



H·CUP

HEALTHCARE COST AND UTILIZATION PROJECT

HCUP Methods Series



Agency for Healthcare
Research and Quality



U.S. Department of Health and Human Services
Agency for Healthcare Research and Quality

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Appendix A: Sources of 2003 HCUP Data with Charge Detail

State	Data Source	SID	SASD	SEDD
Arizona	Arizona Department of Health Services	Buckets (63)		
Colorado	Colorado Health & Hospital Association	Buckets (5)	Buckets (5)	
Connecticut	Chime, Inc.	Buckets (16)	Buckets (16)	Buckets (16)
Florida	Florida Agency for Health Care Administration	Buckets (24)	Buckets (11)	
Georgia	GHA: An Association of Hospitals & Health Systems	Buckets (32)	Buckets (32)	Buckets (32)
Illinois	Illinois Department of Public Health	Buckets (10)		
Iowa	Iowa Hospital Association	Buckets (23)		
Kentucky	Kentucky Department for Public Health	Rev Codes	Rev Codes	
Maine	Maine Health Data Organization	Rev Codes	Rev Codes	Rev Codes
Maryland	Health Services Cost Review Commission	Buckets (31)	Rev Codes	Rev Codes
Massachusetts	Division of Health Care Finance and Policy	Rev Codes		
Minnesota	Minnesota Hospital Association	Rev Codes	Rev Codes	Rev Codes
Nevada	Nevada Department of Human Resources	Rev Codes		
Nebraska	Nebraska Hospital Association	Rev Codes	Rev Codes	Rev Codes
New Jersey	New Jersey Department of Health & Senior Services	Buckets (35)	Buckets (35)	
New York	New York State Department of Health	Rev Codes	Rev Codes	
North Carolina	North Carolina Department of Health and Human Services	Rev Codes	Buckets (10)	
Oregon	Oregon Association of Hospitals & Health Systems	Buckets (10)		
Pennsylvania	Pennsylvania Health Care Cost Containment Council	Rev Codes		
Rhode Island	Rhode Island Department of Health	Buckets (12)		
South Carolina	South Carolina State Budget & Control Board	Buckets (78)	Buckets (78)	Buckets (78)
South Dakota	South Dakota Association of Healthcare Organizations	Buckets (23)		
Tennessee	Tennessee Hospital Association	Rev Codes	Rev Codes	Rev Codes
Texas	Texas Department of State Health Services	Rev Codes		
Utah	Office of Health Care Statistics, Utah Department of Health	Buckets (4)		Buckets (3)
Vermont	Vermont Association of Hospitals and Health Systems	Rev Codes (Only first 2 digits)	Rev Codes (Only first 2 digits)	Rev Codes (Only first 2 digits)
Virginia	Virginia Health Information	Buckets (14)		
Washington	Washington State Department of Health	Rev Codes		
West Virginia	West Virginia Health Care Authority	Rev Codes		

Rev Codes	Data Source provides UB-92 revenue codes and charges. A complete list of UB-92 revenue codes is provided in Appendix B.1
Buckets	Data Source provides detailed charges in predefined categories. Definitions of the charge buckets are provided in Appendix B.2.
	Data Source does not provide detailed charges for this data type or does not provide this data type.

Appendix B.1: Complete List of UB-92 Revenue Codes (As of July 20, 2005)

UB92 Group	UB92 Group Name	UB92 Code	UB92 Description	UB92 Short Title
0001	Total Charge	0001	Total Charge	TOTALCHARGE
011x	Room & Board - Private	0110	General Classification	ROOM-BOARD/PVT
011x	Room & Board - Private	0111	Medical/Surgical/Gyn	MED/SUR/GY/PVT
011x	Room & Board - Private	0112	OB	OB/PVT
011x	Room & Board - Private	0113	Pediatric	PEDS/PVT
011x	Room & Board - Private	0114	Psychiatric	PSYCH/PVT
011x	Room & Board - Private	0115	Hospice	HOSPICE/PVT
011x	Room & Board - Private	0116	Detoxification	DETOX/PVT
011x	Room & Board - Private	0117	Oncology	ONCOLOGY/PVT
011x	Room & Board - Private	0118	Rehabilitation	REHAB/PVT
011x	Room & Board - Private	0119	Other	OTHER/PVT
012x	Room & Board - Semi-Private 2 bed	0120	General Classification	ROOM-BOARD/SEMI
012x	Room & Board - Semi-Private 2 bed	0121	Medical/Surgical/Gyn	MED-SUR-GY/2BED
012x	Room & Board - Semi-Private 2 bed	0122	OB	OB/2BED
012x	Room & Board - Semi-Private 2 bed	0123	Pediatric	PEDS/2BED
012x	Room & Board - Semi-Private 2 bed	0124	Psychiatric	PSTAY/2BED
012x	Room & Board - Semi-Private 2 bed	0125	Hospice	HOSPICE/2BED
012x	Room & Board - Semi-Private 2 bed	0126	Detoxification	DETOX/2BED
012x	Room & Board - Semi-Private 2 bed	0127	Oncology	ONCOLOGY/2BED
012x	Room & Board - Semi-Private 2 bed	0128	Rehabilitation	REHAB/2BED
012x	Room & Board - Semi-Private 2 bed	0129	Other	OTHER/2BED
013x	Room & Board - Semi-Private 3-4 bed	0130	General Classification	ROOM-BOARD/3&4BED
013x	Room & Board - Semi-Private 3-4 bed	0131	Medical/Surgical/Gyn	MED/SURGY/3&4BED
013x	Room & Board - Semi-Private 3-4 bed	0132	OB	OB/3&4BED
013x	Room & Board - Semi-Private 3-4 bed	0133	Pediatric	PEDS/3&4BED
013x	Room & Board - Semi-Private 3-4 bed	0134	Psychiatric	PSYCH/3&4BED
013x	Room & Board - Semi-Private 3-4 bed	0135	Hospice	HOSPICE/3&4BED
013x	Room & Board - Semi-Private 3-4 bed	0136	Detoxification	DETOX/3&4BED
013x	Room & Board - Semi-Private 3-4 bed	0137	Oncology	ONCOLOGY/3&4BED
013x	Room & Board - Semi-Private 3-4 bed	0138	Rehabilitation	REHAB/3&4BED
013x	Room & Board - Semi-Private 3-4 bed	0139	Other	OTHER/3&4BED
014x	Room & Board - Private Deluxe	0140	General Classification	ROOM-BOARD/PVT/DLX
014x	Room & Board - Private Deluxe	0141	Medical/Surgical/Gyn	MED/SUR/GY/DLX
014x	Room & Board - Private Deluxe	0142	OB	OB/DLX
014x	Room & Board - Private Deluxe	0143	Pediatric	PEDS/DLX
014x	Room & Board - Private Deluxe	0144	Psychiatric	PSYCH/DLX
014x	Room & Board - Private Deluxe	0145	Hospice	HOSPICE/DLX
014x	Room & Board - Private Deluxe	0146	Detoxification	DETOX/DLX
014x	Room & Board - Private Deluxe	0147	Oncology	ONCOLOGY/DLX
014x	Room & Board - Private Deluxe	0148	Rehabilitation	REHAB/DLX
014x	Room & Board - Private Deluxe	0149	Other	OTHER/DLX
015x	Room & Board - Ward	0150	General Classification	ROOM-BOARD/WARD
015x	Room & Board - Ward	0151	Medical/Surgical/Gyn	MED/SUR/GY/WARD
015x	Room & Board - Ward	0152	OB	OB/WARD
015x	Room & Board - Ward	0153	Pediatric	PEDS/WARD

UB92 Group	UB92 Group Name	UB92 Code	UB92 Description	UB92 Short Title
015x	Room & Board - Ward	0154	Psychiatric	PSYCH/WARD
015x	Room & Board - Ward	0155	Hospice	HOSPICE/WARD
015x	Room & Board - Ward	0156	Detoxification	DETOX/WARD
015x	Room & Board - Ward	0157	Oncology	ONCOLOGY/WARD
015x	Room & Board - Ward	0158	Rehabilitation	REHAB/WARD
015x	Room & Board - Ward	0159	Other	OTHER/WARD
016x	Room & Board - Other	0160	General Classification	R&B
016x	Room & Board - Other	0164	Sterile Environment	R&B/STERILE
016x	Room & Board - Other	0167	Self Care	R&B/SELF
016x	Room & Board - Other	0169	Other	R&B/OTHER
017x	Nursery	0170	General Classification	NURSERY
017x	Nursery	0171	Newborn - Level I	NURSERY/LEVELI
017x	Nursery	0172	Newborn - Level II	NURSERY/LEVELII
017x	Nursery	0173	Newborn - Level III	NURSERY/LEVELIII
017x	Nursery	0174	Newborn - Level IV	NURSERY/LEVELIV
017x	Nursery	0179	Other Nursery	NURSERY/OTHER
018x	Leave of Absence	0180	General Classification	LEAVE OF ABSENCE OR LOA
018x	Leave of Absence	0182	Patient Convenience	LOA/PT CONV
018x	Leave of Absence	0183	Therapeutic Leave	LOA/THERAPEUTIC
018x	Leave of Absence	0184	ICF/MR - Any Reason	LOA/ICF/MR
018x	Leave of Absence	0185	Nursing Home for Hospitalization	LOA/NURS HOME
018x	Leave of Absence	0189	Other Leave of Absence	LOA/OTHER
019x	Subacute Care	0190	General Classification	SUBACUTE
019x	Subacute Care	0191	Subacute Care -Level I	SUBACUTE/LEVELI
019x	Subacute Care	0192	Subacute Care -Level II	SUBACUTE/LEVELII
019x	Subacute Care	0193	Subacute Care -Level III	SUBACUTE/LEVELIII
019x	Subacute Care	0194	Subacute Care -Level IV	SUBACUTE/LEVELIV
019x	Subacute Care	0199	Other Subacute Care	SUBACUTE/OTHER
020x	Intensive Care	0200	General Classification	INTENSIVE CARE (or ICU)
020x	Intensive Care	0201	Surgical	ICU/SURGICAL
020x	Intensive Care	0202	Medical	ICU/MEDICAL
020x	Intensive Care	0203	Pediatric	ICU PEDS
020x	Intensive Care	0204	Psychiatric	ICU/PSTAY
020x	Intensive Care	0206	Intermediate ICU	ICU/INTERMEDIATE
020x	Intensive Care	0207	Burn Care	ICU/BURN CARE
020x	Intensive Care	0208	Trauma	ICU/TRAMA
020x	Intensive Care	0209	Other Intensive Care	ICU/OTHER
021x	Coronary Care	0210	General Classification	CORONARY CARE (or CCU)
021x	Coronary Care	0211	Myocardial Infarction	CCU/MYO INFARC
021x	Coronary Care	0212	Pulmonary Care	CCU/PULMONARY
021x	Coronary Care	0213	Heart Transplant	CCU/TRANSPLANTICU PEDS
021x	Coronary Care	0214	Intermediate CCU	CCU/INTERMEDIATE
021x	Coronary Care	0219	Other Coronary Care	CCU/OTHER
022x	Special Charges	0220	GENERAL CLASSIFICATION	SPECIAL CHARGES
022x	Special Charges	0221	ADMISSION CHARGE	ADMIT CHARGE
022x	Special Charges	0222	TECHNICAL SUPPORT CHARGE	TECH SUPPORT CHG
022x	Special Charges	0223	U. R. SERVICE CHARGE	UR CHARGE
022x	Special Charges	0224	LATE CHARGE, MEDICALLY NECESSARY	LATE DISCH/MED NEC
022x	Special Charges	0229	OTHER SPECIAL CHARGES	OTHER SPEC CHG
023x	Incremental Nursing Charge Rate	0230	GENERAL CLASSIFICATION	NURSING INCREM
023x	Incremental Nursing Charge Rate	0231	NURSERY	NUR INCR/NURSERY
023x	Incremental Nursing Charge Rate	0232	OB (INCLUDING GYNECOLOGICAL)	NUR INCR/OB-GY
023x	Incremental Nursing Charge Rate	0233	ICU	NUR INCR/ICU
023x	Incremental Nursing Charge Rate	0234	CCU	NUR INCR/CCU
023x	Incremental Nursing Charge Rate	0235	HOSPICE	NUR INCR/HOSPICE
023x	Incremental Nursing Charge Rate	0239	OTHER	NUR INCR/OTHER
024x	All inclusive Ancillary	0240	GENERAL CLASSIFICATION	ALL INCL ANCIL
024x	All inclusive Ancillary	0240	GENERAL CLASSIFICATION	ALL INCL ANCIL
024x	All inclusive Ancillary	0241	BASIC	ALL INCL BASIC
024x	All inclusive Ancillary	0242	COMPREHENSIVE	ALL INCL COMP
024x	All inclusive Ancillary	0243	SPECIALTY	ALL INCL SPECIAL
024x	All inclusive Ancillary	0249	OTHER INCLUSIVE ANCILLARY	ALL INCL ANCIL/OTHER
025x	Pharmacy	0250	GENERAL CLASSIFICATION	PHARMACY
025x	Pharmacy	0251	GENERIC DRUGS	DRUGS/GENERIC
025x	Pharmacy	0252	NON-GENERIC DRUGS	DRUGS/NONGENERIC
025x	Pharmacy	0253	TAKE HOME DRUGS	DRUGS/TAKEHOME
025x	Pharmacy	0254	DRUGS INCIDENT TO OTHER DIAGNOSTIC SERVICES	DRUGS/INCIDENT OTHER DX

UB92 Group	UB92 Group Name	UB92 Code	UB92 Description	UB92 Short Title
025x	Pharmacy	0255	DRUGS INCIDENT TO RADIOLOGY	DRUGS/INCIDENT RAD
025x	Pharmacy	0256	EXPERIMENTAL DRUGS	DRUGS/EXPERIMT
025x	Pharmacy	0257	NON-PRESCRIPTION	DRUGS/NONSCRPT
025x	Pharmacy	0258	IV SOLUTIONS	IV SOLUTIONS
025x	Pharmacy	0259	OTHER PHARMACY	DRUGS/OTHER
026x	IV Therapy	0260	GENERAL CLASSIFICATION	IV THERAPY
026x	IV Therapy	0261	INFUSION PUMP	IV THER/INFNSN PUMP
026x	IV Therapy	0262	IV THERAPY/PHARMACY SERVICES	IV THER/PHARM/SVC
026x	IV Therapy	0263	IV THERAPY/DRUG/SUPPLY DELIVERY	IV THER/DRUG/SUPPLY DELV
026x	IV Therapy	0264	IV THERAPY/SUPPLIES	IV THER/SUPPLIES
026x	IV Therapy	0269	OTHER IV THERAPY	IV THERAPY/OTHER
027x	Med/Surg Supplies and Devices	0270	GENERAL CLASSIFICATION	MED-SUR SUPPLIES
027x	Med/Surg Supplies and Devices	0271	NON STERILE SUPPLY	NON-STER SUPPLY
027x	Med/Surg Supplies and Devices	0272	STERILE SUPPLY	STERILE SUPPLY
027x	Med/Surg Supplies and Devices	0273	TAKE HOME SUPPLIES	TAKEHOME SUPPLY
027x	Med/Surg Supplies and Devices	0274	PROSTHETIC/ORTHOTIC DEVICES	PROSTH/ORTH DEV
027x	Med/Surg Supplies and Devices	0275	PACE MAKER	PACE MAKER
027x	Med/Surg Supplies and Devices	0276	INTRAOCULAR LENS	INTRA OC LENS
027x	Med/Surg Supplies and Devices	0277	OXYGEN - TAKE HOME	O2/TAKEHOME
027x	Med/Surg Supplies and Devices	0278	OTHER IMPLANTS	SUPPLY/IMPLANTS
027x	Med/Surg Supplies and Devices	0279	OTHER SUPPLIES/DEVICES	SUPPLY/OTHER
028x	Oncology	0280	GENERAL CLASSIFICATION	ONCOLOGY/OTHER
028x	Oncology	0289	OTHER ONCOLOGY	ONCOLOGY/OTHER
029x	Durable medical equipment	0290	GENERAL CLASSIFICATION	MED EQUIP/DURAB
029x	Durable medical equipment	0291	RENTAL	MED EQUIP/RENT
029x	Durable medical equipment	0292	PURCHASE OF NEW DME	MED EQUIP/NEW
029x	Durable medical equipment	0293	PURCHASE OF USED DME	MED EQUIP/USED
029x	Durable medical equipment	0294	SUPPLIES/DRUGS FOR DME EFFECTIVENESS	MED EQUIP/SUPPLIES/DRUGS
029x	Durable medical equipment	0299	OTHER EQUIPMENT	MED EQUIP/OTHR
030x	Laboratory	0300	GENERAL CLASSIFICATION	LABORATORY OR LAB
030x	Laboratory	0301	CHEMISTRY	LAB/CHEMISTRY
030x	Laboratory	0302	IMMUNOLOGY	LAB/IMMUNOLOGY
030x	Laboratory	0303	RENAL PATIENT (HOME)	LAB/RENAL HOME
030x	Laboratory	0304	NON-ROUTINE DIALYSIS	LAB/NR DIALYSIS
030x	Laboratory	0305	HEMATOLOGY	LAB/HEMATOLOGY
030x	Laboratory	0306	BACTERIOLOGY AND MICROBIOLOGY	LAB/BACT-MICRO
030x	Laboratory	0307	UROLOGY	LAB/UROLOGY
031x	Laboratory pathology	0310	GENERAL CLASSIFICATION	PATHOLOGY LAB OR PATH LAB
031x	Laboratory pathology	0311	CYTOLOGY	PATHOL/CYTOLOGY
031x	Laboratory pathology	0312	HISTOLOGY	PATHOL/HYSTOL
031x	Laboratory pathology	0314	BIOPSY	PATHOL/BIOPSY
031x	Laboratory pathology	0319	OTHER	PATHOL/OTHER
032x	Radiology - Diagnostic	0320	GENERAL CLASSIFICATION	DX X-RAY
032x	Radiology - Diagnostic	0321	ANGIOCARDIOGRAPHY	DX X-RAY/ANGIO
032x	Radiology - Diagnostic	0322	ARTHROGRAPHY	DX X-RAY/ARTH
032x	Radiology - Diagnostic	0323	ARTERIOGRAPHY	DX X-RAY/ARTER
032x	Radiology - Diagnostic	0324	CHEST X-RAY	DX X-RAY/CHEST
032x	Radiology - Diagnostic	0329	OTHER	DX X-RAY/OTHER
033x	Radiology - Theurapeutic	0330	GENERAL CLASSIFICATION	RX X-RAY
033x	Radiology - Theurapeutic	0331	CHEMOTHERAPY - INJECTED	CHEMOTHER/INJ
033x	Radiology - Theurapeutic	0332	CHEMOTHERAPY - ORAL	CHEMOTHER/ORAL
033x	Radiology - Theurapeutic	0333	RADIATION THERAPY	RADIATION RX
033x	Radiology - Theurapeutic	0335	CHEMOTHERAPY - IV	CHEMOTHERP-IV
033x	Radiology - Theurapeutic	0339	OTHER	RX X-RAY/OTHER
034x	Nuclear Medicine	0340	GENERAL CLASSIFICATION	NUCLEAR MEDICINE OR NUC MED
034x	Nuclear Medicine	0341	DIAGNOSTIC	NUC MED/DX
034x	Nuclear Medicine	0342	THERAPEUTIC	NUC MED/RX
034x	Nuclear Medicine	0343	DIAGNOSTIC RADIOPHARMACEUTICALS	NUC MED/DX-RADIOPHARM
034x	Nuclear Medicine	0344	THERAPEUTIC RADIOPHARMACEUTICALS	NUC MED/RX-RADIOPHARM
034x	Nuclear Medicine	0349	OTHER	NUC MED/OTHER
035x	CT scan	0350	GENERAL CLASSIFICATION	CT SCAN
035x	CT scan	0351	HEAD SCAN	CT SCAN/HEAD
035x	CT scan	0352	BODY SCAN	CT SCAN/BODY
035x	CT scan	0359	OTHER CT SCANS	CT SCAN/OTHER
036x	Operating Rm	0360	GENERAL CLASSIFICATION	OR SERVICES
036x	Operating Rm	0361	MINOR SURGERY	OR MINOR

