Setting	Include/ Exclude	Lookback Period	
13	Epilepsy or convulsions	ED* or IPP	Epilepsy or convulsions	ED* or IP*	183	*Same as Scenario 1 Head/neck MRI	Any Exclude	-183, -1 0, 0	
14	Epilepsy or convulsions	ED*	Epilepsy or convulsions	ED* or IP*	183	*Same as Scenario 1 Head/neck MRI	Any Exclude	-183, -1 0, 0	
15	Epilepsy or convulsions	IPP	Epilepsy or convulsions	ED* or IP*	183	*Same as Scenario 1 Head/neck MRI	Any Exclude	-183, -1 0, 0	
16	Epilepsy or convulsions	ED* or IPP	Epilepsy or convulsions	ED* or IP*	183	*Same as Scenario 1 Head/neck MRI	Any Exclude	-183, -1 0, 0	
17	Epilepsy or convulsions	ED*	Epilepsy or convulsions	ED* or IP*	183	*Same as Scenario 1 Head/neck MRI	Any Exclude	-183, -1 0, 0	
18	Epilepsy or convulsions	IPP	Epilepsy or convulsions	ED* or IP*	183	*Same as Scenario 1 Head/neck MRI	Any Exclude	-183, -1 0, 0	
19	Epilepsy or convulsions	ED* or IPP	Epilepsy or convulsions	ED* or IP*	183	*Same as Scenario 1 Head/neck MRI	Any Exclude	-183, -1 0, 0	
20	Epilepsy or convulsions	ED*	Epilepsy or convulsions	ED* or IP*	183	*Same as Scenario 1 Head/neck MRI	Any Exclude	-183, -1 0, 0	
21	Epilepsy or convulsions	IPP	Epilepsy or convulsions	ED* or IP*	183	*Same as Scenario 1 Head/neck MRI	Any Exclude	-183, -1 0, 0	

*Scenario 1: MI, stroke, brain tumor, alzheimer's, autism spectrum disorder, illegal or legal drug overdose, head injury, kidney disease

International Classification of Diseases, Ninth Revision (ICD-9), International Classification of Diseases, Tenth Revision (ICD-10), Healthcare Common Procedure Coding System (HCPCS), and Current Procedural Terminology (CPT) codes are provided by Optum360.

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Post-exposure enrollment (days): Post-exposure enrollment is not required. Ad hoc code is written to allow for variable censoring.
 Ad hoc code is also written to turn off the envelope macro.

Epilepsy Inclusion/Exclusion Criteria

	Condition	Care Setting	Include/ Exclude	Lookback Period
1	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A

Appendix F. Specifications for Request: cder_ahr_wp007

This request executed the Cohort Identification and Descriptive Analysis (CIDA) tool, version 3.0.3 with ad hoc coding, to evaluate the rate of seizures occurring on the day of gadolinium based contrast agent (GBCA) receipt (exposure risk window) versus the following 42 days (referent window) in the Sentinel Distributed Database (SDD) using a self-controlled risk interval (SCRI) design.

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Pre-exposure enrollment (days): 183 Days
Post-exposure enrollment (days): Post-exposure enrollment is not required. Ad hoc code is written to allow for variable censoring.
 Ad hoc code is also written to turn off the envelope macro.

Epilepsy Inclusion/Exclusion Criteria

	Condition	Care Setting	Include/ Exclude	Lookback Period
4	Epilepsy	Any	Exclude	-183, -1
5	Epilepsy	Any	Exclude	-183, -1
6	Epilepsy	Any	Exclude	-183, -1
7	Epilepsy	Any	Exclude	-183, -1
8	Epilepsy	Any	Exclude	-183, -1
9	Epilepsy	Any	Exclude	-183, -1
10	Epilepsy	Any	Exclude	-183, -1
11	Epilepsy	Any	Exclude	-183, -1
12	Epilepsy	Any	Exclude	-183, -1

*Scenario 1: MI, stroke, brain tumor, alzheimer's, autism spectrum disorder, illegal or legal drug overdose, head injury, kidney disease

Appendix F. Specifications for Request: cder_ahr_wp007

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Post-exposure enrollment (days): Post-exposure enrollment is not required. Ad hoc code is written to allow for variable censoring.
 Ad hoc code is also written to turn off the envelope macro.

Epilepsy Inclusion/Exclusion Criteria

	Condition	Care Setting	Include/ Exclude	Lookback Period
13	Epilepsy	Outpatient	Include	-183, -1
14	Epilepsy	Outpatient	Include	-183, -1
15	Epilepsy	Outpatient	Include	-183, -1
16	Epilepsy	Outpatient	Include	-183, -1
17	Epilepsy	Outpatient	Include	-183, -1
18	Epilepsy	Outpatient	Include	-183, -1
19	Epilepsy	Outpatient	Include	-183, -1
20	Epilepsy	Outpatient	Include	-183, -1
21	Epilepsy	Outpatient	Include	-183, -1

*Scenario 1: MI, stroke, brain tumor, alzheimer's, autism spectrum disorder, illegal or legal drug overdose, head injury, kidney disease
 International Classification of Diseases, Ninth Revision (ICD-9), International Classification of Diseases, Tenth Revision (ICD-10), Healthcare Common Procedure Coding System (HCPCS), and Current Procedural Terminology (CPT) codes are provided by Optum360.