UB92 Group	UB92 Group Name	UB92 Code	UB92 Description	UB92 Short Title
036x	Operating Rm	0362	ORGAN TRANSPLANT - OTHER THAN KIDNEY	OR/ORGAN TRANS
036x	Operating Rm	0367	KIDNEY TRANSPLANT	OR/KIDNEY TRANS
036x	Operating Rm	0369	OTHER OPERATING ROOM SERVICES	OR/OTHER
037x	Anesthesia	0370	GENERAL CLASSIFICATION	ANESTHESIA
037x	Anesthesia	0371	ANESTHESIA INCIDENT TO RADIOLOGY	ANESTHE/INCIDENT RAD
037x	Anesthesia	0372	ANESTHESIA INCIDENT TO OTHER DIAGNOSTIC SERVICES	ANESTHE/INCIDENT OTHER DX
037x	Anesthesia	0374	ACUPUNCTURE	ANESTHE/ACUPUNC
037x	Anesthesia	0379	OTHER ANESTHESIA	ANESTHE/OTHER
038x	Blood	0380	GENERAL CLASSIFICATION	BLOOD
038x	Blood	0381	PACKED RED CELLS	BLOOD/PKD RED
038x	Blood	0382	WHOLE BLOOD	BLOOD/WHOLE
038x	Blood	0383	PLASMA	BLOOD/PLASMA
038x	Blood	0384	PLATELETS	BLOOD/PLATELETS
038x	Blood	0385	LEUCOCYTES	BLOOD/LEUCOCYTES
038x	Blood	0386	OTHER COMPONENTS	BLOOD/COMPONENTS
038x	Blood	0387	OTHER DERIVATIVES (CRYOPRECIPITATES)	BLOOD/DERIVATIVES
038x	Blood	0389	OTHER BLOOD	BLOOD/OTHER
039x	Blood admin & storage	0390	GENERAL CLASSIFICATION	BLOOD/STOR-PROC
039x	Blood admin & storage	0391	BLOOD ADMINISTRATION	BLOOD/ADMIN
039x	Blood admin & storage	0399	OTHER BLOOD STORAGE & PROCESSING	BLOOD/OTHER STOR
040x	Other Imaging Services	0400	GENERAL CLASSIFICATION	IMAGE SERVICE
040x	Other Imaging Services	0401	DIAGNOSTIC MAMMOGRAPHY	DIAG MAMMOGRAPHY
040x	Other Imaging Services	0402	ULTRASOUND	ULTRASOUND
040x	Other Imaging Services	0403	SCREENING MAMMOGRAPHY	SCRNM MAMMOGRAPHY
040x	Other Imaging Services	0404	POSITRON EMISSION TOMOGRAPHY	PET SCAN
040x	Other Imaging Services	0409	OTHER IMAGING SERVICES	OTHER IMAG SVS
041x	Respiratory Services	0410	GENERAL CLASSIFICATION	RESPIRATORY SVC
041x	Respiratory Services	0412	INHALATION SERVICES	INHALATION SVC
041x	Respiratory Services	0413	HYPERBARIC OXYGEN THERAPY	HYPERBARIC O2
041x	Respiratory Services	0419	OTHER RESPIRATORY SERVICES	OTHER RESPIR SVS
042x	Physical Therapy	0420	GENERAL CLASSIFICATION	PHYSICAL THERP
042x	Physical Therapy	0421	VISIT CHARGE	PHYS THERP/VISIT
042x	Physical Therapy	0422	HOURLY CHARGE	PHYS THERP/HOUR
042x	Physical Therapy	0423	GROUP RATE	PHYS THERP/GROUP
042x	Physical Therapy	0424	EVALUATION OR RE-EVALUATION	PHYS THERP/EVAL
042x	Physical Therapy	0429	OTHER PHYSICAL THERAPY	OTHER PHYS THERP
043x	Occupational Therapy	0430	GENERAL CLASSIFICATION	OCCUPATIONAL THER
043x	Occupational Therapy	0431	VISIT CHARGE	OCCUP THERP/VISIT
043x	Occupational Therapy	0432	HOURLY CHARGE	OCCUP THERP/HOUR
043x	Occupational Therapy	0433	GROUP RATE	OCCUP THERP/GROUP
043x	Occupational Therapy	0434	EVALUATION OR RE-EVALUATION	OCCUP THERP/EVAL
043x	Occupational Therapy	0439	OTHER OCCUPATIONAL THERAPY	OTHER OCCUP THERP
044x	Speech Pathology	0440	GENERAL CLASSIFICATION	SPEECH PATHOL
044x	Speech Pathology	0441	VISIT CHARGE	SPEECH PATH/VISIT
044x	Speech Pathology	0442	HOURLY CHARGE	SPEECH PATH/HOUR
044x	Speech Pathology	0443	GROUP RATE	SPEECH PATH/GROUP
044x	Speech Pathology	0444	EVALUATION OR RE-EVALUATION	SPEECH PATH/EVAL
044x	Speech Pathology	0449	OTHER SPEECH-LANGUAGE PATHOLOGY	OTHER SPEECH PAT
045x	Emergency Room	0450	GENERAL CLASSIFICATION	EMERG ROOM
045x	Emergency Room	0451	EMTALA EMERGENCY MEDICAL SCREENING SERVICE	ER/EMTALA
045x	Emergency Room	0452	ER BEYOND EMTALA SCREENING (Effective 4/1/1996)	ER/BEYOND EMTALA
045x	Emergency Room	0456	URGENT CARE (Effective 10/1/1995)	URGENT CARE
045x	Emergency Room	0459	OTHER EMERGENCY ROOM	OTHER EMERG ROOM
046x	Pulmonary Function	0460	GENERAL CLASSIFICATION	PULMONARY FUNC
046x	Pulmonary Function	0469	OTHER PULMONARY FUNCTION	OTHER PULMON FUNC
047x	Audiology	0470	GENERAL CLASSIFICATION	AUDIOLOGY
047x	Audiology	0471	DIAGNOSTIC	AUDIOLOGY/DX
047x	Audiology	0472	TREATMENT	AUDIOLOGY/RX
047x	Audiology	0479	OTHER AUDIOLOGY	OTHER AUDIOL
048x	Cardiology	0480	GENERAL CLASSIFICATION	CARDIOLOGY
048x	Cardiology	0481	CARDIAC CATH LAB	CARDIAC CATH LAB
048x	Cardiology	0482	STRESS TEST	STRESS TEST
048x	Cardiology	0483	ECHOCARDIOLOGY	ECHOCARDIOLOGY

UB92 Group	UB92 Group Name	UB92 Code	UB92 Description	UB92 Short Title
048x	Cardiology	0489	OTHER CARDIOLOGY	OTHER CARDIOL
049x	Ambulatory Surgical Care	0490	GENERAL CLASSIFICATION	AMBUL SURG
049x	Ambulatory Surgical Care	0499	OTHER AMBULATORY SURGICAL CARE	OTHER AMBL SURG
050x	Outpatient Services	0500	GENERAL CLASSIFICATION	OUTPATIENT SVS
050x	Outpatient Services	0509	OTHER OUTPATIENT SERVICES	OUTPATIENT/OTHER
051x	Clinic	0510	GENERAL CLASSIFICATION	CLINIC
051x	Clinic	0511	CHRONIC PAIN CENTER	CHRONIC PAIN CL
051x	Clinic	0512	DENTAL CLINIC	DENTAL CLINIC
051x	Clinic	0513	PSYCHIATRIC CLINIC	PSYCH CLINIC
051x	Clinic	0514	OB-GYN CLINIC	OB-GYN CLINIC
051x	Clinic	0515	PEDIATRIC CLINIC	PEDS CLINIC
051x	Clinic	0516	URGENT CARE CLINIC (Effective 10/1/1995)	URGENT CLINIC
051x	Clinic	0517	FAMILY CLINIC (Effective 10/1/1995)	FAMILY CLINIC
051x	Clinic	0519	OTHER CLINIC	OTHER CLINIC
052x	Free-standing clinic	0520	GENERAL CLASSIFICATION	FREESTAND CLINIC
052x	Free-standing clinic	0521	RURAL HEALTH - CLINIC	RURAL/CLINIC
052x	Free-standing clinic	0522	RURAL HEALTH - HOME	RURAL/HOME
052x	Free-standing clinic	0523	FAMILY PRACTICE	FR/STD FAMILY CLINIC
052x	Free-standing clinic	0526	URGENT CARE CLINIC (Effective 10/1/1996)	FR/STD URGENT CLINIC
052x	Free-standing clinic	0529	OTHER FREESTANDING CLINIC	OTHER FR/STD CLINIC
053x	Osteopathic services	0530	GENERAL CLASSIFICATION	OSTEOPATH SVS
053x	Osteopathic services	0531	OSTEOPATHIC THERAPY	OSTEOPATH RX
053x	Osteopathic services	0539	OTHER OSTEOPATHIC SERVICES	OTHER OSTEOPATH
054x	Ambulance	0540	GENERAL CLASSIFICATION	AMBULANCE
054x	Ambulance	0541	SUPPLIES	AMBUL/SUPPLY
054x	Ambulance	0542	MEDICAL TRANSPORT	AMBUL/MED TRANS
054x	Ambulance	0543	HEART MOBILE	AMBUL/HEARTMOBL
054x	Ambulance	0544	OXYGEN	AMBUL/OXY
054x	Ambulance	0545	AIR AMBULANCE	AIR AMBULANCE
054x	Ambulance	0546	NEONATAL AMBULANCE SERVICES	AMBUL/NEONAT
054x	Ambulance	0547	PHARMACY	AMBUL/PHARMACY
054x	Ambulance	0548	TELEPHONE TRANSMISSION EKG	AMBUL/TELEPHONIC EKG
054x	Ambulance	0549	OTHER AMBULANCE	OTHER AMBULANCE
055x	Skilled Nursing	0550	GENERAL CLASSIFICATION	SKILLED NURSING
055x	Skilled Nursing	0551	VISIT CHARGE	SKILLED NURS/VISIT
055x	Skilled Nursing	0552	HOURLY CHARGE	SKILLED NURS/HOUR
055x	Skilled Nursing	0559	OTHER SKILLED NURSING	SKILLED NURS/OTHER
056x	Medical Social Services	0560	GENERAL CLASSIFICATION	MED SOCIAL SVS
056x	Medical Social Services	0561	VISIT CHARGE	MED SOC SERVS/VISIT
056x	Medical Social Services	0562	HOURLY CHARGE	MED SOC SERV/HOUR
056x	Medical Social Services	0569	OTHER MEDICAL SOCIAL SERVICES	MED SOC SERV/OTHER
057x	Home Health Aide	0570	GENERAL CLASSIFICATION	AID/HOME HEALTH
057x	Home Health Aide	0571	VISIT CHARGE	AIDE/HOME HLTH/VISIT
057x	Home Health Aide	0572	HOURLY CHARGE	AIDE/HOME HLTH/HOUR
057x	Home Health Aide	0579	OTHER HOME HEALTH AIDE	AIDE/HOME HLTH/OTHER
058x	Home Health Other Visit	0580	GENERAL CLASSIFICATION	VISIT HOME HEALTH
058x	Home Health Other Visit	0581	VISIT CHARGE	VISIT/HOME HLTH/VISIT
058x	Home Health Other Visit	0582	HOURLY CHARGE	VISIT/HOME HLTH/HOUR
058x	Home Health Other Visit	0583	ASSESSMENT	VISIT/HOME HLTH/ASSESS
058x	Home Health Other Visit	0589	OTHER HOME HEALTH VISITS	VISIT/HOME HLTH/OTHER
059x	Home Health Units of Service	0590	GENERAL CLASSIFICATION	UNIT/HOME HEALTH
059x	Home Health Units of Service	0599	HOME HEALTH OTHER UNITS	UNIT/HOME HLTH/OTHER
060x	Home Health Oxygen	0600	GENERAL CLASSIFICATION	O2/HOME HEALTH
060x	Home Health Oxygen	0601	OXYGEN - STATE/EQUIP/SUPPL OR CONT	O2/STAT EQUIP/SUPPL/CONT
060x	Home Health Oxygen	0602	OXYGEN - STATE/EQUIP/SUPPL/UNDER 1 LPM	O2/STAT EQUIP/UNDER 1 LPM
060x	Home Health Oxygen	0603	OXYGEN - STATE/EQUIP/OVER 4 LPM	O2/STAT EQUIP/OVER 4 LPM
060x	Home Health Oxygen	0604	OXYGEN - PORTABLE ADD-ON	O2/PORTABLE ADD-ON
060x	Home Health Oxygen	0609	OTHER OXYGEN	O2 - OTHER
061x	Magnetic Resonance Technology	0610	GENERAL CLASSIFICATION	MRT
061x	Magnetic Resonance Technology	0611	MRI - BRAIN (INCLUDING BRAINSTEM)	MRI - BRAIN
061x	Magnetic Resonance Technology	0612	MRI - SPINAL CORD (INCLUDING SPINE)	MRI - SPINE
061x	Magnetic Resonance Technology	0614	MRI - OTHER	MRI - OTHER
061x	Magnetic Resonance Technology	0615	MRA - HEAD AND NECK	MRA - HEAD AND NECK
061x	Magnetic Resonance Technology	0616	MRA - LOWER EXTREMITIES	MRA - LOWER EXT
061x	Magnetic Resonance Technology	0618	MRA - OTHER	MRA - OTHER
061x	Magnetic Resonance Technology	0619	OTHER MRI	MRI - OTHER
062x	Med/Surg Supplies and Devices	0621	SUPPLIES INCIDENT TO RADIOLOGY	MED-SUP SUP/INCDNT RAD

UB92 Group	UB92 Group Name	UB92 Code	UB92 Description	UB92 Short Title
062x	Med/Surg Supplies and Devices	0622	SUPPLIES INCIDENT TO OTHER DIAGNOSTIC SERVICES	MED-SUR SUP/INCDNT ODX
062x	Med/Surg Supplies and Devices	0623	SURGICAL DRESSINGS (Effective 1/1/1995)	MED-SUR SUP/DRESS
062x	Med/Surg Supplies and Devices	0624	FDA INVESTIGATIONAL DEVICES (Effective 10/1/1996)	FDA INVEST DEVICE
063x	Pharmacy	0630	GENERAL CLASSIFICATION	DRUGS
063x	Pharmacy	0631	SINGLE SOURCE DRUG	DRUG/SINGLE
063x	Pharmacy	0632	MULTIPLE SOURCE DRUG	DRUG/MULT
063x	Pharmacy	0633	RESTRICTIVE PRESCRIPTION	DRUG/RSTR
063x	Pharmacy	0634	ERYTHROPOIETIN (EPO) LESS THAN 10,000 UNITS	DRUG/EPO<10,000 UNITS
063x	Pharmacy	0635	ERYTHROPOIETIN (EPO) 10,000 UNITS OR MORE	DRUG/EPO=>10,000 UNITS
063x	Pharmacy	0636	DRUGS REQUIRING DETAILED CODING	DRUGS/DETAIL CODE
063x	Pharmacy	0637	SELF-ADMINISTRABLE DRUGS (Effective 10/1/1997)	DRUGS/SELF ADMIN
064x	Home IV Therapy Services	0640	GENERAL CLASSIFICATION	IV THERAPY SVC
064x	Home IV Therapy Services	0641	NONROUTINE NURSING, CENTRAL LINE	NON RT NURSING/CENTRAL
064x	Home IV Therapy Services	0642	IV SITE CARE, CENTRAL LINE (SEE NOTE)	IV SITE CARE/CENTRAL
064x	Home IV Therapy Services	0643	IV START/CHANGE, PERIPHERAL LINE	IV STRT/CHNG/PERIPHAL
064x	Home IV Therapy Services	0644	NONROUTINE NURSING, PERIPHERAL LINE	NONRT NURSING/PERIPHRL
064x	Home IV Therapy Services	0645	TRAINING PATIENT/CAREGIVER, CENTRAL LINE	TRNG PT/CAREGVR/CENTRAL
064x	Home IV Therapy Services	0646	TRAINING, DISABLED PATIENT, CENTRAL LINE	TRNG DSBLPT/CENTRAL
064x	Home IV Therapy Services	0647	TRAINING, PATIENT/CAREGIVER, PERIPHERAL LINE	TRNG/PT/CARGVR/PERIPHRL
064x	Home IV Therapy Services	0648	TRAINING, DISABLED PATIENT PERIPHERAL LINE	TRNG/DSBLPAT/PERIPHRL
064x	Home IV Therapy Services	0649	OTHER IV THERAPY SERVICES	OTHER IV THERAPY SVC
065x	Hospice	0650	GENERAL CLASSIFICATION	HOSPICE
065x	Hospice	0651	ROUTINE HOME CARE	HOSPICE/RTN HOME
065x	Hospice	0652	CONTINUOUS HOME CARE	HOSPICE CTNS HOME
065x	Hospice	0655	INPATIENT RESPITE CARE	HOSPICE/IP RESPITE
065x	Hospice	0656	GENERAL INPATIENT CARE (NON-RESPITE)	HOSPICE/IP NON-RESPITE
065x	Hospice	0657	PHYSICIAN SERVICES	HOSPICE/PHYSICIAN
065x	Hospice	0659	OTHER HOSPICE	HOSPICE/OTHER
066x	Respite Care	0660	GENERAL CLASSIFICATION	RESPITE CARE
066x	Respite Care	0661	HOURLY CHARGE/SKILLED NURSING	RESPITE/SKILLED NURSE
066x	Respite Care	0662	HOURLY CHARGE/HOME HEALTH AIDE/HOMEMAKER	RESPITE/HMEAD/HMEMKR
066x	Respite Care	0663	DAILY RESPITE CHARGE	RESPITE DAILY
066x	Respite Care	0669	OTHER RESPITE CARE	RESPITE OTHER
067x	Outpatient Special Residence	0670	GENERAL CLASSIFICATION	OP SPEC RES
067x	Outpatient Special Residence	0671	HOSPITAL BASED	OP SPEC RES/HOSP BASED
067x	Outpatient Special Residence	0672	CONTRACTED	OP SPEC RES/CONTRACTED
067x	Outpatient Special Residence	0679	OTHER SPECIAL RESIDENCE CHARGES	OP SPEC RES/OTHER
068x	Trauma Response	0681	LEVEL I	TRAUMA LEVEL I
068x	Trauma Response	0682	LEVEL II	TRAUMA LEVEL II
068x	Trauma Response	0683	LEVEL III	TRAUMA LEVEL III
068x	Trauma Response	0684	LEVEL IV	TRAUMA LEVEL IV
068x	Trauma Response	0689	OTHER TRAUMA RESPONSE	TRAUMA OTHER
070x	Cast Room	0700	GENERAL CLASSIFICATION	CAST ROOM
070x	Cast Room	0709	OTHER CAST ROOM	OTHER CAST ROOM
071x	Recovery Room	0710	GENERAL CLASSIFICATION	RECOVERY ROOM
071x	Recovery Room	0719	OTHER RECOVERY ROOM	OTHER RECOV RM
072x	Labor Room/Delivery	0720	GENERAL CLASSIFICATION	DELIVERROOM/LABOR
072x	Labor Room/Delivery	0721	LABOR	LABOR
072x	Labor Room/Delivery	0722	DELIVERY	DELIVERY ROOM
072x	Labor Room/Delivery	0723	CIRCUMCISION	CIRCUMCISION
072x	Labor Room/Delivery	0724	BIRTHING CENTER	BIRTHING CENTER
072x	Labor Room/Delivery	0729	OTHER LABOR ROOM/DELIVERY	OTHER/DELIV-LABOR
073x	Electrocardiogram	0730	GENERAL CLASSIFICATION	EKG/ECG
073x	Electrocardiogram	0731	HOLTER MONITOR	HOLTER MONT
073x	Electrocardiogram	0732	TELEMETRY	TELEMETRY

UB92 Group	UB92 Group Name	UB92 Code	UB92 Description	UB92 Short Title
073x	Electrocardiogram	0739	OTHER EKG/ECG	OTHER EKG-ECG
074x	Electroencephalogram	0740	GENERAL CLASSIFICATION	EEG
074x	Electroencephalogram	0749	OTHER EEG	OTHER EEG
075x	Gastro-intestinal services	0750	GENERAL CLASSIFICATION	GASTR-INST SVS
075x	Gastro-intestinal services	0759	OTHER GASTRO-INTESTINAL	OTHER GASTRO-INTS
076x	Treatment/Observation Room	0760	GENERAL CLASSIFICATION	TREATMENT/OBSERVATION RM
076x	Treatment/Observation Room	0761	TREATMENT ROOM	TREATMENT RM
076x	Treatment/Observation Room	0762	OBSERVATION ROOM	OBSERVATION RM
076x	Treatment/Observation Room	0769	OTHER TREATMENT/OBSERVATION ROOM	OTHER TREAT/OBSERV RM
077x	Preventive Care Services	0770	GENERAL CLASSIFICATION	PREVENT CARE SVS
077x	Preventive Care Services	0771	VACCINE ADMINISTRATION	TREATMENT RM
077x	Preventive Care Services	0779	OTHER	OTHER PREVENT
078x	Telemedicine	0780	GENERAL CLASSIFICATION	TELEMEDICINE
078x	Telemedicine	0789	TELEMEDICINE OTHER	TELEMEDICINE/OTHER
079x	Extra-Corporeal Shock Wave Therapy	0790	GENERAL CLASSIFICATION	LITHOTRIPSY
079x	Extra-Corporeal Shock Wave Therapy	0799	OTHER LITHOTRIPSY	LITHOTRIPSY/OTHER
080x	Renal Dialysis - Inpatient	0800	GENERAL CLASSIFICATION	RENAL DIALYSIS
080x	Renal Dialysis - Inpatient	0801	HEMODIALYSIS (INPATIENT)	DIALY/INPT
080x	Renal Dialysis - Inpatient	0802	PERITONEAL DIALYSIS INPATIENT (NON-CAPD)	DIALY/INP/PER
080x	Renal Dialysis - Inpatient	0803	CONTINUOUS AMBULATORY PERITONEAL DIALYSIS - (CAPD) INPATIENT	DIALY/INPT/CAPD
080x	Renal Dialysis - Inpatient	0804	CONTINUOUS CYCLING PERITONEAL DIALYSIS - (CAPD) INPATIENT	DIALY/INPT/CCPD
080x	Renal Dialysis - Inpatient	0809	OTHER INPATIENT DIALYSIS	DIALY/INPT/OTHER
081x	Organ Acquisition	0810	GENERAL CLASSIFICATION	ORGAN ACQUIST
081x	Organ Acquisition	0811	LIVING DONOR	LIVING DONOR
081x	Organ Acquisition	0812	CADAVER DONOR	CADAVER DONOR
081x	Organ Acquisition	0813	UNKNOWN DONOR	UNKNOWN DONOR
081x	Organ Acquisition	0814	UNSUCCESSFUL ORGAN SEARCH	UNSUCCESSFUL SEARCH
081x	Organ Acquisition	0819	OTHER ORGAN ACQUISITION	OTHER DONOR
082x	Hemodialysis - OP or home	0820	GENERAL CLASSIFICATION	HEMO/OP OR HOME
082x	Hemodialysis - OP or home	0821	HEMODIALYSIS/COMPOSITE OR OTHER RATE	HEMO/COMPOSITE
082x	Hemodialysis - OP or home	0822	HOME SUPPLIES	HEMO/HOME/SUPPL
082x	Hemodialysis - OP or home	0823	HOME EQUIPMENT	HEMO/HOME/EQUIP
082x	Hemodialysis - OP or home	0824	MAINTENANCE 100%	HEMO/HOME/100%
082x	Hemodialysis - OP or home	0825	SUPPORT SERVICES	HEMO/HOME/SUPSERV
082x	Hemodialysis - OP or home	0829	OTHER OUTPATIENT HEMODIALYSIS	HEMO/HOME/OTHER
083x	Peritoneal Dialysis - OP or home	0830	GENERAL CLASSIFICATION	PERITONEAL/OP OR HOME
083x	Peritoneal Dialysis - OP or home	0831	PERITONEAL/COMPOSITE OR OTHER RATE	PERTNL/COMPOSITE
083x	Peritoneal Dialysis - OP or home	0832	HOME SUPPLIES	PERTNL/HOME/SUPPL
083x	Peritoneal Dialysis - OP or home	0833	HOME EQUIPMENT	PERTNL/HOME/EQUIP
083x	Peritoneal Dialysis - OP or home	0834	MAINTENANCE 100%	PERTNL/HOME/100%
083x	Peritoneal Dialysis - OP or home	0835	SUPPORT SERVICES	PERTNL/HOME/SUPSERV
083x	Peritoneal Dialysis - OP or home	0839	OTHER OUTPATIENT PERITONEAL DIALYSIS	PERTNL/HOME/OTHER
084x	Continuous ambulatory peritoneal dialysis (CAPD) - OP or home	0840	GENERAL CLASSIFICATION	CAPD/OP OR HOME
084x	Continuous ambulatory peritoneal dialysis (CAPD) - OP or home	0841	CAPD/COMPOSITE OR OTHER RATE	CAPD/COMPOSITE
084x	Continuous ambulatory peritoneal dialysis (CAPD) - OP or home	0842	HOME SUPPLIES	CAPD/HOME/SUPPL
084x	Continuous ambulatory peritoneal dialysis (CAPD) - OP or home	0843	HOME EQUIPMENT	CAPD/HOME/EQUIP
084x	Continuous ambulatory peritoneal dialysis (CAPD) - OP or home	0844	MAINTENANCE 100%	CAPD/HOME/100%
084x	Continuous ambulatory peritoneal dialysis (CAPD) - OP or home	0845	SUPPORT SERVICES	CAPD/HOME/SUPSERV
084x	Continuous ambulatory peritoneal dialysis (CAPD) - OP or home	0849	OTHER OUTPATIENT CAPD	CAPD/HOME/OTHER
085x	Continuous cycling peritoneal dialysis (CCPD) - OP or home	0850	GENERAL CLASSIFICATION	CCPD/OP OR HOME

UB92 Group	UB92 Group Name	UB92 Code	UB92 Description	UB92 Short Title
085x	Continuous cycling peritoneal dialysis (CCPD) - OP or home	0851	CCPP/COMPOSITE OR OTHER RATE	CCPD/COMPOSITE
085x	Continuous cycling peritoneal dialysis (CCPD) - OP or home	0852	HOME SUPPLIES	CCPD/HOME/SUPPL
085x	Continuous cycling peritoneal dialysis (CCPD) - OP or home	0853	HOME EQUIPMENT	CCPD/HOME EQUIP
085x	Continuous cycling peritoneal dialysis (CCPD) - OP or home	0854	MAINTENANCE 100%	CCPD/HOME/100%
085x	Continuous cycling peritoneal dialysis (CCPD) - OP or home	0855	SUPPORT SERVICES	CCPD/HOME/SUPSERV
085x	Continuous cycling peritoneal dialysis (CCPD) - OP or home	0859	OTHER OUTPATIENT CCPD	CCPD/HOME/OTHER
088x	Dialysis - Miscellaneous	0880	GENERAL CLASSIFICATION	DIALY/MISC
088x	Dialysis - Miscellaneous	0881	ULTRAFILTRATION	DIALY/ULTRAFILT
088x	Dialysis - Miscellaneous	0882	HOME DIALYSIS AID VISIT	HOME DIALYSIS AID VISIT
088x	Dialysis - Miscellaneous	0889	MISCELLANEOUS DIALYSIS OTHER	DIALY/MISC/OTHER
090x	Behavioral Health Treatment	0900	GENERAL CLASSIFICATION	PSYCH TREATMENT
090x	Behavioral Health Treatment	0901	ELECTROSHOCK TREATMENT	ELECTRO SHOCK
090x	Behavioral Health Treatment	0902	MILIEU THERAPY	MILIEU THERAPY
090x	Behavioral Health Treatment	0903	PLAY THERAPY	PLAY THERAPY
090x	Behavioral Health Treatment	0904	ACTIVITY THERAPY (Effective 4/1/1994)	ACTIVITY THERAPY
090x	Behavioral Health Treatment	0905	INTENSIVE OUTPATIENT SERVICES- PSYCHIATRIC	BH/INTENS OP/PSYCH
090x	Behavioral Health Treatment	0906	INTENSIVE OUTPATIENT SERVICES- CHEMICAL DEPENDENCY	BH-INTENS OP/CHEM DEP
090x	Behavioral Health Treatment	0907	COMMUNITY BEHAVIORAL HEALTH PROGRAM	BH/COMMUNITY
090x	Behavioral Health Treatment	0909	OTHER	OTHER PSYCH RX
091x	Behavioral Health Treatment	0910	GENERAL CLASSIFICATION	PSYCH SERVICES
091x	Behavioral Health Treatment	0911	REHABILITATION	PSYCH/REHAB
091x	Behavioral Health Treatment	0912	PARTIAL HOSPITALIZATION - LESS INTENSIVE (Effective 4/1/97)	PSYCH/PARTIAL HOSP
091x	Behavioral Health Treatment	0913	PARTIAL HOSPITALIZATION - INTENSIVE (Effective 4/1/97)	PSYCH/PARTIAL INTENSIVE
091x	Behavioral Health Treatment	0914	INDIVIDUAL THERAPY	PSYCH/INDIV RX
091x	Behavioral Health Treatment	0915	GROUP THERAPY	PSYCH/GROUP RX
091x	Behavioral Health Treatment	0916	FAMILY THERAPY	PSYCH/FAMILY RX
091x	Behavioral Health Treatment	0917	BIO FEEDBACK	PSYCH/BIOFEED
091x	Behavioral Health Treatment	0918	TESTING	PSYCH/RESTING
091x	Behavioral Health Treatment	0919	OTHER	PSYCH/OTHER
092x	Other Diagnostic Services	0920	GENERAL CLASSIFICATION	OTHER DX SVS
092x	Other Diagnostic Services	0921	PERIPHERAL VASCULAR LAB	PERI VASCUL LAB
092x	Other Diagnostic Services	0922	ELECTROMYELGRAM	EMG
092x	Other Diagnostic Services	0923	PAP SMEAR	PAP SMEAR
092x	Other Diagnostic Services	0924	ALLERGY TEST	ALLERGY TEST
092x	Other Diagnostic Services	0925	PREGNANCY TEST	PREG TEST
092x	Other Diagnostic Services	0929	OTHER DIAGNOSTIC SERVICE	ADDITIONAL DX SVS
093x	Medical Rehab Day Program	0931	HALF DAY	HALF DAY
093x	Medical Rehab Day Program	0932	FULL DAY	FULL DAY
094x	Other Theurapeutice Services	0940	GENERAL CLASSIFICATION	OTHER RX SVS
094x	Other Theurapeutice Services	0941	RECREATIONAL THERAPY	RECREATION RX

UB92 Group	UB92 Group Name	UB92 Code	UB92 Description	UB92 Short Title
094x	Other Theurapeutice Services	0942	EDUCATION/TRAINING	EDUC/TRAINING
094x	Other Theurapeutice Services	0943	CARDIAC REHABILITATION	CARDIAC REHAB
094x	Other Theurapeutice Services	0944	DRUG REHABILITATION	DRUG REHAB
094x	Other Theurapeutice Services	0945	ALCOHOL REHABILITATION	ALCOHOL REHAB
094x	Other Theurapeutice Services	0946	COMPLEX MEDICAL EQUIPMENT - ROUTINE	CMPLX MED EQUIP-ROUT
094x	Other Theurapeutice Services	0947	COMPLEX MEDICAL EQUIPMENT - ANCILLARY	CMPLX MED EQUIP-ANC
094x	Other Theurapeutice Services	0949	OTHER THERAPEUTIC SERVICES	ADDITIONAL RX SVS
095x	Other Theurapeutice Services	0951	ATHLETIC TRAINING	ATHLETIC TRAINING
095x	Other Theurapeutice Services	0952	KINESIOTHERAPY	KINESIOTHERAPY
096x	Professional Fees	0960	GENERAL CLASSIFICATION	PRO FEE
096x	Professional Fees	0961	PSYCHIATRIC	PRO FEE/PSYCH
096x	Professional Fees	0962	OPHTHALMOLOGY	PRO FEE/EYE
096x	Professional Fees	0963	ANESTHESIOLOGIST (MD)	PRO FEE/ANES MD
096x	Professional Fees	0964	ANESTHETIST (CRNA)	PRO FEE/ANES CRNA
096x	Professional Fees	0969	OTHER PROFESSIONAL FEES	OTHER PRO FEE
097x	Professional Fees	0971	LABORATORY	PRO FEE/LAB
097x	Professional Fees	0972	RADIOLOGY- DIAGNOSTIC	PRO FEE/RAD/DX
097x	Professional Fees	0973	RADIOLOGY - THERAPEUTIC	PRO FEE/RAD/RX
097x	Professional Fees	0974	RADIOLOGY - NUCLEAR MEDICINE	PRO FEE/ANES MD
097x	Professional Fees	0975	OPERATING ROOM	PRO FEE/OR
097x	Professional Fees	0976	RESPIRATORY THERAPY	PRO FEE/RESPIR
097x	Professional Fees	0977	PHYSICAL THERAPY	PRO FEE/PHYSI
097x	Professional Fees	0978	OCCUPATIONAL THERAPY	PRO FEE/OCCUPA
097x	Professional Fees	0979	SPEECH THERAPY	PRO FEE/SPEECH
098x	Professional Fees	0981	EMERGENCY ROOM	PRO FEE/ER
098x	Professional Fees	0982	OUTPATIENT SERVICES	PRO FEE/OUTPT
098x	Professional Fees	0983	CLINIC	PRO FEE/CLINIC
098x	Professional Fees	0984	MEDICAL SOCIAL SERVICES	PRO FEE/SOC SVC
098x	Professional Fees	0985	EKG	PRO FEE/EKG
098x	Professional Fees	0986	EEG	PRO FEE/EEG
098x	Professional Fees	0987	HOSPITAL VISIT	PRO FEE/HOS VIS
098x	Professional Fees	0988	CONSULTATION	PRO FEE CONSULT
098x	Professional Fees	0989	PRIVATE DUTY NURSE	FEE/PVT NURSE
099x	Convenience Items	0990	GENERAL CLASSIFICATION	PT CONVENIENCE
099x	Convenience Items	0991	CAFETERIA/GUEST TRAY	CAFETERIA
099x	Convenience Items	0992	PRIVATE LINEN SERVICE	LINEN
099x	Convenience Items	0993	TELEPHONE/TELEGRAPH	TELEPHONE
099x	Convenience Items	0994	TV/RADIO	TV/RADIO
099x	Convenience Items	0995	NONPATIENT ROOM RENTALS	NONPT ROOM RENT
099x	Convenience Items	0996	LATE DISCHARGE CHARGE	LATE DISCHARGE
099x	Convenience Items	0997	ADMISSION KITS	ADMIT KITS
099x	Convenience Items	0998	BEAUTY SHOP/BARBER	BARBER/BEAUTY
099x	Convenience Items	0999	OTHER PATIENT CONVENIENCE ITEMS	PT CONVENCE/OTH
100x	Behavioral Health Accomodations	1000	GENERAL CLASSIFICATION	BH R&B
100x	Behavioral Health Accomodations	1001	RESIDENTIAL TREATMENT - PSYCHIATRIC	BH R&B RES/PSYCH
100x	Behavioral Health Accomodations	1002	RESIDENTIAL TREATMENT - CHEMICAL DEPENDENCY	BH R&B RES/CHEM DEP
100x	Behavioral Health Accomodations	1003	SUPERVISED LIVING	BH R&B SUP LIVING
100x	Behavioral Health Accomodations	1004	HALFWAY HOUSE	BH R&B HALFWAY HOUSE
100x	Behavioral Health Accomodations	1005	GROUP HOME	BH R&B GROUP HOME
210x	Alternative Therapy Services	2100	GENERAL CLASSIFICATION	ALTTHERAPY
210x	Alternative Therapy Services	2101	ACUPUNCTURE	ACUPUNCTURE
210x	Alternative Therapy Services	2102	ACUPRESSURE	ACUPRESSURE
210x	Alternative Therapy Services	2103	MASSAGE	MASSAGE
210x	Alternative Therapy Services	2104	REFLEXOLOGY	REFLEXOLOGY
210x	Alternative Therapy Services	2105	HYPNOSIS	HYPNOSIS
210x	Alternative Therapy Services	2109	OTHER ALTERNATIVE THERAPY SERVICES	OTHER ALTTHERAPY
310x	Adult Care	3101	ADULT DAY CARE, MEDICAL AND SOCIAL - HOURLY	ADULT MED/SOC HR
310x	Adult Care	3102	ADULT DAY CARE SOCIAL - HOURLY	ADULT SOC HR
310x	Adult Care	3103	ADULT DAY CARE, MEDICAL AND SOCIAL - DAILY	ADULT MED/SOC DAY
310x	Adult Care	3104	ADULT DAY CARE, SOCIAL - DAILY	ADULT SOC DAY
310x	Adult Care	3105	ADULT FOSTER CARE - DAILY	ADULT FOSTER DAY
310x	Adult Care	3109	OTHER ADULT CARE	OTHER ADULT

Appendix B.2: Definition of Charge Buckets by State

State	Database	CHGn	Description	UB-92 Revenue Codes
Arizona	SID	1	All Inclusive Room and Board	10x
Arizona	SID	2	Room and Board, Private	11x
Arizona	SID	3	Room and Board, Two Beds	12x
Arizona	SID	4	Room and Board, 3-4 Beds	13x
Arizona	SID	5	Private (Deluxe)	14x
Arizona	SID	6	Room and Board, Ward	15x
Arizona	SID	7	Room and Board, Other	16x
Arizona	SID	8	Nursery	17x
Arizona	SID	9	ICU	20x
Arizona	SID	10	CCU	21x
Arizona	SID	11	Special Charges	22x
Arizona	SID	12	Incremental Charges	23x
Arizona	SID	13	All Inclusive Ancillary	24x
Arizona	SID	14	Pharmacy	25x
Arizona	SID	15	IV Therapy	26x
Arizona	SID	16	Medical/Surgical Supplies	27x
Arizona	SID	17	Oncology	28x
Arizona	SID	18	DME (Other than renal)	29x
Arizona	SID	19	Laboratory	30x
Arizona	SID	20	Laboratory Pathology	31x
Arizona	SID	21	Radiology, Diagnostic	32x
Arizona	SID	22	Radiology, Therapeutic	33x
Arizona	SID	23	Nuclear Medicine	34x
Arizona	SID	24	CT Scan	35x
Arizona	SID	25	Operating Room	36x
Arizona	SID	26	Anesthesia	37x
Arizona	SID	27	Blood	38x
Arizona	SID	28	Blood Storage/ Processing	39x
Arizona	SID	29	Other Imaging	40x
Arizona	SID	30	Respiratory Services	41x
Arizona	SID	31	Physical Therapy	42x
Arizona	SID	32	Occupational Therapy	43x
Arizona	SID	33	Speech Therapy	44x
Arizona	SID	34	Emergency Room	45x
Arizona	SID	35	Pulmonary Function	46x
Arizona	SID	36	Audiology	47x
Arizona	SID	37	Cardiology	48x
Arizona	SID	38	Osteopathic Services	53x
Arizona	SID	39	Ambulance	54x
Arizona	SID	40	Medical Social Services	56x
Arizona	SID	41	MRI	61x
Arizona	SID	42	Medical Surgical Supplies (extension of revenue codes 27x)	62x
Arizona	SID	43	Drugs requiring specific ID	63x
Arizona	SID	44	Cast Room	70x
Arizona	SID	45	Recovery Room	71x
Arizona	SID	46	Labor/Delivery Room	72x
Arizona	SID	47	EKG/ECG	73x
Arizona	SID	48	EEG	74x
Arizona	SID	49	Gastro Intestinal Services	75x
Arizona	SID	50	Treatment/Observation Room	76x
Arizona	SID	51	Lithotripsy	79x
Arizona	SID	52	Inpatient Renal Dialysis	80x
Arizona	SID	53	Organ Acquisition	81x
Arizona	SID	54	Miscellaneous Dialysis	88x
Arizona	SID	55	Psychiatric Treatment	90x
Arizona	SID	56	Psychiatric Services	91x
Arizona	SID	57	Other Diagnostic Services	92x
Arizona	SID	58	Other Therapeutic Services	94x
Arizona	SID	59	Professional Fees	96x
Arizona	SID	60	Professional Fees	97x
Arizona	SID	61	Professional Fees	98x
Arizona	SID	62	Patient Convenience Items	99x
Arizona	SID	63	All Other Charges	---

State	Database	CHGn	Description	UB-92 Revenue Codes
Colorado	SID and SASD	1	Routine Charges	100-239
Colorado	SID and SASD	2	Laboratory Charges	300-319
Colorado	SID and SASD	3	Radiology Charges	320-359, 400-409, 610-619
Colorado	SID and SASD	4	Pharmacy Charges	250-259
Colorado	SID and SASD	5	All Other Charges	---
Connecticut	SID, SASD, SEDD	1	Room and Board	110-239
Connecticut	SID, SASD, SEDD	2	Nursery	170-179, 231
Connecticut	SID, SASD, SEDD	3	ICU	200-219, 233-234
Connecticut	SID, SASD, SEDD	4	Pharmacy	250-259, 630-637
Connecticut	SID, SASD, SEDD	5	Med/Surg Supplies	270-279, 621-623
Connecticut	SID, SASD, SEDD	6	Laboratory	300-319
Connecticut	SID, SASD, SEDD	7	Radiology	320-339, 350-359, 400-409, 610-619
Connecticut	SID, SASD, SEDD	8	Nuclear Medicine	340-349
Connecticut	SID, SASD, SEDD	9	Operating Room	360-369
Connecticut	SID, SASD, SEDD	10	Anesthesia	370-379
Connecticut	SID, SASD, SEDD	11	Respiratory	410-419
Connecticut	SID, SASD, SEDD	12	Physical Therapy	420-429
Connecticut	SID, SASD, SEDD	13	Emergency Room	450-459
Connecticut	SID, SASD, SEDD	14	Recovery Room	710-719
Connecticut	SID, SASD, SEDD	15	Labor/Delivery Room	720-729
Connecticut	SID, SASD, SEDD	16	Other	---
Florida	SASD	1	Pharmacy	25x
Florida	SASD	2	Medical and Surgical Supplies	27x
Florida	SASD	3	Radiation Oncology	28x
Florida	SASD	4	Laboratory	30x
Florida	SASD	5	CT Scan	35x
Florida	SASD	6	Operating Room	36x
Florida	SASD	7	Anesthesia	37x
Florida	SASD	8	MRI	61x
Florida	SASD	9	Recovery Room	71x
Florida	SASD	10	Treatment/Observation Room	76x
Florida	SASD	11	Other charges	--
Florida	SID	1	Room Charges	11x-16x
Florida	SID	2	Nursery	17x
Florida	SID	3	Intensive Care	20x
Florida	SID	4	Coronary Care	21x
Florida	SID	5	Pharmacy	25x
Florida	SID	6	Medical/Surgical Supplies & Devices	27x
Florida	SID	7	Oncology	28x
Florida	SID	8	Laboratory	30x
Florida	SID	9	Laboratory Pathological	31x
Florida	SID	10	Radiology-Diagnostic	32x
Florida	SID	11	Radiology-Therapeutic	33x
Florida	SID	12	Nuclear Medicine	34x
Florida	SID	13	CT Scan	35x
Florida	SID	14	Operating Room Service	36x
Florida	SID	15	Anesthesia	37x
Florida	SID	16	Respiratory Services	41x
Florida	SID	17	Physical Therapy	42x
Florida	SID	18	Occupational Therapy	43x
Florida	SID	19	Emergency Room	45x
Florida	SID	20	Cardiology	48x
Florida	SID	21	Magnetic Resonance Imaging (MRI)	61x
Florida	SID	22	Recovery Room	71x
Florida	SID	23	Labor Room/Delivery	72x
Florida	SID	24	Other (not covered by preceding revenue code groups)	---
Georgia	SID, SASD, SEDD	1	Room and Board charges	110-169
Georgia	SID, SASD, SEDD	2	Newborn nursery charges	170-171, 179
Georgia	SID, SASD, SEDD	3	Intermediate nursery charges	172-173
Georgia	SID, SASD, SEDD	4	Neonatal ICU charges	174
Georgia	SID, SASD, SEDD	5	ICU charges	200-209
Georgia	SID, SASD, SEDD	6	CCU charges	210-219
Georgia	SID, SASD, SEDD	7	Pharmacy charges	250-259, 630-639
Georgia	SID, SASD, SEDD	8	IV therapy charges	260-269

State	Database	CHGn	Description	UB-92 Revenue Codes
Georgia	SID, SASD, SEDD	9	Supply charges	270-274, 276-279, 620-629
Georgia	SID, SASD, SEDD	10	Pacemaker charges	275
Georgia	SID, SASD, SEDD	11	Laboratory charges	300-319
Georgia	SID, SASD, SEDD	12	X-ray diagnostic charges	320-329
Georgia	SID, SASD, SEDD	13	X-ray therapeutic charges	330-339
Georgia	SID, SASD, SEDD	14	Nuclear medicine charges	340-349
Georgia	SID, SASD, SEDD	15	CT scan charges	350-359
Georgia	SID, SASD, SEDD	16	Operating room charges	360-369
Georgia	SID, SASD, SEDD	17	Anesthesia charges	370-379
Georgia	SID, SASD, SEDD	18	Blood charges	380-389
Georgia	SID, SASD, SEDD	19	Other imaging charges	400-409 (In 2005 data 401 and 403 are moved into a new category for mammography)
Georgia	SID, SASD, SEDD	20	Respiratory charges	410-419
Georgia	SID, SASD, SEDD	21	Emergency room charges	450-459
Georgia	SID, SASD, SEDD	22	Cath lab charges	480-481
Georgia	SID, SASD, SEDD	23	Other cardiology charges	482-489
Georgia	SID, SASD, SEDD	24	Ambulatory surgery charges	490-499
Georgia	SID, SASD, SEDD	25	MRI charges	610-619
Georgia	SID, SASD, SEDD	26	Recovery room charges	710-719
Georgia	SID, SASD, SEDD	27	Labor and delivery charges	720-729
Georgia	SID, SASD, SEDD	28	Telemetry charges	732
Georgia	SID, SASD, SEDD	29	Observation charges	760, 762
Georgia	SID, SASD, SEDD	30	Lithotripsy charges	790-799
Georgia	SID, SASD, SEDD	31	Professional Fees	960-989
Georgia	SID, SASD, SEDD	32	Other charges (Beginning in 2000)	180-199, 220-249, 280-299, 390-399, 420-449, 460-479, 500-609, 640-709, 730-731, 733-739, 740-749, 750-759*, 761, 763-769, 770-789, 800-959, 990-999, all others) *In 2005, 750-759 are moved into a new category for endoscopy.
Illinois	SID	1	Room and Board (routine charges)	110-101, 110-199, 200-209, 210-219
Illinois	SID	2	Ancillary charges (sum of to CHG10)	---
Illinois	SID	3	Anesthesiology	370-379
Illinois	SID	4	Pharmacy charges	250-269, 631-637
Illinois	SID	5	Radiology	320-329, 341, 350-359, 400-409, 610-619, 621
Illinois	SID	6	Clinical lab charges	300-319
Illinois	SID	7	Labor-delivery charges	232, 720-729
Illinois	SID	8	Operating room charges	360-369, 710, 719
Illinois	SID	9	Oncology charges	280-289, 330-339, 342
Illinois	SID	10	Other ancillary charges	---
Iowa	SID	1	Professional component charges	Not specified
Iowa	SID	2	Room	11x-16x, 230, 235, 239
Iowa	SID	3	Nursery	17x, 231
Iowa	SID	4	ICU	20x, 21x, 233, 234
Iowa	SID	5	Pharmacy	25x, 63x
Iowa	SID	6	Medical/Surgical Supply	27x, 62x
Iowa	SID	7	Laboratory	30x, 31x
Iowa	SID	8	MRI and CAT Scans	35x, 61x
Iowa	SID	9	Therapeutic Radiology	33x
Iowa	SID	10	Other Imaging Services	32x, 40x
Iowa	SID	11	Nuclear Medicine	34x
Iowa	SID	12	Operating Room	36x
Iowa	SID	13	Anesthesia	37x
Iowa	SID	14	Respiratory Therapy	41x
Iowa	SID	15	Physical Therapy	42x
Iowa	SID	16	Uncovered	253, 99x
Iowa	SID	17	Professional Fees	96x, 97x, 98x
Iowa	SID	18	Treatment or Observation Room	76x
Iowa	SID	19	Ambulatory Surgical Care	49x
Iowa	SID	20	Emergency Room	45x
Iowa	SID	21	Recovery Room	71x
Iowa	SID	22	Other	---
Iowa	SID	23	Labor and Delivery	72x

State	Database	CHGn	Description	UB-92 Revenue Codes
Maryland	SID	1	Medical/Surgical Acute Charges	110-169, 180-189, 220-239
Maryland	SID	2	Coronary Care Charges	210-219
Maryland	SID	3	Medical/Surgical Intensive Care Charges	200-209
Maryland	SID	4	Nursery Charges	170-179
Maryland	SID	5	Oncology Charges	280-289
Maryland	SID	6	Skilled Nursing Care Charges	550-559
Maryland	SID	7	Psychiatric Acute Charges	900-919
Maryland	SID	8	Operating Room Charges	360-369, 490-499, 710-719
Maryland	SID	9	Drug Charges	250-259, 260-269, 636-637
Maryland	SID	10	Radiology Diagnostic Charges	320-329, 401-402
Maryland	SID	11	Radiology Therapeutic Charges	330-339
Maryland	SID	12	Nuclear Medicine Charges	340-349
Maryland	SID	13	CAT Scan Charges	350-359
Maryland	SID	14	MRI Charges	400-409, 610-619
Maryland	SID	15	Cardiac Catheterization Charges	480-489
Maryland	SID	16	Laboratory Charges	300-319, 920-929
Maryland	SID	17	Medical Supplies Charges	270-279, 290-299, 621-623
Maryland	SID	18	Respiratory Therapy Charges	410-419
Maryland	SID	19	Physical Therapy Charges	420-429
Maryland	SID	20	Occupational Therapy Charges	430-439
Maryland	SID	21	Speech and Audiology Charges	440-499, 470-479
Maryland	SID	22	Pulmonary Function Charges	460-469
Maryland	SID	23	Anesthesiology Charges	370-379, 964
Maryland	SID	24	Blood Charges	380-399
Maryland	SID	25	Emergency Room Charges	450-459
Maryland	SID	26	Outpatient Clinic Charges	500-509, 510-519, 530-539, 700-709
Maryland	SID	27	Freestanding Clinic Charges	520-529
Maryland	SID	28	Labor and Delivery Charges	720-729
Maryland	SID	29	EKG Charges	730-739
Maryland	SID	30	EEG Charges	740-749
Maryland	SID	31	Other Charges	--
New Jersey	SID and SASD	1	Medical - Surgical Charges (MSA)	111, 116, 121, 126, 131, 136, 141, 146, 151, 156, 164, 167, 169, 224
New Jersey	SID and SASD	2	Obstetric Charges (OBS)	112, 122, 132, 142, 152, 232
New Jersey	SID and SASD	3	Pediatric Charges (PED)	113, 123, 133, 143, 153
New Jersey	SID and SASD	4	Psychiatric Charges (PSA)	114, 124, 134, 144, 154
New Jersey	SID and SASD	5	Burn Care Unit Charges (BCU)	207
New Jersey	SID and SASD	6	Intensive Care Unit Charges (ICU)	201-209, 233
New Jersey	SID and SASD	7	Coronary Care Unit Charges (CCU)	211-219, 234
New Jersey	SID and SASD	8	Neonatal Intensive Care Unit Charges (NNI)	174
New Jersey	SID and SASD	9	Newborn Nursery Charges (NBN)	171-173, 179, 231
New Jersey	SID and SASD	10	Emergency Room Charges (EMR)	450-459, 500, 509, 540-549, 700, 709, 981
New Jersey	SID and SASD	11	Clinic Charges (CLN)	510-529, 770-771, 779, 962, 982-983
New Jersey	SID and SASD	12	Home Health Charges (HHA)	550-559, 570, 571-579, 580-589, 590, 599, 984
New Jersey	SID and SASD	13	Anesthesiology Charges (ANS)	370-379, 963-964
New Jersey	SID and SASD	14	Cardiac Catheterization Charges (CCA)	480-481, 489
New Jersey	SID and SASD	15	Delivery and/or Gyn Charges (DEL)	720-729
New Jersey	SID and SASD	16	Dialysis Charges (DIA)	634-635, 800-809, 880-882, 889
New Jersey	SID and SASD	17	Drug or Pharmacy Charges (DRU)	250-259, 631-637
New Jersey	SID and SASD	18	Electrocardiogram Charges (EKG)	482, 730-739, 985
New Jersey	SID and SASD	19	Laboratory Charges (LAB)	300-319, 380-399, 921, 923, 924, 925, 971
New Jersey	SID and SASD	20	Medical Surgical Supply Charges (MSS)	260-279, 290-293, 299, 621-624, 946, 947
New Jersey	SID and SASD	21	Neurology Charges (NEU)	740, 749, 922, 986
New Jersey	SID and SASD	22	Nuclear Medicine Charges (NMD)	340-349, 974
New Jersey	SID and SASD	23	Occupational Therapy Charges (OCC)	430-439, 941-949, 978
New Jersey	SID and SASD	24	Operating Room Charges (ORR)	360-369, 710, 719, 975
New Jersey	SID and SASD	25	Organ Acquisition Charges (ORG)	810-819
New Jersey	SID and SASD	26	Physical Therapy Charges (PHT)	420-429, 530-531, 539, 977
New Jersey	SID and SASD	27	Psychiatric Charges (PSY)	560-562, 569, 901-919, 961
New Jersey	SID and SASD	28	Radiology Charges (RAD)	320-329, 350-351, 359, 400-409, 483, 610-619, 750, 759, 790, 799, 972
New Jersey	SID and SASD	29	Respiratory Therapy Charges (RSP)	410, 412-413, 419, 460, 469, 976

State	Database	CHGn	Description	UB-92 Revenue Codes
New Jersey	SID and SASD	30	Speech Pathology Charges (SPA)	440-449, 471-472, 479, 979
New Jersey	SID and SASD	31	Therapeutic Radiology Charges (THR)	280, 289, 330-339, 973
New Jersey	SID and SASD	32	Same Day Surgery Charges (SDS)	490, 499, 769
New Jersey	SID and SASD	33	Excluded Charges (EXC)	115, 117-119, 125, 127-129, 135, 137-139, 145, 147-149, 155, 157-159, 182-185, 189, 221-223, 229, 235, 239, 254, 294, 543, 600-604, 640-652, 655-662, 670-672, 679, 760-762, 820-825, 829-835, 839-845, 849-855, 859, 900, 905-907, 920, 929, 940, 960, 969, 987-999
New Jersey	SID and SASD	34	Non-Acute Ancillary Charges (NAC)	191-199, 240-249
New Jersey	SID and SASD	35	Medicare, Part B, Non-Acute Charges (MNC)	Not specified
North Carolina	SASD	1	Routine charges	101, 110-179
North Carolina	SASD	2	ICU/CCU charges	200-219
North Carolina	SASD	3	Surgery charges	360-379, 710-729
North Carolina	SASD	4	Laboratory charges	300-319, 390-399, 740-759
North Carolina	SASD	5	Pharmacy charges	250-269, 630-639
North Carolina	SASD	6	Radiology charges	280-289, 320-359, 400-409
North Carolina	SASD	7	Respiratory charges	410-419, 460-469
North Carolina	SASD	8	Physical Therapy charges	420-449, 470-479
North Carolina	SASD	9	Supplies charges	270-279, 620-629
North Carolina	SASD	10	Other charges	070-077, 180-189, 220-249, 290-299, 380-389, 450-459, 480-619, 640-669, 700-709, 730-739, 760-769, 790-859, 880-929, 940-949, 960-999, 100
Oregon	SID	1	Ancillary charges	220-229, 232, 240-999, 1006-9999
Oregon	SID	2	Room and board charges	100-219, 230-231, 233-239, 1000-1005
Oregon	SID	3	Anesthesiology charges	370-379
Oregon	SID	4	Laboratory charges	300-319
Oregon	SID	5	Labor and delivery charges	720-729
Oregon	SID	6	Oncology charges	280-289, 330-339
Oregon	SID	7	Operating room charges	360-369, 710-719
Oregon	SID	8	Pharmacy charges	250-269, 630-639
Oregon	SID	9	Radiology charges	320-329, 340-349, 350-359, 400-409, 610-619
Oregon	SID	10	Other charges	All other revenue codes
Rhode Island	SID	1	Room and Board general	011x-018x (excluding 0174)
Rhode Island	SID	2	Room and Board special	020x-021x, 0174
Rhode Island	SID	3	OR/Recovery room charges	036x, 071x, 072x
Rhode Island	SID	4	Anesthesia charges	037x
Rhode Island	SID	5	Supplies & equipment charges	027x, 029x, 062x
Rhode Island	SID	6	Laboratory charges	030x, 031x
Rhode Island	SID	7	Diagnostic tests charges	032x, 0341, 0343, 035x, 040x, 046x, 0470, 0471, 0479, 048x, 061x, 073x, 074x, 075x, 092x
Rhode Island	SID	8	Therapy charges	026x, 028x, 033x, 0340, 0342, 0344, -349, -41x, 042x, 043x, 044x, 0472, 053x, 070x, 0760, 0761, 077x, 079x, 080x, 081x, 088x, 094x, 095x, 210x
Rhode Island	SID	9	Blood charges	038x, 039x
Rhode Island	SID	10	Pharmacy charges	025x, 063x
Rhode Island	SID	11	Other ancillary charges	050x, 054x, 096x, 097x, 098x (excluding 0981)
Rhode Island	SID	12	Patient convenience items charges	099x
South Carolina	SID, SASD, SEDD	1	Room and Board - All Inclusive Rate	100-101
South Carolina	SID, SASD, SEDD	2	Room and Board - General medical charges	110, 120, 130, 140, 150, 111-113, 121-123, 190-194, 199, 151-133, 131-143, 151-153
South Carolina	SID, SASD, SEDD	3	Room and Board - Psych charges	114, 124, 134, 144, 154
South Carolina	SID, SASD, SEDD	4	Room and Board - Hospice charges	115, 125, 135, 145, 155
South Carolina	SID, SASD, SEDD	5	Room and Board - Detox charges	116, 126, 136, 146, 156
South Carolina	SID, SASD, SEDD	6	Room and Board - Oncology charges	117, 127, 137, 147, 157
South Carolina	SID, SASD, SEDD	7	Room and Board - Rehab charges	118, 128, 138, 148, 158

State	Database	CHGn	Description	UB-92 Revenue Codes
South Carolina	SID, SASD, SEDD	8	Room and Board - Other charges	119, 129, 139, 149, 159, 160, 164, 180, 183, 167, 169, 181-182, 184-185, 189, 224
South Carolina	SID, SASD, SEDD	9	Nursery - Levels I and Other charges	170, 723, 171, 179
South Carolina	SID, SASD, SEDD	10	Nursery - Level II	172
South Carolina	SID, SASD, SEDD	11	Nursery - Level III	173
South Carolina	SID, SASD, SEDD	12	Nursery - Level IV	174
South Carolina	SID, SASD, SEDD	13	ICU charges	200, 201, 202, 208, 209
South Carolina	SID, SASD, SEDD	14	ICU - Pediatric charges	203
South Carolina	SID, SASD, SEDD	15	ICU - Psych charges	204
South Carolina	SID, SASD, SEDD	16	ICU - Intermediate ICU charges	206
South Carolina	SID, SASD, SEDD	17	ICU - Burn Unit charges	207
South Carolina	SID, SASD, SEDD	18	Coronary Care charges	210, 211, 212, 213, 219
South Carolina	SID, SASD, SEDD	19	Coronary Care - Intermediate CCU charges	214
South Carolina	SID, SASD, SEDD	20	Special charges	220-229
South Carolina	SID, SASD, SEDD	21	Nursing acuity charges	230, 231-235, 239
South Carolina	SID, SASD, SEDD	22	All Inclusive Ancillary	240-249
South Carolina	SID, SASD, SEDD	23	Pharmacy charges	250, 253-256, 258, 634-636, 251, 252, 257, 259, 630-633, 637
South Carolina	SID, SASD, SEDD	24	IV Therapy charges	260-264, 269, 640-649
South Carolina	SID, SASD, SEDD	25	Supplies charges	270-279, 621-624
South Carolina	SID, SASD, SEDD	26	Oncology charges	280, 289
South Carolina	SID, SASD, SEDD	27	Equipment charges	290-299
South Carolina	SID, SASD, SEDD	28	Laboratory charges	300-309, 310, 311, 312, 314, 319
South Carolina	SID, SASD, SEDD	29	Radiology - Diagnostic charges	320, 321-324, 329
South Carolina	SID, SASD, SEDD	30	Radiology - Therapeutic services charges	330, 333, 339
South Carolina	SID, SASD, SEDD	31	Chemotherapy charges	331, 332, 335
South Carolina	SID, SASD, SEDD	32	Linear Accelerator	not specified
South Carolina	SID, SASD, SEDD	33	Nuclear medicine charges	340-349
South Carolina	SID, SASD, SEDD	34	CT scan charges	350-359
South Carolina	SID, SASD, SEDD	35	Operating room charges	360-369
South Carolina	SID, SASD, SEDD	36	Anesthesia charges	370-379
South Carolina	SID, SASD, SEDD	37	Blood charges	380-389, 390-399, 999
South Carolina	SID, SASD, SEDD	38	Other Imaging charges	404-403, 409
South Carolina	SID, SASD, SEDD	39	PET Scan charges	404
South Carolina	SID, SASD, SEDD	40	Respiratory therapy charges	410-413, 419
South Carolina	SID, SASD, SEDD	41	Physical therapy charges	420-429
South Carolina	SID, SASD, SEDD	42	Occupational therapy charges	430-439
South Carolina	SID, SASD, SEDD	43	Speech and Audiology charges	440-449, 470-479
South Carolina	SID, SASD, SEDD	44	Emergency room charges	450-459
South Carolina	SID, SASD, SEDD	45	Pulmonary function charges	460-469
South Carolina	SID, SASD, SEDD	46	Cardiology charges	480, 482-489
South Carolina	SID, SASD, SEDD	47	Cath lab charges	481
South Carolina	SID, SASD, SEDD	48	Ambulatory surgical care (ASC) charges	490-499
South Carolina	SID, SASD, SEDD	49	Outpatient services - general charges	500, 509, 761
South Carolina	SID, SASD, SEDD	50	Outpatient Clinic services charges	510-517, 519
South Carolina	SID, SASD, SEDD	51	Outpatient Clinic - freestanding charges	520-523, 526, 529
South Carolina	SID, SASD, SEDD	52	Other Inpatient services charges	530-539, 560-569, 700, 709, 780-789, 920-929
South Carolina	SID, SASD, SEDD	53	Ambulance services charges	540-549
South Carolina	SID, SASD, SEDD	54	Skilled Nursing charges	550-559
South Carolina	SID, SASD, SEDD	55	Home Health Agency (HHA) charges	570-572, 579, 580-583, 589, 590, 599, 600-604, 609, 660-663, 669
South Carolina	SID, SASD, SEDD	56	MRI charges	610-619
South Carolina	SID, SASD, SEDD	57	Hospice charges	650-659
South Carolina	SID, SASD, SEDD	58	Outpatient Special Resident charges	670-672, 679
South Carolina	SID, SASD, SEDD	59	Recovery room charges	710-719
South Carolina	SID, SASD, SEDD	60	Labor room/delivery charges	720-729
South Carolina	SID, SASD, SEDD	61	EKG charges	730-739
South Carolina	SID, SASD, SEDD	62	EEG charges	740-749
South Carolina	SID, SASD, SEDD	63	Gastro Intestinal charges	750-759
South Carolina	SID, SASD, SEDD	64	Observation Beds charges	760, 762, 769
South Carolina	SID, SASD, SEDD	65	Preventative Care services charges	770, 779
South Carolina	SID, SASD, SEDD	66	Vaccine Administration charges	771
South Carolina	SID, SASD, SEDD	67	Lithotripsy charges	790-799
South Carolina	SID, SASD, SEDD	68	Renal Dialysis - Inpatient charges	800-804, 809
South Carolina	SID, SASD, SEDD	69	Organ acquisition charges	810-814, 819

State	Database	CHGn	Description	UB-92 Revenue Codes
South Carolina	SID, SASD, SEDD	70	Dialysis Outpatient charges	820-825 829, 830-835, 839, 840-845, 849, 850-855, 859, 880-882, 889
South Carolina	SID, SASD, SEDD	71	Psychiatric/Psychol services charges	900-907, 909-919
South Carolina	SID, SASD, SEDD	72	Other Therapy Rehabilitation charges	940-942, 946-947, 949
South Carolina	SID, SASD, SEDD	73	Cardiac rehabilitation charges	943
South Carolina	SID, SASD, SEDD	74	Alcohol and Drug rehabilitation charges	944-945
South Carolina	SID, SASD, SEDD	75	Professional fees - Providers and Other Specialists charges	960-964, 969
South Carolina	SID, SASD, SEDD	76	Professional fees - Therapies and Lab charges	971-979
South Carolina	SID, SASD, SEDD	77	Professional fees - Other and Outpatient services charges	981-989
South Carolina	SID, SASD, SEDD	78	Patient Convenience charges	990-998
South Dakota	SID	1	Room	11x-16x, 230, 232, 235, 239
South Dakota	SID	2	Nursery	17x, 231
South Dakota	SID	3	Intensive Care Unit	20x, 21x, 233, 234
South Dakota	SID	4	Pharmacy	25x, 63x
South Dakota	SID	5	Medical/Surgical Supplies	27x, 62x
South Dakota	SID	6	Laboratory	30x, 31x
South Dakota	SID	7	MRI and CAT Scans	35x, 61x
South Dakota	SID	8	Therapeutic Radiology	33x
South Dakota	SID	9	Other imaging services	32x, 40x
South Dakota	SID	10	Nuclear Medicine	34x
South Dakota	SID	11	Operating Room	36x
South Dakota	SID	12	Anesthesia	37x
South Dakota	SID	13	Respiratory Therapy	41x
South Dakota	SID	14	Physical Therapy	42x
South Dakota	SID	15	Uncovered	253, 99x
South Dakota	SID	16	Professional Fees	96x, 97x, 98x
South Dakota	SID	17	Treatment or Observation Room	76x
South Dakota	SID	18	Ambulatory Surgical Care	49x
South Dakota	SID	19	Emergency Room	45x
South Dakota	SID	20	Recovery Room	71x
South Dakota	SID	21	Labor/Delivery Room	72x
South Dakota	SID	22	Other	All other revenue codes
South Dakota	SID	23	Professional component charges	Not applicable
Utah	SEDD	1	Facility charges	10x-94x
Utah	SEDD	2	Professional charges	95x-98x
Utah	SEDD	3	Emergency department charges	45x
Utah	SID	1	Facility charges	10x-94x
Utah	SID	2	Professional charges	95x-98x
Utah	SID	3	Emergency department charges	45x
Utah	SID	4	Patient Convenience Items Charge	99x
Virginia	SID	1	Room and Board	100-171
Virginia	SID	2	Routine Care	176-199, 220-232, 235-239, 500-529, 550-569, 650-659, 910-919, 990-999
Virginia	SID	3	Special Care (Intensive Care)	172-175, 200-219, 233-234
Virginia	SID	4	Anesthesiology	370-379
Virginia	SID	5	Pharmacy	250-269
Virginia	SID	6	Radiology	320-339, 400-409
Virginia	SID	7	MRI/CT	350-359, 610-619
Virginia	SID	8	Nuclear Medicine	340-349
Virginia	SID	9	Clinical Lab	300-319
Virginia	SID	10	Labor/Delivery Room	720-729
Virginia	SID	11	Operating Room	360-369, 490-499, 710-719
Virginia	SID	12	Oncology	280-289
Virginia	SID	13	Medical/Surgical Supplies	270-279
Virginia	SID	14	Other charges	All other revenue codes

Appendix C.1: Groups of UB-92 Revenue Code for Benchmark Reporting

Inpatient room & board

010x flat fee charge
 011x-018x room and board
 022x special charges
 024x ancillary svcs

Professional fees

023x incremental RN charge
 053x osteopathic svc
 055x skilled nursing
 056x social services
 096x-098x professional fees

Emergency services

045x ED
 054x ambulance
 068x trauma response

General place of service charges

310x adult day care
 019x subacute care
 057x-060x, 064x home health
 065x-066x hospice, respite
 067x outpt residence
 076x observation svcs
 050x-052x outpt svc, clinic

Medical specialty services

028x oncology
 075x GI svcs
 049x amb surg
 048x cardiology
 070x cast room
 072x labor, delivery

Intensive care

020x ICU
 021x coronary care

Surgery

036x OR
 037x anesthesia

Ambulatory Surgical Care

490x AS general
 499x AS other

Diagnostic services - Laboratory

030x lab
 031x path
 092x other diagnostic svc

Diagnostic services - Imaging

032x diag radiology
 034x nuc med
 035x CT scan
 040x other imaging
 073x EKG
 074x EEG
 061x MRI

Other therapeutic services - Medical

025x, 063x pharm
 026x IV
 038x, 039x blood
 080x, 082x-088x dialysis
 033x Rx radiology and/or chemo
 079x ESWT
 027x, 029x, 062x med surg supplies devices, DME

Other therapeutic services - Ancillary services

041x, 046x respiratory rx, pulm fct
 042x-044x, 047x, 093x PT, OT, speech path, audiology, med rehab
 090x-091x, 100x behavioral health
 210x alternative Rx
 094x-095x other Rx svcs

Appendix C.2: Percentage of Records with Different Groups of UB-92 Revenue Codes - All Discharges

	Percent of Discharges with <i>Inpatient Room & Board Revenue Codes</i>	Percent of Discharges with <i>Professional Fees Revenue Codes</i>	Percent of Discharges with <i>General place of service charges</i>	Percent of Discharges with <i>Medical Specialty Services</i>	Percent of Discharges with <i>Intensive Care Revenue Codes</i>	Percent of Discharges with <i>Surgery Revenue Codes</i>	Percent of Discharges with <i>Major Diagnostic or Therapeutic Procedures that have Surgery Revenue Codes</i>	Percent of Discharges with <i>Ambulatory Surgery Care Revenue Codes</i>	Percent of Discharges with <i>Diagnostic Services-Laboratory</i>	Percent of Discharges with <i>Diagnostic Services - Imaging</i>	Percent of Discharges with <i>Other therapeutic services - Medical</i>	Percent of Discharges with <i>Other therapeutic services - Ancillary Services</i>
	All Discharges	All Discharges	All Discharges	All Discharges	All Discharges	All Discharges	All Discharges	All Discharges	All Discharges	All Discharges	All Discharges	All Discharges
SID												
Minimum	85.62	0.08	5.16	24.67	12.77	24.30	68.61	0.00	93.31	61.24	82.96	40.01
Maximum	95.49	42.47	12.06	41.21	24.73	39.70	87.37	3.46	97.66	78.98	99.65	60.76
Range	9.88	42.39	6.90	16.54	11.96	15.39	18.76	3.46	4.35	17.74	16.70	20.76
Mean	89.97	13.15	7.93	31.48	19.25	32.91	80.40	1.29	95.77	68.73	97.38	54.10
KY	89.53	17.61	8.89	29.91	20.57	33.00	80.86	0.05	97.50	73.76	98.91	55.14
MA	94.52	11.76	9.64	31.37	13.64	34.27	81.38	3.46	95.28	70.59	96.61	60.76
ME	93.56	42.47	6.02	29.06	15.17	29.28	79.46	1.73	93.43	66.52	98.49	53.16
MN	92.89	26.77	12.06	29.85	14.84	32.96	80.88	3.44	93.80	62.53	98.40	50.46
NC	87.18	24.53	7.01	33.19	22.45	32.20	80.19	0.94	96.68	69.48	98.73	54.26
NE	89.84	1.99	5.31	32.95	18.01	34.41	75.88	0.82	96.21	63.21	99.65	56.21
NV	91.44	9.56	6.62	41.21	22.15	37.28	86.70	0.03	97.14	69.36	99.19	58.21
NY	95.49	3.72	5.16	24.67	12.77	24.30	68.61	1.38	93.31	67.22	82.96	40.01
PA	85.62	5.61	6.36	33.00	24.73	32.98	80.94	2.59	95.97	73.09	98.58	58.54
TN	87.27	0.08	9.30	32.82	21.36	33.68	79.41	1.20	97.66	72.20	98.74	54.27
TX	87.14	5.52	8.42	32.28	21.99	34.76	83.84	0.16	96.28	65.33	98.51	53.58
VT*	-	-	-	-	-	-	-	-	-	-	-	-
WA	88.15	0.98	6.25	27.43	19.92	39.70	87.37	0.00	95.08	61.24	97.53	52.36
WV	86.97	20.31	11.97	31.54	22.66	29.08	79.62	0.94	96.64	78.98	99.64	56.30
SASD												
Minimum	0.00	0.00	5.79	11.71	0.00	25.00	75.71	1.54	38.20	15.79	46.80	3.25
Maximum	0.50	22.48	28.56	18.51	0.06	75.11	93.79	26.89	66.38	37.60	94.17	10.07
Range	0.50	22.48	22.77	6.81	0.06	50.10	18.08	25.36	28.19	21.81	47.37	6.83
Mean	0.12	6.29	14.34	14.57	0.01	55.13	86.72	9.70	50.76	26.55	80.79	7.34
KY	0.01	6.53	9.55	14.51	0.00	75.11	93.79	1.54	53.75	30.71	94.08	7.06
MD	0.50	0.00	8.74	11.82	0.00	65.93	#	6.58	51.92	29.13	87.66	8.16
ME	0.00	22.48	11.18	11.71	0.00	25.00	85.79	5.61	66.38	20.06	46.80	3.25
MN	0.01	11.39	21.29	14.01	0.00	41.93	87.70	11.29	44.28	27.67	78.47	6.30
NE	0.01	2.62	28.56	17.95	0.00	47.28	75.71	9.47	38.20	24.91	86.55	10.07
NY	0.07	0.95	5.79	13.44	0.00	72.24	84.61	26.89	50.23	15.79	77.80	9.04
TN	0.24	0.06	15.24	18.51	0.06	58.40	92.75	6.55	50.53	37.60	94.17	7.47
VT*	-	-	-	-	-	-	-	-	-	-	-	-
SEDD												
Minimum	0.00	0.00	1.38	0.46	0.00	0.08	82.19	0.00	32.19	36.24	48.31	5.00
Maximum	0.09	74.70	4.01	0.94	0.03	0.47	87.28	0.07	43.14	47.83	65.72	11.46
Range	0.09	74.70	2.63	0.48	0.03	0.39	5.10	0.07	10.94	11.59	17.40	6.46
Mean	0.03	20.98	2.90	0.71	0.01	0.26	85.65	0.03	38.46	42.02	59.02	8.54
MD	0.06	0.00	3.81	0.71	0.01	0.33		0.00	38.91	44.62	65.72	5.81
ME	0.00	74.70	1.38	0.53	0.00	0.28	87.28	0.06	32.19	36.24	48.31	5.00
MN	0.01	23.79	2.65	0.46	0.00	0.08	86.05	0.01	38.69	38.12	55.55	9.16
NE	0.00	6.31	4.01	0.94	0.00	0.14	87.10	0.00	39.36	43.27	63.18	11.46
TN	0.09	0.08	2.65	0.91	0.03	0.47	82.19	0.07	43.14	47.83	62.35	11.27
VT*	-	-	-	-	-	-	-	-	-	-	-	-

Maryland does not provide the ICD-9-CM procedure codes necessary to identify major procedures.

*Vermont only uses 2 digit revenue codes so analysis wasn't available

Appendix C.3: Percentage of Records with Different Groups of UB-92 Revenue Codes - Discharges Admitted through the Emergency Department

	Percent of Discharges with <i>Inpatient Room & Board Revenue Codes</i>	Percent of Discharges with <i>Professional Fees Revenue Codes</i>	Percent of Discharges with <i>Emergency Services Revenue Codes</i>	Percent of Discharges with <i>General place of service charges</i>	Percent of Discharges with <i>Medical Specialty Services</i>	Percent of Discharges with <i>Intensive Care Revenue Codes</i>	Percent of Discharges with <i>Surgery Revenue Codes</i>	Percent of Discharges with <i>Indicator of Major Diagnostic or Therapeutic Procedures that have Surgery Revenue Codes</i>	Percent of Discharges with <i>Ambulatory Surgery Care Revenue Codes</i>	Percent of Discharges with <i>Diagnostic Services- Laboratory</i>	Percent of Discharges with <i>Diagnostic Services - Imaging</i>	Percent of Discharges with <i>Other therapeutic services - Medical</i>	Percent of Discharges with <i>Other therapeutic services - Ancillary Services</i>
	ED Admissions	ED Admissions	ED Admissions	ED Admissions	ED Admissions	ED Admissions	ED Admissions	ED Admissions	ED Admissions	ED Admissions	ED Admissions	ED Admissions	ED Admissions
SID													
Minimum	78.62	0.14	77.52	4.10	22.89	15.93	16.00	73.10	0.00	94.88	85.70	83.92	44.47
Maximum	94.50	56.84	97.77	13.26	46.04	35.25	32.03	91.16	3.75	99.34	96.40	99.89	72.09
Range	15.88	56.70	20.25	9.16	23.15	19.32	16.03	18.06	3.75	4.46	10.70	15.97	27.62
Mean	85.62	17.40	92.38	8.69	30.71	27.57	23.16	86.98	1.13	97.97	90.52	98.40	62.70
KY	86.55	22.79	92.62	10.32	28.88	26.93	23.29	89.21	0.06	98.98	91.32	99.84	63.33
MA	93.16	19.48	92.69	11.17	27.99	17.11	23.18	90.75	3.75	97.97	91.19	98.95	69.72
ME	89.73	56.84	89.06	6.19	25.91	22.18	18.77	87.75	0.74	94.88	85.70	99.57	62.19
MN	89.06	36.52	96.04	11.31	25.34	21.92	19.13	88.67	1.89	96.94	86.91	99.31	58.93
NC	83.47	29.02	94.38	8.17	32.90	31.42	23.28	85.58	1.00	98.59	91.36	99.45	61.09
NE	83.00	3.27	91.57	5.52	32.23	30.40	21.93	82.64	1.09	98.19	86.98	99.68	64.58
NV	87.17	11.55	97.77	10.72	46.04	33.37	32.03	91.16	0.04	98.99	96.40	99.77	72.09
NY	94.50	5.39	77.52	4.10	24.18	15.93	16.00	73.10	1.33	95.65	85.89	83.92	44.47
PA	79.54	7.15	95.33	5.63	34.40	34.71	22.61	87.01	2.36	98.55	92.99	99.73	67.16
TN	83.40	0.14	92.78	10.42	32.74	29.08	25.81	85.99	1.35	98.66	91.21	99.62	61.77
TX	78.62	7.43	93.65	8.05	36.07	35.25	26.42	89.00	0.15	98.88	91.46	99.89	58.87
VT*	*	*	*	*	*	*	*	*	*	*	*	*	*
WA	80.44	0.28	92.55	8.09	22.89	32.55	28.24	89.52	0.00	98.01	90.01	99.56	67.44
WV	84.47	26.38	95.01	13.26	29.63	27.59	20.43	90.32	0.91	99.34	95.35	99.88	63.42

Maryland does not provide the ICD-9-CM procedure codes necessary to identify major procedures.

*Vermont only uses 2 digit revenue codes so analysis wasn't available

Appendix D: Definitions of Utilization Flags Using Revenue Codes and ICD-9-CM Procedure Codes, Including Flags that were Dropped (in alphabetic order)

* The **Status** column indicates whether the utilization flag would be defined by only revenue codes, by revenue codes and ICD-9-CM procedures (Dual Flag), or dropped. If the flag is dropped, the reason for exclusion is included in the Comments section.

Utilization Flag	Revenue Codes	Corresponding Procedure CCS or Code	Number of Records Identified by		Number of Records Added by		Status*	Comments
			Revenue Code	Procedure CCS or Code	Procedure CCS or Code	Procedure CCS or Code		
Alternative Therapy Services	2100-2109	None	0	--	--	--	Drop	Not coded in development database.
Anesthesia	370-379	None	814,500	--	--	--	Drop	Seventy-one percent (71%) of records with a major surgical procedure had anesthesia revenue code. See comments under OR.
Anesthesia Professional Fees	963, 964, 974	None	108,547	--	--	--	Drop	Professional fees are not uniformly coded across states and add few records to the utilization flag. ANESTH alone captures 26.3% of the records; ANESTH_PRO captures 3.5% of the records; and combined they capture 27% of the records.
Angiocardiology	321	Procedure Codes 884 and 885	1,884	161,683	--	--	Drop	It appears that revenue codes 321 and 323 are not used appropriately. The distribution of the diagnoses include a mixture of peripheral and coronary atherosclerosis. This procedure tends to be reported under the cardiac cath revenue code (481). Angiography/arteriography procedures codes (884 and 885) identify 161,683 records. The revenue codes of 321 (Diag-ANGIOCARDIOGRAPHY) and 323 (Diag-ARTERIOGRAPHY) are present on only 7.5% of these records. Revenue code 481 (cardiac cath) is coded on 76% of the records.
Arteriography	323	Procedure Codes 884 and 885	15,418	161,683	--	--	Drop	See note under Diag - Angiocardiology.
Arthrography	322	None	229	--	--	--	Drop	Low yield.

Utilization Flag	Revenue Codes	Corresponding Procedure CCS or Code	Number of Records Identified by		Number of Records Added by	Status*	Comments
			Revenue Code	Procedure CCS or Code	Procedure CCS or Code		
Blood Products and Administration (U_BLOOD)	380-389, 390-399	CCS 222: Blood transfusion	362,282	139,668	6,852	Dual Flag	Including the revenue codes for blood storage captures many more records and almost all blood transfusion records. Apparently there is some confusion about whether it is permissible to bill for blood products – varies by state (according to: http://www.cap.org/apps/docs/cap_today/feature_stories/bloodandmoney.html).
Blood Products Only	380-389	CCS 222: Blood transfusion	22,400	139,668	133,225	Drop	Revenue Codes 380-389 are not coded on many of the records with a blood transfusion procedure. Need to use 380-389 and 390-399 (blood admin) to capture appropriate records.
Cardiac Catheterization Lab (U_CATH)	481	CCS 47: Diagnostic cardiac catheterization; coronary arteriography	144,067	135,230	9,990	Dual Flag	
Cardiac rehabilitaion	943	Procedure code 93.36 (Cardiac retraining)	18,949	8	4	Drop	Check overlap.
Cardiac Stress Test (U_STRESS)	482	CCS 201: Cardiac stress tests	86,590	9,016	3,071	Dual Flag	
Chest x-ray (U_CHESTXRAY)	324	Procedures 8744 (Routine Chest Xray) and 8749 (Other Chest Xray)	773,935	2,269	1,805	Dual Flag	
Coronary Care Unit (U_CCU)	210-219	None	199,249	--	--	Revenue Code	Of the 199,249 records coded as CCU, 163,358 (82%) are coded with a CCU revenue code and not an ICU revenue codes. 36,891 records have both ICU and CCU coded. Keep separate flags.

Utilization Flag	Revenue Codes	Corresponding Procedure CCS or Code	Number of Records Identified by		Number of Records Added by	Status*	Comments
			Revenue Code	Procedure CCS or Code	Procedure CCS or Code		
CCU Nurse	234	None	38,232	--	--	Drop	Revenue Code 234 is for nursing charges in addition to the room and board. You need to have a combination of 0234 and 0210-0219 (CCU) on the same days for it to indicate CCU care. Do not use or combine with CCU.
CT Scan (U_CTSCAN)	350-359	CCS 177: Computerized axial tomography (CT) scan head CCS 178: CT scan chest CCS 179: CT scan abdomen CCS 180: Other CT scan	656,568	22,209	630	Dual Flag	
Device - Intraocular lens	276	None	392	--	--	Drop	Low yield.
Device -Other Implants (U_OTHIMPLANTS)	278	None	312,796	--	--	Revenue Code	Review of the top 25 procedures and diagnoses seems sensible.
Device - Pacemaker (U_PACEMAKER)	275	CCS 48: Insertion; revision; replacement; removal of cardiac pacemaker or cardioverter/defibrillator	25,570	25,562	6,681	Dual Flag	
Echocardiogram (U_ECHO)	483	Procedures 0024 (Intravascular echocardiography), 3728 (Intracardiac echocardiography), 8872 (Diagnostic ultrasound of heart)	115,391	47,868	32,900	Dual Flag	

Utilization Flag	Revenue Codes	Corresponding Procedure CCS or Code	Number of Records Identified by		Number of Records Added by	Status*	Comments
			Revenue Code	Procedure CCS or Code	Procedure CCS or Code		
Electrocardiogram (U_EKG)	730, 731, 739 (exclude 732)	CCS 202: Electrocardiogram	1,304,328	4,712	223	Dual Flag	Telemetry (revenue code 0732) is excluded from this range because it is more resource intensive than the other EKG services, involving continuous monitoring of heart function. Telemetry is a mechanism used in CCU, but can also be used for any remote transmission of data.
EKG Professional Fees	985	None	155,965	--	--	Drop	Professional fees are not uniformly coded across states and add few records to the utilization flag. ECG captures 42.1% (1,304,328 records). ECG_PRO captures 5% (155,965 records). Combined (COMB_ECG) captures 42.2% (1,305,542).
Electroencephalogram (U_EEG)	740-749	Procedure Codes 8914 (Electroencephalogram) and 8919 (Video and radio-telemetered electroencephalographic monitoring)	62,306	4,292	582	Dual Flag	
EEG Professional Fees	986	None	1,968	--	--	Drop	Professional fees are not uniformly coded across states and add few records to the utilization flag. EEG captures 2% of development file (62,306 records). EEG_PRO captures 0.1% (1,968 records). Combined captures 2% (62,338 records).
Electromyelgram	922	None	7,904	--	--	Drop	Low yield.
Emergency Room (U_ED)	450-459	None	1,286,907	--	--	Revenue Code	89.2% percent of the records in this flag have an admission source of ER. The majority of the other records have an admission source of routine. Of the 1.2 million records with an admission source of ER, 6% do not have a revenue code for ER services.

Utilization Flag	Revenue Codes	Corresponding Procedure CCS or Code	Number of Records Identified by		Number of Records Added by		Status*	Comments
			Revenue Code	Procedure CCS or Code	Procedure CCS or Code	Procedure CCS or Code		
Emergency Room Professional Fees	981	None	105,322	--	--	--	Drop	Professional fees are not uniformly coded across states and add few records to the utilization flag. ER captures 41.6% (1,286,907 records). ER_PRO captures 3.4% (105,322 records). Combined (COMB_ER) captures 41.6% (1,287,691).
Erythropoietin (U_EPO)	634-635	None	11,406	--	--	Revenue Code	Drop	Half received dialysis.
Hospice	115, 125, 135, 145, 155, 650-659	None	1,948	--	--	--	Drop	Low yield.
Hospice Nurse	235	None	0	--	--	--	Drop	Not coded in development database.
Intensive Care Unit (U_ICU)	200-209	None	461,120	--	--	Revenue Code	Drop	Of the 461,120 records coded as ICU, 425,229 (92%) are coded with an ICU revenue code and not a CCU revenue codes. 35,891 records have both ICU and CCU coded. Keep separate flags.
ICU Nurse	233	None	89,451	--	--	--	Drop	Revenue Code 233 is for both ICU and transitional care, which is usually a monitored level of care, but not needing quite as intense a level of nursing care as ICU. Because these are for charges in addition to the room and board, you need to have a combination of 0233 and 0200-0209 (ICU) on the same days for it to be ICU care.
IV Therapy	260-269	None	573,865	--	--	--	Drop	Implausibly low. The IV Therapy revenue code includes pharmacy/drug services.

Utilization Flag	Revenue Codes	Corresponding Procedure CCS or Code	Number of Records Identified by		Number of Records Added by	Status*	Comments
			Revenue Code	Procedure CCS or Code	Procedure CCS or Code		
Lithotripsy (U_LITHOTRIPSY)	790-799	Procedures 9851 (ESWT of the kidney, ureter, and/or bladder), 9852 (ESWT of the gall bladder and/or bile duct), 9859 (ESWT of other sites)	495	869	477	Dual Flag	
Magnetic Resonance Technology (U_MRT)	610-619	CCS 198: Magnetic resonance imaging	143,212	8,922	800	Dual Flag	
Medical Social Services	560-569	None	1,409	--	--	Drop	Low yield.
Medical Social Services Professional Fees	984	None	1	--	--	Drop	Professional fees are not uniformly coded across states and add few records to the utilization flag. The one record with MEDSOCSERV_PRO was also in MEDSOCSERV.
Mental Health and Substance Abuse (U_MHSA)	114, 116, 124, 126, 134, 136, 144, 146, 154, 156, 513, 900-919, 944-945, 1001-1002	CCS 218: Psychological and psychiatric evaluation and therapy CCS 219: Alcohol and drug rehabilitation/detoxification	140,726	35,272	12,965	Dual Flag	
Mental Health and Substance Abuse Professional Fees	961	None	9,226	--	--	Drop	Professional fees are not uniformly coded across states and add few records to the utilization flag. MHSA captures 4.5% (140,726 records). MHSA_PRO captures 0.3% (9,226 records). Combined (COMB_MHSA) captures 4.6% (142,003).

Utilization Flag	Revenue Codes	Corresponding Procedure CCS or Code	Number of Records Identified by		Number of Records Added by	Status*	Comments
			Revenue Code	Procedure CCS or Code	Procedure CCS or Code		
Newborn Level II (U_NEWBN2)	172	None	17,474	--	--	Revenue Code	Level II (takes infants 32 weeks or more, 3 lb. 5 oz. or more) = 17,474 Level III (<32 weeks, < 3 lb. 5 oz.) = 17,429 Level IV (most complex cases) = 15,076 Any Level II to IV = 30,051 Level II only = 11,499 (38.3%) Level III only = 0 Level IV only = 7,705 (25.6%) Some combination = 10,847 (36.1%) Keep as 3 separate flags which could be combined by user.
Newborn Level III (U_NEWBN3)	173	None	17,429	--	--	Revenue Code	See comment under Nursery Level II.
Newborn Level IV (_NEWBN4)	174	None	15,076	--	--	Revenue Code	See comment under Nursery Level II.
Nuclear Medicine (U_NUCMED)	340-349	Procedures 9201-9209 (Radioisotope scan and function study), 9211-9219 (Other radioisotope scan), 9220-9229 (Therapeutic radiology and nuclear medicine), 9230-9239 (Stereotactic Radiosurgery)	172,929	17,090	8,984	Dual Flag	
Observation & Treatment Rm	760-769	None	208,642	--	--	Drop	Average length of stay of 5.1 days. Drop because treatment room and observation room are very different in terms of resource utilization. Observations services alone would be more beneficial.
Observation Rm - Only (U_OBSERVATION)	762	None	94,334	--	--	Revenue Code	Average length of stay of 3.3 days.

Utilization Flag	Revenue Codes	Corresponding Procedure CCS or Code	Number of Records Identified by		Number of Records Added by		Status*	Comments
			Revenue Code	Procedure CCS or Code	Procedure CCS or Code	Procedure CCS or Code		
Treatment Rm - Only	760-769, excluding 762	None	120,055	--	--	--	Drop	Average length of stay of 6.4. Decided to drop because revenue codes 760 and 769 may include some observation services.
Occupational Therapy (U_OCCTHERAPY)	430-439	Procedure code 9383	294,120	15,010	4,407		Dual Flag	
Occupational Therapy Professional Fees	978	None	2	--	--	--	Drop	Professional fees are not uniformly coded across states and add few records to the utilization flag. Only two records in development database.
Operating Room	360-369	None	937,320	--	--	--	Drop	934,493 observations in the data development file have a major procedure. -197,846 (21%) of these are not captured by the OR revenue code. -184,459 (20%) of these are not captured by the OR and recovery revenue codes. -158,556 (17%) of these are not captured by the OR, recovery, and anesthesia revenue codes. Surgery, recovery room, and anesthesia revenue codes do not capture all surgical discharges. The HCUP tool for identifying major and minor diagnostic and therapeutic procedures is more accurate.
Operating Room Professional Fees	975	None	632	--	--	--	Drop	Professional fees are not uniformly coded across states and add few records to the utilization flag. OR captures 30.3% (937,320 records). OR_PRO captures 0.03% (632 records). Combined (COMB_OR) captures 30.3% (937,811).
Organ Acquisition (U_ORGANACQ)	810-819	None	2,445	--	--	Revenue Code		No ICD-9-CM procedure codes are included in this definition because there is only one code for the excision of donor tissue specifically for transplantation (4191 - Aspiration of bone marrow from donor for transplant).

Utilization Flag	Revenue Codes	Corresponding Procedure CCS or Code	Number of Records Identified by		Number of Records Added by	Status*	Comments
			Revenue Code	Procedure CCS or Code	Procedure CCS or Code		
Physical Therapy (U_PHYTHERAPY)	420-429	CCS 212 (Diagnostic physical therapy) and CCS 213 (Physical therapy exercises, manipulation, and other procedures)	617,968	19,880	2,534	Dual Flag	
Physical Therapy Professional Fees	977	None	0	--	--	Drop	Professional fees are not uniformly coded across states and add few records to the utilization flag. No records in development database.
Positron Emission Tomography (PET) Scan	404	None	1,261	--	--	Drop	Low yield.
Recovery Room	710-719	None	745,494	--	--	Drop	See comment under OR.
Renal Dialysis (U_DIALYSIS)	800-809	Procedures 3995 (Hemodialysis), 5498 (peritoneal dialysis)	51,147	47,195	5,401	Dual Flag	Adding revenue codes for non-routine and outpatient home dialysis would add 2,476 records.
Renal Dialysis (NonRoutine)	304	None	40	--	--	Drop	Low yield. Handful of records in 4 of the 5 states (not WA).
Renal Dialysis (Outpatient/Home)	820-859, 880-889	None	3,715	--	--	Drop	Low yield. Similar counts in 4 of the 5 states; very few records from the fifth state, WA.
Respiratory Services (U_RESPTHERAPY)	410-419	Procedure codes: 93.90-93.99, 96.70-96.72	722,485	91,388	8,855	Dual Flag	Revenue codes for Pulmonary Function (046x) are not being included with respiratory services (041x). 041x is for the respiratory therapy based on the results of the tests. The tests themselves would be coded to the 046x. Mechanical ventilation codes are included because they involve some respiratory therapy.

Utilization Flag	Revenue Codes	Corresponding Procedure CCS or Code	Number of Records Identified by		Number of Records Added by	Status*	Comments
			Revenue Code	Procedure CCS or Code	Procedure CCS or Code		
Respiratory Services Professional Fees	976	None	2,048	--	--	Drop	Professional fees are not uniformly coded across states and add few records to the utilization flag. RESPSERV captures 23.3% (722,485 records). RESPSERV_PRO captures 0.1% (2,048 records). Combined captures 23.4% (723,088).
Speech-Language Pathology (U_SPEECHTHERAPY)	440-449	Procedure codes: 93.71-93.75	119,288	4,577	1,007	Dual Flag	
Speech-Language Pathology Professional Fees	979	None	0	--	--	Drop	Professional fees are not uniformly coded across states and add few records to the utilization flag. No records in development database.
Subacute	190-199	None	0	--	--	Drop	Not coded in development database.
Theurapeutic Radiology and Chemotherapy (U_RADTHERAPY)	330-339	CCS 211: Therapeutic radiology for cancer treatment CCS 224: Cancer Chemotherapy	18,784	28,724	19,061	Dual Flag	
Trauma Level I	681	None	2,376	--	--	Drop	Low yield.
Trauma Level II	682	None	1,385	--	--	Drop	Low yield.
Trauma Level III	683	None	184	--	--	Drop	Low yield.
Trauma Level IV	684	None	127	--	--	Drop	Low yield.
Trauma Other	689	None	0	--	--	Drop	Not coded in development database.

Utilization Flag	Revenue Codes	Corresponding Procedure CCS or Code	Number of Records Identified by		Number of Records Added by	Status*	Comments
			Revenue Code	Procedure CCS or Code	Procedure CCS or Code		
Ultrasound (U_ULTRASOUND)	402	CCS 192: Diagnostic ultrasound of head and neck CCS 194: Diagnostic ultrasound of gastrointestinal tract CCS 195: Diagnostic ultrasound of urinary tract CCS 196: Diagnostic ultrasound of abdomen or retroperitoneum CCS 197: Other diagnostic ultrasound Procedure code 95.13: Ultrasound study of eye	294,923	11,986	5,314	Dual Flag	

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Intensive Care Unit (ICU)
SAS name: U_ICU

Number of records identified by flag: 461,120
Percentage of records: 14.9%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	37028.14
Min	37.00
10%	5892.00
25%	10341.00
50%	20811.50
75%	42587.00
90%	80280.00
Maximum	996285.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 62.87

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
101: Coronary atherosclerosis	40,841	8.86	92,889	43.97
100: Acute myocardial infarction	32,949	7.15	63,009	52.29
108: Congestive heart failure, nonhyperte	24,051	5.22	81,174	29.63
106: Cardiac dysrhythmias	18,466	4.00	55,775	33.11
102: Nonspecific chest pain	17,357	3.76	71,011	24.44
122: Pneumonia (except that caused by tub	16,759	3.63	108,707	15.42
109: Acute cerebrovascular disease	16,178	3.51	46,308	34.94
131: Respiratory failure, insufficiency,	14,191	3.08	23,045	61.58
237: Complication of device, implant or g	10,586	2.30	49,925	21.20
50: Diabetes mellitus with complications	9,469	2.05	36,165	26.18
2: Septicemia (except in labor)	8,821	1.91	28,567	30.88
153: Gastrointestinal hemorrhage	8,741	1.90	28,445	30.73
127: Chronic obstructive pulmonary diseas	8,087	1.75	55,655	14.53
233: Intracranial injury	7,285	1.58	12,797	56.93
110: Occlusion or stenosis of precerebral	6,806	1.48	12,132	56.10
238: Complications of surgical procedures	6,076	1.32	38,082	15.96
242: Poisoning by other medications and d	5,765	1.25	11,880	48.53
83: Epilepsy, convulsions	5,066	1.10	19,591	25.86
157: Acute and unspecified renal failure	5,040	1.09	18,019	27.97
99: Hypertension with complications and	5,021	1.09	15,695	31.99
96: Heart valve disorders	4,700	1.02	7,087	66.32
55: Fluid and electrolyte disorders	4,496	0.98	47,395	9.49
19: Cancer of bronchus, lung	4,414	0.96	13,210	33.41
115: Aortic, peripheral, and visceral art	4,391	0.95	6,621	66.32
114: Peripheral and visceral atherosclero	4,352	0.94	12,516	34.77

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 55.36

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
47: Diagnostic cardiac catheterization,	58,112	12.60	135,230	42.97
216: Respiratory intubation and mechanical	57,943	12.57	84,487	68.58
54: Other vascular catheterization, not	46,335	10.05	112,473	41.20
222: Blood transfusion	44,256	9.60	139,668	31.69
63: Other non-O.R. therapeutic cardiovas	30,638	6.64	75,558	40.55
45: Percutaneous coronary angioplasty (P	25,491	5.53	62,846	40.56
70: Upper gastrointestinal endoscopy, bi	24,440	5.30	93,038	26.27
231: Other therapeutic procedures	24,288	5.27	96,989	25.04
44: Coronary artery bypass graft (CABG)	23,281	5.05	28,725	81.05
50: Extracorporeal circulation auxiliary	22,312	4.84	28,263	78.94
193: Diagnostic ultrasound of heart (echo	18,668	4.05	47,766	39.08
58: Hemodialysis	13,788	2.99	45,334	30.41
61: Other O.R. procedures on vessels oth	13,517	2.93	27,490	49.17
39: Incision of pleura, thoracentesis, c	11,471	2.49	29,243	39.23
37: Diagnostic bronchoscopy and biopsy o	11,406	2.47	24,885	45.83
223: Enteral and parenteral nutrition	10,864	2.36	30,105	36.09
48: Insertion, revision, replacement, re	9,479	2.06	25,562	37.08
76: Colonoscopy and biopsy	9,462	2.05	45,493	20.80
49: Other O.R. heart procedures	8,178	1.77	13,944	58.65
78: Colorectal resection	7,956	1.73	26,364	30.18
225: Conversion of cardiac rhythm	7,764	1.68	15,192	51.11
71: Gastrostomy, temporary and permanent	7,740	1.68	17,461	44.33
1: Incision and excision of CNS	7,575	1.64	8,699	87.08
189: Contrast aortogram	7,180	1.56	16,826	42.67
51: Endarterectomy, vessel of head and n	6,998	1.52	11,137	62.84

**All Listed Procedures
Top 25 Procedures
Percent All Records : 46.81**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
8856: CORONAR ARTERIOGR-2 CATH	51,196	11.10	121,417	42.17
3722: LEFT HEART CARDIAC CATH	49,176	10.66	115,623	42.53
8853: LT HEART ANGIOCARDIOGRAM	43,905	9.52	106,340	41.29
3893: VENOUS CATH NEC	42,663	9.25	102,939	41.44
9904: PACKED CELL TRANSFUSION	38,790	8.41	120,064	32.31
9604: INSERT ENDOTRACHEAL TUBE	33,918	7.36	49,083	69.10
9671: CONT MECH VENT < 96 HRS	33,615	7.29	46,801	71.83
3961: EXTRACORPOREAL CIRCULAT	21,563	4.68	27,255	79.12
3601: PTCA-1 VES/ATH W/O AGENT	21,512	4.67	52,556	40.93
9672: CONT MECH VENT 96+ HRS	18,856	4.09	23,846	79.07
8872: DX ULTRASOUND-HEART	18,668	4.05	47,766	39.08
3615: 1 INT MAM-COR ART BYPASS	18,578	4.03	22,625	82.11
3606: INS NONDRUG ELUT COR ST	15,383	3.34	37,161	41.40
3995: HEMODIALYSIS	13,788	2.99	45,334	30.41
9920: INJ/INF PLATELET INHIBIT	12,349	2.68	31,113	39.69
4513: SM BOWEL ENDOSCOPY NEC	11,670	2.53	38,720	30.14
4516: EGD WITH CLOSED BIOPSY	10,889	2.36	48,882	22.28
3607: INS DRUG-ELUT CORONRY ST	7,817	1.70	20,587	37.97
3612: AORTOCOR BYPAS-2 COR ART	7,752	1.68	9,450	82.03
9907: SERUM TRANSFUSION NEC	7,596	1.65	15,369	49.42
3891: ARTERIAL CATHETERIZATION	7,217	1.57	13,777	52.38
8842: CONTRAST AORTOGRAM	7,180	1.56	16,826	42.67
3812: HEAD & NECK ENDARTER NEC	6,998	1.52	11,137	62.84
3613: AORTOCOR BYPAS-3 COR ART	6,908	1.50	8,692	79.48
0331: SPINAL TAP	6,225	1.35	27,745	22.44

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Coronary Care Unit (CCU)
SAS name: U_CCU
Number of records identified by flag: 199,249
Percentage of records: 6.4%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	28721.17
Min	110.00
10%	5080.00
25%	8542.00
50%	16968.00
75%	34578.00
90%	61827.00
Maximum	973617.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 76.85

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
101: Coronary atherosclerosis	28,625	14.37	92,889	30.82
100: Acute myocardial infarction	26,433	13.27	63,009	41.95
108: Congestive heart failure, nonhyperte	15,497	7.78	81,174	19.09
102: Nonspecific chest pain	15,234	7.65	71,011	21.45
106: Cardiac dysrhythmias	13,763	6.91	55,775	24.68
122: Pneumonia (except that caused by tub	6,110	3.07	108,707	5.62
237: Complication of device, implant or g	4,881	2.45	49,925	9.78
109: Acute cerebrovascular disease	4,188	2.10	46,308	9.04
131: Respiratory failure, insufficiency,	3,603	1.81	23,045	15.63
127: Chronic obstructive pulmonary diseas	3,526	1.77	55,655	6.34
245: Syncope	2,802	1.41	17,369	16.13
96: Heart valve disorders	2,791	1.40	7,087	39.38
153: Gastrointestinal hemorrhage	2,579	1.29	28,445	9.07
99: Hypertension with complications and	2,496	1.25	15,695	15.90
2: Septicemia (except in labor)	2,292	1.15	28,567	8.02
55: Fluid and electrolyte disorders	2,248	1.13	47,395	4.74
50: Diabetes mellitus with complications	2,149	1.08	36,165	5.94
238: Complications of surgical procedures	2,023	1.02	38,082	5.31
157: Acute and unspecified renal failure	1,998	1.00	18,019	11.09
105: Conduction disorders	1,773	0.89	5,426	32.68
97: Peri-, endo-, and myocarditis, cardi	1,758	0.88	6,380	27.55
103: Pulmonary heart disease	1,677	0.84	11,399	14.71
110: Occlusion or stenosis of precerebral	1,633	0.82	12,132	13.46
138: Esophageal disorders	1,621	0.81	15,323	10.58
133: Other lower respiratory disease	1,428	0.72	12,851	11.11

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 57.29

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
47: Diagnostic cardiac catheterization,	51,475	25.83	135,230	38.06
63: Other non-O.R. therapeutic cardiovas	26,951	13.53	75,558	35.67
45: Percutaneous coronary angioplasty (P	26,777	13.44	62,846	42.61
231: Other therapeutic procedures	16,930	8.50	96,989	17.46
44: Coronary artery bypass graft (CABG)	13,516	6.78	28,725	47.05
222: Blood transfusion	13,429	6.74	139,668	9.61
216: Respiratory intubation and mechanica	13,201	6.63	84,487	15.62
50: Extracorporeal circulation auxiliary	12,995	6.52	28,263	45.98
54: Other vascular catheterization, not	11,532	5.79	112,473	10.25
70: Upper gastrointestinal endoscopy, bi	9,367	4.70	93,038	10.07
48: Insertion, revision, replacement, re	8,586	4.31	25,562	33.59
193: Diagnostic ultrasound of heart (echo	8,239	4.14	47,766	17.25
58: Hemodialysis	5,599	2.81	45,334	12.35
49: Other O.R. heart procedures	5,137	2.58	13,944	36.84
225: Conversion of cardiac rhythm	3,982	2.00	15,192	26.21
61: Other O.R. procedures on vessels oth	3,924	1.97	27,490	14.27
189: Contrast aortogram	3,892	1.95	16,826	23.13
39: Incision of pleura, thoracentesis, c	3,554	1.78	29,243	12.15
43: Heart valve procedures	3,426	1.72	8,099	42.30
191: Arterio- or venogram (not heart and	3,254	1.63	17,445	18.65
76: Colonoscopy and biopsy	3,245	1.63	45,493	7.13
62: Other diagnostic cardiovascular proc	3,137	1.57	10,407	30.14
37: Diagnostic bronchoscopy and biopsy o	2,790	1.40	24,885	11.21
201: Cardiac stress tests	2,156	1.08	9,016	23.91
223: Enteral and parenteral nutrition	2,143	1.08	30,105	7.12

**All Listed Procedures
Top 25 Procedures
Percent All Records : 50.2**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
8856: CORONAR ARTERIOGR-2 CATH	45,326	22.75	121,417	37.33
3722: LEFT HEART CARDIAC CATH	44,499	22.33	115,623	38.49
8853: LT HEART ANGIOCARDIOGRAM	40,076	20.11	106,340	37.69
3601: PTCA-1 VES/ATH W/O AGENT	22,650	11.37	52,556	43.10
3606: INS NONDRUG ELUT COR ST	16,376	8.22	37,161	44.07
9920: INJ/INF PLATELET INHIBIT	13,284	6.67	31,113	42.70
3961: EXTRACORPOREAL CIRCULAT	12,718	6.38	27,255	46.66
9904: PACKED CELL TRANSFUSION	11,808	5.93	120,064	9.83
3893: VENOUS CATH NEC	10,587	5.31	102,939	10.28
3615: 1 INT MAM-COR ART BYPASS	10,457	5.25	22,625	46.22
8872: DX ULTRASOUND-HEART	8,239	4.14	47,766	17.25
9604: INSERT ENDOTRACHEAL TUBE	8,187	4.11	49,083	16.68
3607: INS DRUG-ELUT CORONRY ST	8,151	4.09	20,587	39.59
9671: CONT MECH VENT < 96 HRS	7,486	3.76	46,801	16.00
3995: HEMODIALYSIS	5,599	2.81	45,334	12.35
3723: RT/LEFT HEART CARD CATH	4,732	2.37	12,974	36.47
4513: SM BOWEL ENDOSCOPY NEC	4,579	2.30	38,720	11.83
3612: AORTOCOR BYPAS-2 COR ART	4,425	2.22	9,450	46.83
3613: AORTOCOR BYPAS-3 COR ART	4,165	2.09	8,692	47.92
9672: CONT MECH VENT 96+ HRS	4,136	2.08	23,846	17.34
4516: EGD WITH CLOSED BIOPSY	4,091	2.05	48,882	8.37
8842: CONTRAST AORTOGRAM	3,892	1.95	16,826	23.13
3605: PTCA-MULTIPLE VESSEL/ATH	3,753	1.88	9,527	39.39
3783: INT INSERT DUAL-CHAM DEV	3,711	1.86	11,423	32.49
3772: INT INSER LEAD ATRI-VENT	3,668	1.84	11,321	32.40

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Nursery Level II
SAS name: U_NEWBN2L
Number of records identified by flag: 17,474
Percentage of records: 0.6%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	32807.73
Min	239.00
10%	2104.00
25%	4214.00
50%	11446.00
75%	31141.00
90%	73898.00
Maximum	899338.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 99.25

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
218: Liveborn	14,688	84.06	330,415	4.45
219: Short gestation, low birth weight, a	1,082	6.19	3,578	30.24
224: Other perinatal conditions	673	3.85	5,673	11.86
222: Hemolytic jaundice and perinatal jau	372	2.13	3,752	9.91
221: Respiratory distress syndrome	260	1.49	829	31.36
213: Cardiac and circulatory congenital a	59	0.34	3,481	1.69
217: Other congenital anomalies	34	0.19	4,181	0.81
214: Digestive congenital anomalies	26	0.15	1,932	1.35
220: Intrauterine hypoxia and birth asphy	26	0.15	76	34.21
254: Rehabilitation care, fitting of pros	15	0.09	43,124	0.03
256: Medical examination/evaluation	15	0.09	808	1.86
216: Nervous system congenital anomalies	12	0.07	680	1.76
122: Pneumonia (except that caused by tub	11	0.06	108,707	0.01
223: Birth trauma	10	0.06	66	15.15
133: Other lower respiratory disease	8	0.05	12,851	0.06
81: Other hereditary and degenerative ne	7	0.04	3,111	0.23
2: Septicemia (except in labor)	6	0.03	28,567	0.02
7: Viral infections	6	0.03	7,089	0.08
155: Other gastrointestinal disorders	6	0.03	16,758	0.04
58: Other nutritional, endocrine, and me	5	0.03	16,120	0.03
138: Esophageal disorders	5	0.03	15,323	0.03
215: Genitourinary congenital anomalies	5	0.03	991	0.50
76: Meningitis (except that caused by tu	4	0.02	5,357	0.07
87: Retinal detachments, defects, vascul	4	0.02	726	0.55
193: Trauma to perineum and vulva	4	0.02	61,697	0.01

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 61.14

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
115: Circumcision	4,071	23.30	93,342	4.36
231: Other therapeutic procedures	3,657	20.93	96,989	3.77
216: Respiratory intubation and mechanical	2,966	16.97	84,487	3.51
54: Other vascular catheterization, not	2,833	16.21	112,473	2.52
223: Enteral and parenteral nutrition	2,148	12.29	30,105	7.14
228: Prophylactic vaccinations and inocul	1,933	11.06	69,400	2.79
4: Diagnostic spinal tap	479	2.74	27,745	1.73
217: Other respiratory therapy	459	2.63	14,241	3.22
222: Blood transfusion	451	2.58	139,668	0.32
220: Ophthalmologic and otologic diagnosi	255	1.46	10,523	2.42
93: Other non-O.R. upper GI therapeutic	190	1.09	13,757	1.38
227: Other diagnostic procedures (intervi	138	0.79	16,094	0.86
39: Incision of pleura, thoracentesis, c	133	0.76	29,243	0.45
193: Diagnostic ultrasound of heart (echo	80	0.46	47,766	0.17
61: Other O.R. procedures on vessels oth	71	0.41	27,490	0.26
71: Gastrostomy, temporary and permanent	66	0.38	17,461	0.38
85: Inguinal and femoral hernia repair	60	0.34	4,148	1.45
205: Arterial blood gases	59	0.34	4,798	1.23
99: Other O.R. gastrointestinal therapeu	56	0.32	19,446	0.29
96: Other O.R. lower GI therapeutic proc	53	0.30	21,412	0.25
94: Other O.R. upper GI therapeutic proc	50	0.29	20,554	0.24
192: Diagnostic ultrasound of head and ne	45	0.26	2,300	1.96
225: Conversion of cardiac rhythm	43	0.25	15,192	0.28
2: Insertion, replacement, or removal o	42	0.24	3,080	1.36
35: Tracheoscopy and laryngoscopy with b	41	0.23	4,588	0.89

**All Listed Procedures
Top 25 Procedures
Percent All Records : 60.51**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
640 : CIRCUMCISION	4,071	23.30	93,342	4.36
9983: OTHER PHOTOTHERAPY	3,274	18.74	11,390	28.74
9955: VACCINATION NEC	1,916	10.96	66,336	2.89
9604: INSERT ENDOTRACHEAL TUBE	1,914	10.95	49,083	3.90
9915: PARENT INFUS NUTRIT SUB	1,889	10.81	18,796	10.05
9671: CONT MECH VENT < 96 HRS	1,519	8.69	46,801	3.25
3891: ARTERIAL CATHETERIZATION	1,514	8.66	13,777	10.99
3893: VENOUS CATH NEC	1,371	7.85	102,939	1.33
3892: UMBILICAL VEIN CATH	1,283	7.34	4,091	31.36
9390: CONT POS AIRWAY PRESSURE	781	4.47	10,815	7.22
9672: CONT MECH VENT 96+ HRS	682	3.90	23,846	2.86
966 : ENTRAL INFUS NUTRIT SUB	492	2.82	12,410	3.96
0331: SPINAL TAP	479	2.74	27,745	1.73
9396: OXYGEN ENRICHMENT NEC	453	2.59	10,434	4.34
9904: PACKED CELL TRANSFUSION	343	1.96	120,064	0.29
9635: GASTRIC GAVAGE	184	1.05	526	34.98
9982: ULTRAVIOLET LIGHT THERAP	178	1.02	973	18.29
9393: NONMECHAN RESUSCITATION	91	0.52	690	13.19
9547: HEARING EXAMINATION NOS	89	0.51	2,562	3.47
3404: INSERT INTERCOSTAL CATH	85	0.49	12,657	0.67
8961: ARTERIAL PRESSURE MONIT	83	0.47	900	9.22
9543: AUDIOLOGICAL EVALUATION	82	0.47	1,592	5.15
8872: DX ULTRASOUND-HEART	80	0.46	47,766	0.17
9541: AUDIOMETRY	74	0.42	5,449	1.36
9907: SERUM TRANSFUSION NEC	63	0.36	15,369	0.41

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Nursery Level III
SAS name: U_NEWBN3L
Number of records identified by flag: 17,429
Percentage of records: 0.6%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	54658.54
Min	304.00
10%	4450.00
25%	9158.00
50%	22526.00
75%	56574.00
90%	133663.00
Maximum	973617.00

Frequently Coded Diagnoses

Clinical Classification Software (CCS) for Principal Diagnosis

Top 25 Diagnoses

Percent All Records : 98.81

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
218: Liveborn	13,054	74.90	330,415	3.95
219: Short gestation, low birth weight, a	1,563	8.97	3,578	43.68
224: Other perinatal conditions	1,312	7.53	5,673	23.13
221: Respiratory distress syndrome	440	2.52	829	53.08
222: Hemolytic jaundice and perinatal jau	304	1.74	3,752	8.10
213: Cardiac and circulatory congenital a	119	0.68	3,481	3.42
214: Digestive congenital anomalies	85	0.49	1,932	4.40
217: Other congenital anomalies	79	0.45	4,181	1.89
220: Intrauterine hypoxia and birth asphy	34	0.20	76	44.74
216: Nervous system congenital anomalies	30	0.17	680	4.41
254: Rehabilitation care, fitting of pros	27	0.15	43,124	0.06
223: Birth trauma	21	0.12	66	31.82
256: Medical examination/evaluation	21	0.12	808	2.60
138: Esophageal disorders	20	0.11	15,323	0.13
87: Retinal detachments, defects, vascul	17	0.10	726	2.34
122: Pneumonia (except that caused by tub	16	0.09	108,707	0.01
215: Genitourinary congenital anomalies	15	0.09	991	1.51
58: Other nutritional, endocrine, and me	10	0.06	16,120	0.06
81: Other hereditary and degenerative ne	10	0.06	3,111	0.32
7: Viral infections	9	0.05	7,089	0.13
237: Complication of device, implant or g	8	0.05	49,925	0.02
2: Septicemia (except in labor)	7	0.04	28,567	0.02
76: Meningitis (except that caused by tu	7	0.04	5,357	0.13
126: Other upper respiratory infections	7	0.04	7,763	0.09
193: Trauma to perineum and vulva	7	0.04	61,697	0.01

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 74.86

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
231: Other therapeutic procedures	5,427	31.14	96,989	5.60
216: Respiratory intubation and mechanica	5,354	30.72	84,487	6.34
54: Other vascular catheterization, not	4,809	27.59	112,473	4.28
223: Enteral and parenteral nutrition	4,380	25.13	30,105	14.55
115: Circumcision	2,973	17.06	93,342	3.19
228: Prophylactic vaccinations and inocul	2,386	13.69	69,400	3.44
4: Diagnostic spinal tap	851	4.88	27,745	3.07
222: Blood transfusion	793	4.55	139,668	0.57
220: Ophthalmologic and otologic diagnosi	756	4.34	10,523	7.18
227: Other diagnostic procedures (intervi	592	3.40	16,094	3.68
217: Other respiratory therapy	553	3.17	14,241	3.88
93: Other non-O.R. upper GI therapeutic	359	2.06	13,757	2.61
39: Incision of pleura, thoracentesis, c	243	1.39	29,243	0.83
193: Diagnostic ultrasound of heart (echo	222	1.27	47,766	0.46
61: Other O.R. procedures on vessels oth	190	1.09	27,490	0.69
71: Gastrostomy, temporary and permanent	170	0.98	17,461	0.97
192: Diagnostic ultrasound of head and ne	167	0.96	2,300	7.26
99: Other O.R. gastrointestinal therapeu	162	0.93	19,446	0.83
96: Other O.R. lower GI therapeutic proc	140	0.80	21,412	0.65
85: Inguinal and femoral hernia repair	131	0.75	4,148	3.16
94: Other O.R. upper GI therapeutic proc	117	0.67	20,554	0.57
2: Insertion, replacement, or removal o	115	0.66	3,080	3.73
174: Other non-O.R. therapeutic procedure	105	0.60	16,465	0.64
9: Other O.R. therapeutic nervous syste	96	0.55	15,867	0.61
226: Other diagnostic radiology and relat	86	0.49	14,156	0.61

**All Listed Procedures
Top 25 Procedures
Percent All Records : 73.64**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
9983: OTHER PHOTOTHERAPY	4,841	27.78	11,390	42.50
9915: PARENT INFUS NUTRIT SUB	3,984	22.86	18,796	21.20
9604: INSERT ENDOTRACHEAL TUBE	3,522	20.21	49,083	7.18
640 : CIRCUMCISION	2,973	17.06	93,342	3.19
3891: ARTERIAL CATHETERIZATION	2,832	16.25	13,777	20.56
9671: CONT MECH VENT < 96 HRS	2,778	15.94	46,801	5.94
9955: VACCINATION NEC	2,379	13.65	66,336	3.59
3893: VENOUS CATH NEC	2,249	12.90	102,939	2.18
3892: UMBILICAL VEIN CATH	2,213	12.70	4,091	54.09
9390: CONT POS AIRWAY PRESSURE	1,541	8.84	10,815	14.25
9672: CONT MECH VENT 96+ HRS	1,415	8.12	23,846	5.93
0331: SPINAL TAP	851	4.88	27,745	3.07
966 : ENTRAL INFUS NUTRIT SUB	796	4.57	12,410	6.41
9904: PACKED CELL TRANSFUSION	633	3.63	120,064	0.53
9541: AUDIOMETRY	587	3.37	5,449	10.77
9396: OXYGEN ENRICHMENT NEC	544	3.12	10,434	5.21
8915: NEUROLOGIC FUNC TEST NEC	434	2.49	4,384	9.90
9635: GASTRIC GAVAGE	347	1.99	526	65.97
8872: DX ULTRASOUND-HEART	222	1.27	47,766	0.46
9929: INJECT/INFUSE NEC	207	1.19	15,573	1.33
9982: ULTRAVIOLET LIGHT THERAP	186	1.07	973	19.12
3885: OCCLUDE THORACIC VES NEC	180	1.03	763	23.59
3404: INSERT INTERCOSTAL CATH	171	0.98	12,657	1.35
8871: DX ULTRASOUND-HEAD/NECK	167	0.96	2,300	7.26
9547: HEARING EXAMINATION NOS	123	0.71	2,562	4.80

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Nursery Level IV
SAS name: U_NEWBN4L
Number of records identified by flag: 15,076
Percentage of records: 0.5%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	61539.62
Min	453.00
10%	4285.50
25%	9609.00
50%	23932.00
75%	63431.00
90%	160847.50
Maximum	983556.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 98.81

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
218: Liveborn	9,598	63.66	330,415	2.90
219: Short gestation, low birth weight, a	1,889	12.53	3,578	52.79
224: Other perinatal conditions	1,672	11.09	5,673	29.47
221: Respiratory distress syndrome	586	3.89	829	70.69
213: Cardiac and circulatory congenital a	283	1.88	3,481	8.13
222: Hemolytic jaundice and perinatal jau	235	1.56	3,752	6.26
217: Other congenital anomalies	135	0.90	4,181	3.23
214: Digestive congenital anomalies	132	0.88	1,932	6.83
216: Nervous system congenital anomalies	59	0.39	680	8.68
220: Intrauterine hypoxia and birth asphy	51	0.34	76	67.11
87: Retinal detachments, defects, vascul	46	0.31	726	6.34
215: Genitourinary congenital anomalies	37	0.25	991	3.73
223: Birth trauma	29	0.19	66	43.94
256: Medical examination/evaluation	26	0.17	808	3.22
138: Esophageal disorders	24	0.16	15,323	0.16
122: Pneumonia (except that caused by tub	15	0.10	108,707	0.01
58: Other nutritional, endocrine, and me	13	0.09	16,120	0.08
81: Other hereditary and degenerative ne	13	0.09	3,111	0.42
47: Other benign neoplasm	10	0.07	13,793	0.07
44: Neoplasms of unspecified nature or u	8	0.05	3,793	0.21
143: Abdominal hernia	8	0.05	14,217	0.06
106: Cardiac dysrhythmias	7	0.05	55,775	0.01
133: Other lower respiratory disease	7	0.05	12,851	0.05
145: Intestinal obstruction without herni	7	0.05	24,173	0.03
155: Other gastrointestinal disorders	7	0.05	16,758	0.04

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 73.83

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
216: Respiratory intubation and mechanical	5,743	38.09	84,487	6.80
54: Other vascular catheterization, not	4,949	32.83	112,473	4.40
231: Other therapeutic procedures	3,724	24.70	96,989	3.84
223: Enteral and parenteral nutrition	2,753	18.26	30,105	9.14
115: Circumcision	2,392	15.87	93,342	2.56
228: Prophylactic vaccinations and inocul	1,794	11.90	69,400	2.59
4: Diagnostic spinal tap	766	5.08	27,745	2.76
222: Blood transfusion	765	5.07	139,668	0.55
220: Ophthalmologic and otologic diagnosi	500	3.32	10,523	4.75
227: Other diagnostic procedures (intervi	484	3.21	16,094	3.01
217: Other respiratory therapy	445	2.95	14,241	3.12
193: Diagnostic ultrasound of heart (echo	377	2.50	47,766	0.79
61: Other O.R. procedures on vessels oth	341	2.26	27,490	1.24
39: Incision of pleura, thoracentesis, c	315	2.09	29,243	1.08
99: Other O.R. gastrointestinal therapeu	221	1.47	19,446	1.14
71: Gastrostomy, temporary and permanent	190	1.26	17,461	1.09
96: Other O.R. lower GI therapeutic proc	188	1.25	21,412	0.88
50: Extracorporeal circulation auxiliary	172	1.14	28,263	0.61
94: Other O.R. upper GI therapeutic proc	156	1.03	20,554	0.76
85: Inguinal and femoral hernia repair	149	0.99	4,148	3.59
2: Insertion, replacement, or removal o	145	0.96	3,080	4.71
9: Other O.R. therapeutic nervous syste	145	0.96	15,867	0.91
192: Diagnostic ultrasound of head and ne	136	0.90	2,300	5.91
75: Small bowel resection	129	0.86	6,626	1.95
174: Other non-O.R. therapeutic procedure	121	0.80	16,465	0.73

**All Listed Procedures
Top 25 Procedures
Percent All Records : 72.7**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
9604: INSERT ENDOTRACHEAL TUBE	3,731	24.75	49,083	7.60
9671: CONT MECH VENT < 96 HRS	3,121	20.70	46,801	6.67
9983: OTHER PHOTOTHERAPY	3,111	20.64	11,390	27.31
3891: ARTERIAL CATHETERIZATION	2,811	18.65	13,777	20.40
3893: VENOUS CATH NEC	2,527	16.76	102,939	2.45
9915: PARENT INFUS NUTRIT SUB	2,458	16.30	18,796	13.08
640 : CIRCUMCISION	2,392	15.87	93,342	2.56
3892: UMBILICAL VEIN CATH	2,358	15.64	4,091	57.64
9672: CONT MECH VENT 96+ HRS	1,774	11.77	23,846	7.44
9955: VACCINATION NEC	1,771	11.75	66,336	2.67
9390: CONT POS AIRWAY PRESSURE	1,277	8.47	10,815	11.81
0331: SPINAL TAP	766	5.08	27,745	2.76
9904: PACKED CELL TRANSFUSION	603	4.00	120,064	0.50
966 : ENTRAL INFUS NUTRIT SUB	505	3.35	12,410	4.07
9541: AUDIOMETRY	487	3.23	5,449	8.94
9396: OXYGEN ENRICHMENT NEC	390	2.59	10,434	3.74
8872: DX ULTRASOUND-HEART	377	2.50	47,766	0.79
8915: NEUROLOGIC FUNC TEST NEC	329	2.18	4,384	7.50
3885: OCCLUDE THORACIC VES NEC	313	2.08	763	41.02
9929: INJECT/INFUSE NEC	254	1.68	15,573	1.63
9982: ULTRAVIOLET LIGHT THERAP	229	1.52	973	23.54
3404: INSERT INTERCOSTAL CATH	225	1.49	12,657	1.78
8871: DX ULTRASOUND-HEAD/NECK	136	0.90	2,300	5.91
4319: OTHER GASTROSTOMY	129	0.86	4,337	2.97
0234: VENTRICL SHUNT-ABDOMEN	126	0.84	1,455	8.66

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Cardiac Catheterization Lab
SAS name: U_CATH

Number of records identified by flag: 154,057
Percentage of records: 5.0%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	47941.68
Min	441.00
10%	12452.00
25%	19391.00
50%	29037.00
75%	52967.00
90%	98526.00
Maximum	994259.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 95.53

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
101: Coronary atherosclerosis	57,803	37.52	92,889	62.23
100: Acute myocardial infarction	39,776	25.82	63,009	63.13
102: Nonspecific chest pain	13,867	9.00	71,011	19.53
237: Complication of device, implant or g	7,853	5.10	49,925	15.73
108: Congestive heart failure, nonhyperte	7,305	4.74	81,174	9.00
106: Cardiac dysrhythmias	6,658	4.32	55,775	11.94
96: Heart valve disorders	2,394	1.55	7,087	33.78
97: Peri-, endo-, and myocarditis, cardi	1,473	0.96	6,380	23.09
99: Hypertension with complications and	1,073	0.70	15,695	6.84
105: Conduction disorders	1,065	0.69	5,426	19.63
138: Esophageal disorders	933	0.61	15,323	6.09
245: Syncope	879	0.57	17,369	5.06
213: Cardiac and circulatory congenital a	852	0.55	3,481	24.48
127: Chronic obstructive pulmonary diseas	630	0.41	55,655	1.13
122: Pneumonia (except that caused by tub	617	0.40	108,707	0.57
238: Complications of surgical procedures	489	0.32	38,082	1.28
131: Respiratory failure, insufficiency,	483	0.31	23,045	2.10
103: Pulmonary heart disease	428	0.28	11,399	3.75
133: Other lower respiratory disease	421	0.27	12,851	3.28
114: Peripheral and visceral atherosclero	420	0.27	12,516	3.36
109: Acute cerebrovascular disease	369	0.24	46,308	0.80
115: Aortic, peripheral, and visceral art	365	0.24	6,621	5.51
50: Diabetes mellitus with complications	346	0.22	36,165	0.96
117: Other circulatory disease	337	0.22	9,406	3.58
107: Cardiac arrest and ventricular fibri	329	0.21	1,520	21.64

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 98.65

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
47: Diagnostic cardiac catheterization,	135,230	87.78	135,230	100.00
45: Percutaneous coronary angioplasty (P	61,405	39.86	62,846	97.71
63: Other non-O.R. therapeutic cardiovas	56,190	36.47	75,558	74.37
231: Other therapeutic procedures	32,095	20.83	96,989	33.09
44: Coronary artery bypass graft (CABG)	16,135	10.47	28,725	56.17
50: Extracorporeal circulation auxiliary	13,305	8.64	28,263	47.08
189: Contrast aortogram	9,476	6.15	16,826	56.32
48: Insertion, revision, replacement, re	8,652	5.62	25,562	33.85
193: Diagnostic ultrasound of heart (echo	8,624	5.60	47,766	18.05
49: Other O.R. heart procedures	6,949	4.51	13,944	49.84
191: Arterio- or venogram (not heart and	4,670	3.03	17,445	26.77
62: Other diagnostic cardiovascular proc	4,636	3.01	10,407	44.55
216: Respiratory intubation and mechanica	4,636	3.01	84,487	5.49
222: Blood transfusion	4,165	2.70	139,668	2.98
70: Upper gastrointestinal endoscopy, bi	3,683	2.39	93,038	3.96
54: Other vascular catheterization, not	3,323	2.16	112,473	2.95
43: Heart valve procedures	3,038	1.97	8,099	37.51
225: Conversion of cardiac rhythm	2,501	1.62	15,192	16.46
211: Therapeutic radiology	2,334	1.52	10,444	22.35
61: Other O.R. procedures on vessels oth	2,293	1.49	27,490	8.34
190: Contrast arteriogram of femoral and	2,064	1.34	9,041	22.83
58: Hemodialysis	2,001	1.30	45,334	4.41
204: Swan-Ganz catheterization for monito	1,945	1.26	5,882	33.07
227: Other diagnostic procedures (intervi	1,752	1.14	16,094	10.89
201: Cardiac stress tests	990	0.64	9,016	10.98

**All Listed Procedures
Top 25 Procedures
Percent All Records : 96.54**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
8856: CORONAR ARTERIOGR-2 CATH	121,417	78.81	121,417	100.00
3722: LEFT HEART CARDIAC CATH	115,623	75.05	115,623	100.00
8853: LT HEART ANGIOCARDIOGRAM	106,340	69.03	106,340	100.00
3601: PTCA-1 VES/ATH W/O AGENT	51,426	33.38	52,556	97.85
3606: INS NONDRUG ELUT COR ST	36,335	23.59	37,161	97.78
9920: INJ/INF PLATELET INHIBIT	29,659	19.25	31,113	95.33
3607: INS DRUG-ELUT CORONRY ST	20,121	13.06	20,587	97.74
3723: RT/LEFT HEART CARD CATH	12,974	8.42	12,974	100.00
3961: EXTRACORPOREAL CIRCULAT	12,708	8.25	27,255	46.63
3615: 1 INT MAM-COR ART BYPASS	12,644	8.21	22,625	55.89
8842: CONTRAST AORTOGRAM	9,476	6.15	16,826	56.32
3605: PTCA-MULTIPLE VESSEL/ATH	9,227	5.99	9,527	96.85
8872: DX ULTRASOUND-HEART	8,624	5.60	47,766	18.05
8857: CORONARY ARTERIOGRAM NEC	6,010	3.90	6,010	100.00
3612: AORTOCOR BYPAS-2 COR ART	5,303	3.44	9,450	56.12
3613: AORTOCOR BYPAS-3 COR ART	4,974	3.23	8,692	57.23
3726: CARDIAC ELECTROPHY STIM	3,964	2.57	8,604	46.07
3761: PULSATION BALLOON IMPLAN	3,528	2.29	4,060	86.90
9904: PACKED CELL TRANSFUSION	3,331	2.16	120,064	2.77
3783: INT INSERT DUAL-CHAM DEV	2,855	1.85	11,423	24.99
3614: AORTCOR BYPAS-4+ COR ART	2,836	1.84	4,714	60.16
3893: VENOUS CATH NEC	2,821	1.83	102,939	2.74
3772: INT INSER LEAD ATRI-VENT	2,817	1.83	11,321	24.88
8845: CONTRAST RENAL ARTERIOGR	2,742	1.78	4,388	62.49
9671: CONT MECH VENT < 96 HRS	2,690	1.75	46,801	5.75

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Cardiac Stress Test
SAS name: U_STRESS
Number of records identified by flag: 89,661
Percentage of records: 2.9%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	21716.82
Min	314.00
10%	5678.00
25%	8199.00
50%	12962.00
75%	23272.00
90%	43730.00
Maximum	901999.00

Frequently Coded Diagnoses

Clinical Classification Software (CCS) for Principal Diagnosis

Top 25 Diagnoses

Percent All Records : 84.22

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
102: Nonspecific chest pain	28,851	32.18	71,011	40.63
101: Coronary atherosclerosis	11,810	13.17	92,889	12.71
106: Cardiac dysrhythmias	5,984	6.67	55,775	10.73
108: Congestive heart failure, nonhyperte	5,301	5.91	81,174	6.53
100: Acute myocardial infarction	3,094	3.45	63,009	4.91
138: Esophageal disorders	2,843	3.17	15,323	18.55
245: Syncope	2,687	3.00	17,369	15.47
127: Chronic obstructive pulmonary diseas	1,735	1.94	55,655	3.12
122: Pneumonia (except that caused by tub	1,550	1.73	108,707	1.43
133: Other lower respiratory disease	1,282	1.43	12,851	9.98
99: Hypertension with complications and	1,265	1.41	15,695	8.06
237: Complication of device, implant or g	974	1.09	49,925	1.95
149: Biliary tract disease	942	1.05	36,227	2.60
50: Diabetes mellitus with complications	888	0.99	36,165	2.46
109: Acute cerebrovascular disease	792	0.88	46,308	1.71
226: Fracture of neck of femur (hip)	726	0.81	26,225	2.77
98: Essential hypertension	647	0.72	4,933	13.12
205: Spondylosis, intervertebral disc dis	590	0.66	60,367	0.98
128: Asthma	557	0.62	32,916	1.69
117: Other circulatory disease	548	0.61	9,406	5.83
112: Transient cerebral ischemia	514	0.57	13,893	3.70
55: Fluid and electrolyte disorders	511	0.57	47,395	1.08
97: Peri-, endo-, and myocarditis, cardi	486	0.54	6,380	7.62
140: Gastritis and duodenitis	474	0.53	10,286	4.61
212: Other bone disease and musculoskelet	462	0.52	8,497	5.44

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 40.8

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
47: Diagnostic cardiac catheterization,	14,812	16.52	135,230	10.95
201: Cardiac stress tests	9,016	10.06	9,016	100.00
193: Diagnostic ultrasound of heart (echo	5,583	6.23	47,766	11.69
70: Upper gastrointestinal endoscopy, bi	3,828	4.27	93,038	4.11
63: Other non-O.R. therapeutic cardiovas	3,333	3.72	75,558	4.41
45: Percutaneous coronary angioplasty (P	3,001	3.35	62,846	4.78
209: Radioisotope scan and function studi	2,869	3.20	4,404	65.15
222: Blood transfusion	2,510	2.80	139,668	1.80
231: Other therapeutic procedures	2,269	2.53	96,989	2.34
54: Other vascular catheterization, not	2,253	2.51	112,473	2.00
189: Contrast aortogram	1,888	2.11	16,826	11.22
58: Hemodialysis	1,672	1.86	45,334	3.69
216: Respiratory intubation and mechanica	1,445	1.61	84,487	1.71
48: Insertion, revision, replacement, re	1,401	1.56	25,562	5.48
76: Colonoscopy and biopsy	1,299	1.45	45,493	2.86
191: Arterio- or venogram (not heart and	1,097	1.22	17,445	6.29
44: Coronary artery bypass graft (CABG)	1,024	1.14	28,725	3.56
84: Cholecystectomy and common duct expl	848	0.95	38,419	2.21
62: Other diagnostic cardiovascular proc	840	0.94	10,407	8.07
50: Extracorporeal circulation auxiliary	779	0.87	28,263	2.76
61: Other O.R. procedures on vessels oth	765	0.85	27,490	2.78
225: Conversion of cardiac rhythm	720	0.80	15,192	4.74
190: Contrast arteriogram of femoral and	693	0.77	9,041	7.67
188: Cerebral arteriogram	663	0.74	12,001	5.52
227: Other diagnostic procedures (intervi	551	0.61	16,094	3.42

**All Listed Procedures
Top 25 Procedures
Percent All Records : 37.89**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
8856: CORONAR ARTERIOGR-2 CATH	13,778	15.37	121,417	11.35
3722: LEFT HEART CARDIAC CATH	13,258	14.79	115,623	11.47
8853: LT HEART ANGIOCARDIOGRAM	12,551	14.00	106,340	11.80
8944: CARDIAC STRESS TEST NEC	6,186	6.90	6,186	100.00
8872: DX ULTRASOUND-HEART	5,583	6.23	47,766	11.69
8941: TREADMILL STRESS TEST	3,118	3.48	3,118	100.00
9205: C-VASC SCAN/ISOTOP FUNCT	2,848	3.18	3,442	82.74
3601: PTCA-1 VES/ATH W/O AGENT	2,535	2.83	52,556	4.82
9904: PACKED CELL TRANSFUSION	2,211	2.47	120,064	1.84
4516: EGD WITH CLOSED BIOPSY	2,176	2.43	48,882	4.45
3893: VENOUS CATH NEC	2,117	2.36	102,939	2.06
8842: CONTRAST AORTOGRAM	1,888	2.11	16,826	11.22
3606: INS NONDRUG ELUT COR ST	1,801	2.01	37,161	4.85
3995: HEMODIALYSIS	1,672	1.86	45,334	3.69
9920: INJ/INF PLATELET INHIBIT	1,451	1.62	31,113	4.66
4513: SM BOWEL ENDOSCOPY NEC	1,340	1.49	38,720	3.46
3723: RT/LEFT HEART CARD CATH	1,165	1.30	12,974	8.98
3607: INS DRUG-ELUT CORONRY ST	940	1.05	20,587	4.57
9604: INSERT ENDOTRACHEAL TUBE	918	1.02	49,083	1.87
9671: CONT MECH VENT < 96 HRS	887	0.99	46,801	1.90
3615: 1 INT MAM-COR ART BYPASS	823	0.92	22,625	3.64
4523: COLONOSCOPY	785	0.88	24,452	3.21
3726: CARDIAC ELECTROPHY STIM	776	0.87	8,604	9.02
3961: EXTRACORPOREAL CIRCULAT	747	0.83	27,255	2.74
3783: INT INSERT DUAL-CHAM DEV	742	0.83	11,423	6.50

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Echocardiology
SAS name: U_ECHO
Number of records identified by flag: 148,291
Percentage of records: 4.8%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	31004.42
Min	823.00
10%	5654.00
25%	8635.00
50%	15157.00
75%	31711.00
90%	66173.00
Maximum	991788.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 73.46

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
108: Congestive heart failure, nonhyperte	14,731	9.93	81,174	18.15
100: Acute myocardial infarction	11,194	7.55	63,009	17.77
101: Coronary atherosclerosis	10,299	6.95	92,889	11.09
106: Cardiac dysrhythmias	10,103	6.81	55,775	18.11
109: Acute cerebrovascular disease	9,521	6.42	46,308	20.56
102: Nonspecific chest pain	8,984	6.06	71,011	12.65
122: Pneumonia (except that caused by tub	6,332	4.27	108,707	5.82
127: Chronic obstructive pulmonary diseas	3,332	2.25	55,655	5.99
245: Syncope	3,127	2.11	17,369	18.00
237: Complication of device, implant or g	2,902	1.96	49,925	5.81
112: Transient cerebral ischemia	2,824	1.90	13,893	20.33
218: Liveborn	2,707	1.83	330,415	0.82
96: Heart valve disorders	2,585	1.74	7,087	36.48
2: Septicemia (except in labor)	2,503	1.69	28,567	8.76
131: Respiratory failure, insufficiency,	2,450	1.65	23,045	10.63
99: Hypertension with complications and	2,409	1.62	15,695	15.35
97: Peri-, endo-, and myocarditis, cardi	2,010	1.36	6,380	31.50
103: Pulmonary heart disease	1,640	1.11	11,399	14.39
157: Acute and unspecified renal failure	1,577	1.06	18,019	8.75
55: Fluid and electrolyte disorders	1,424	0.96	47,395	3.00
50: Diabetes mellitus with complications	1,379	0.93	36,165	3.81
133: Other lower respiratory disease	1,353	0.91	12,851	10.53
226: Fracture of neck of femur (hip)	1,295	0.87	26,225	4.94
238: Complications of surgical procedures	1,194	0.81	38,082	3.14
117: Other circulatory disease	1,065	0.72	9,406	11.32

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 62.65

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
193: Diagnostic ultrasound of heart (echo	47,766	32.21	47,766	100.00
47: Diagnostic cardiac catheterization,	21,106	14.23	135,230	15.61
54: Other vascular catheterization, not	13,308	8.97	112,473	11.83
216: Respiratory intubation and mechanica	12,278	8.28	84,487	14.53
222: Blood transfusion	9,929	6.70	139,668	7.11
70: Upper gastrointestinal endoscopy, bi	9,478	6.39	93,038	10.19
63: Other non-O.R. therapeutic cardiovas	8,826	5.95	75,558	11.68
231: Other therapeutic procedures	7,381	4.98	96,989	7.61
45: Percutaneous coronary angioplasty (P	6,991	4.71	62,846	11.12
50: Extracorporeal circulation auxiliary	6,944	4.68	28,263	24.57
44: Coronary artery bypass graft (CABG)	6,121	4.13	28,725	21.31
58: Hemodialysis	5,111	3.45	45,334	11.27
48: Insertion, revision, replacement, re	3,988	2.69	25,562	15.60
225: Conversion of cardiac rhythm	3,755	2.53	15,192	24.72
49: Other O.R. heart procedures	3,551	2.39	13,944	25.47
39: Incision of pleura, thoracentesis, c	3,477	2.34	29,243	11.89
43: Heart valve procedures	3,245	2.19	8,099	40.07
223: Enteral and parenteral nutrition	3,098	2.09	30,105	10.29
201: Cardiac stress tests	2,917	1.97	9,016	32.35
37: Diagnostic bronchoscopy and biopsy o	2,655	1.79	24,885	10.67
189: Contrast aortogram	2,620	1.77	16,826	15.57
76: Colonoscopy and biopsy	2,533	1.71	45,493	5.57
61: Other O.R. procedures on vessels oth	2,531	1.71	27,490	9.21
191: Arterio- or venogram (not heart and	2,467	1.66	17,445	14.14
188: Cerebral arteriogram	1,954	1.32	12,001	16.28

**All Listed Procedures
Top 25 Procedures
Percent All Records : 57.71**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
8872: DX ULTRASOUND-HEART	47,766	32.21	47,766	100.00
8856: CORONAR ARTERIOGR-2 CATH	17,920	12.08	121,417	14.76
3722: LEFT HEART CARDIAC CATH	16,518	11.14	115,623	14.29
8853: LT HEART ANGIOCARDIOGRAM	14,640	9.87	106,340	13.77
3893: VENOUS CATH NEC	11,638	7.85	102,939	11.31
9904: PACKED CELL TRANSFUSION	8,761	5.91	120,064	7.30
9604: INSERT ENDOTRACHEAL TUBE	7,298	4.92	49,083	14.87
3961: EXTRACORPOREAL CIRCULAT	6,679	4.50	27,255	24.51
9671: CONT MECH VENT < 96 HRS	6,126	4.13	46,801	13.09
3601: PTCA-1 VES/ATH W/O AGENT	5,959	4.02	52,556	11.34
3995: HEMODIALYSIS	5,111	3.45	45,334	11.27
9672: CONT MECH VENT 96+ HRS	4,638	3.13	23,846	19.45
3615: 1 INT MAM-COR ART BYPASS	4,598	3.10	22,625	20.32
3606: INS NONDRUG ELUT COR ST	4,235	2.86	37,161	11.40
4223: ESOPHAGOSCOPY NEC	3,785	2.55	5,042	75.07
3723: RT/LEFT HEART CARD CATH	3,369	2.27	12,974	25.97
9920: INJ/INF PLATELET INHIBIT	3,066	2.07	31,113	9.85
4516: EGD WITH CLOSED BIOPSY	3,030	2.04	48,882	6.20
3891: ARTERIAL CATHETERIZATION	2,783	1.88	13,777	20.20
4513: SM BOWEL ENDOSCOPY NEC	2,743	1.85	38,720	7.08
8842: CONTRAST AORTOGRAM	2,620	1.77	16,826	15.57
3491: THORACENTESIS	2,363	1.59	16,173	14.61
3607: INS DRUG-ELUT CORONRY ST	2,130	1.44	20,587	10.35
3895: VEN CATH RENAL DIALYSIS	2,006	1.35	13,424	14.94
8944: CARDIAC STRESS TEST NEC	1,967	1.33	6,186	31.80

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Electrocardiogram
SAS name: U_EKG
Number of records identified by flag: 1,304,551
Percentage of records: 42.1%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	22919.25
Min	42.00
10%	4473.00
25%	7178.00
50%	12858.00
75%	25104.00
90%	47354.00
Maximum	996285.00

Frequently Coded Diagnoses

Clinical Classification Software (CCS) for Principal Diagnosis

Top 25 Diagnoses

Percent All Records : 60.58

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
101: Coronary atherosclerosis	87,958	6.74	92,889	94.69
108: Congestive heart failure, nonhyperte	73,361	5.62	81,174	90.37
102: Nonspecific chest pain	68,251	5.23	71,011	96.11
122: Pneumonia (except that caused by tub	63,589	4.87	108,707	58.50
100: Acute myocardial infarction	61,245	4.69	63,009	97.20
106: Cardiac dysrhythmias	51,444	3.94	55,775	92.23
127: Chronic obstructive pulmonary diseas	40,297	3.09	55,655	72.40
109: Acute cerebrovascular disease	38,262	2.93	46,308	82.63
237: Complication of device, implant or g	26,308	2.02	49,925	52.70
226: Fracture of neck of femur (hip)	23,026	1.77	26,225	87.80
205: Spondylosis, intervertebral disc dis	22,037	1.69	60,367	36.51
55: Fluid and electrolyte disorders	22,023	1.69	47,395	46.47
50: Diabetes mellitus with complications	20,429	1.57	36,165	56.49
203: Osteoarthritis	19,340	1.48	54,442	35.52
149: Biliary tract disease	19,098	1.46	36,227	52.72
131: Respiratory failure, insufficiency,	19,034	1.46	23,045	82.59
2: Septicemia (except in labor)	18,522	1.42	28,567	64.84
153: Gastrointestinal hemorrhage	17,515	1.34	28,445	61.57
245: Syncope	16,210	1.24	17,369	93.33
159: Urinary tract infections	15,472	1.19	36,273	42.65
69: Affective disorders	14,590	1.12	64,982	22.45
238: Complications of surgical procedures	13,772	1.06	38,082	36.16
157: Acute and unspecified renal failure	13,204	1.01	18,019	73.28
99: Hypertension with complications and	13,121	1.01	15,695	83.60
112: Transient cerebral ischemia	12,192	0.93	13,893	87.76

Frequently Coded Procedures

**Clinical Classification Software (CCS) for All Listed Procedures
Top 25 Procedures
Percent of All Records : 42.7**

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
47: Diagnostic cardiac catheterization,	128,186	9.83	135,230	94.79
222: Blood transfusion	88,722	6.80	139,668	63.52
54: Other vascular catheterization, not	68,893	5.28	112,473	61.25
63: Other non-O.R. therapeutic cardiovas	67,565	5.18	75,558	89.42
216: Respiratory intubation and mechanica	61,187	4.69	84,487	72.42
70: Upper gastrointestinal endoscopy, bi	60,767	4.66	93,038	65.31
45: Percutaneous coronary angioplasty (P	60,399	4.63	62,846	96.11
231: Other therapeutic procedures	54,126	4.15	96,989	55.81
193: Diagnostic ultrasound of heart (echo	42,587	3.26	47,766	89.16
58: Hemodialysis	32,056	2.46	45,334	70.71
44: Coronary artery bypass graft (CABG)	28,251	2.17	28,725	98.35
50: Extracorporeal circulation auxiliary	27,330	2.09	28,263	96.70
76: Colonoscopy and biopsy	26,598	2.04	45,493	58.47
48: Insertion, revision, replacement, re	21,937	1.68	25,562	85.82
84: Cholecystectomy and common duct expl	21,005	1.61	38,419	54.67
39: Incision of pleura, thoracentesis, c	19,673	1.51	29,243	67.27
146: Treatment, fracture or dislocation o	19,228	1.47	25,770	74.61
3: Laminectomy, excision intervertebral	17,834	1.37	47,346	37.67
61: Other O.R. procedures on vessels oth	17,652	1.35	27,490	64.21
37: Diagnostic bronchoscopy and biopsy o	17,332	1.33	24,885	69.65
153: Hip replacement, total and partial	17,234	1.32	32,231	53.47
78: Colorectal resection	15,703	1.20	26,364	59.56
223: Enteral and parenteral nutrition	15,692	1.20	30,105	52.12
152: Arthroplasty knee	14,630	1.12	39,861	36.70
124: Hysterectomy, abdominal and vaginal	13,931	1.07	56,519	24.65

**All Listed Procedures
Top 25 Procedures
Percent All Records : 33.9**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
8856: CORONAR ARTERIOGR-2 CATH	115,307	8.84	121,417	94.97
3722: LEFT HEART CARDIAC CATH	110,223	8.45	115,623	95.33
8853: LT HEART ANGIOCARDIOGRAM	101,019	7.74	106,340	95.00
9904: PACKED CELL TRANSFUSION	77,665	5.95	120,064	64.69
3893: VENOUS CATH NEC	64,823	4.97	102,939	62.97
3601: PTCA-1 VES/ATH W/O AGENT	50,528	3.87	52,556	96.14
8872: DX ULTRASOUND-HEART	42,587	3.26	47,766	89.16
9604: INSERT ENDOTRACHEAL TUBE	36,316	2.78	49,083	73.99
3606: INS NONDRUG ELUT COR ST	35,796	2.74	37,161	96.33
9671: CONT MECH VENT < 96 HRS	34,260	2.63	46,801	73.20
3995: HEMODIALYSIS	32,056	2.46	45,334	70.71
4516: EGD WITH CLOSED BIOPSY	31,188	2.39	48,882	63.80
9920: INJ/INF PLATELET INHIBIT	30,058	2.30	31,113	96.61
3961: EXTRACORPOREAL CIRCULAT	26,424	2.03	27,255	96.95
4513: SM BOWEL ENDOSCOPY NEC	25,602	1.96	38,720	66.12
3615: 1 INT MAM-COR ART BYPASS	22,254	1.71	22,625	98.36
3607: INS DRUG-ELUT CORONRY ST	19,715	1.51	20,587	95.76
9672: CONT MECH VENT 96+ HRS	18,781	1.44	23,846	78.76
4523: COLONOSCOPY	15,380	1.18	24,452	62.90
5123: LAPAROSCOPIC CHOLECYSTEC	14,719	1.13	27,605	53.32
8842: CONTRAST AORTOGRAM	13,791	1.06	16,826	81.96
8154: TOTAL KNEE REPLACEMENT	13,101	1.00	35,168	37.25
8051: EXCISION INTERVERT DISC	12,114	0.93	33,462	36.20
3491: THORACENTESIS	12,060	0.92	16,173	74.57
3723: RT/LEFT HEART CARD CATH	11,880	0.91	12,974	91.57

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Computed Tomography Scan
SAS name: U_CTSCAN
Number of records identified by flag: 657,198
Percentage of records: 21.2%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	26689.90
Min	41.00
10%	5386.00
25%	8169.00
50%	13867.00
75%	26641.00
90%	54632.00
Maximum	996285.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 51.64

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
109: Acute cerebrovascular disease	40,619	6.18	46,308	87.71
122: Pneumonia (except that caused by tub	31,575	4.80	108,707	29.05
142: Appendicitis and other appendiceal c	14,951	2.27	24,014	62.26
108: Congestive heart failure, nonhyperte	14,700	2.24	81,174	18.11
159: Urinary tract infections	14,222	2.16	36,273	39.21
152: Pancreatic disorders (not diabetes)	13,743	2.09	23,811	57.72
102: Nonspecific chest pain	13,022	1.98	71,011	18.34
55: Fluid and electrolyte disorders	12,789	1.95	47,395	26.98
145: Intestinal obstruction without herni	12,446	1.89	24,173	51.49
2: Septicemia (except in labor)	12,347	1.88	28,567	43.22
112: Transient cerebral ischemia	12,237	1.86	13,893	88.08
233: Intracranial injury	12,088	1.84	12,797	94.46
238: Complications of surgical procedures	12,004	1.83	38,082	31.52
146: Diverticulosis and diverticulitis	11,881	1.81	23,334	50.92
127: Chronic obstructive pulmonary diseas	11,552	1.76	55,655	20.76
83: Epilepsy, convulsions	11,250	1.71	19,591	57.42
245: Syncope	10,853	1.65	17,369	62.48
251: Abdominal pain	10,736	1.63	17,447	61.53
42: Secondary malignancies	10,430	1.59	20,455	50.99
149: Biliary tract disease	10,324	1.57	36,227	28.50
100: Acute myocardial infarction	9,898	1.51	63,009	15.71
231: Other fractures	9,676	1.47	15,629	61.91
106: Cardiac dysrhythmias	9,113	1.39	55,775	16.34
101: Coronary atherosclerosis	8,545	1.30	92,889	9.20
237: Complication of device, implant or g	8,378	1.27	49,925	16.78

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 42.4

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
54: Other vascular catheterization, not	52,409	7.97	112,473	46.60
222: Blood transfusion	41,802	6.36	139,668	29.93
216: Respiratory intubation and mechanica	41,562	6.32	84,487	49.19
70: Upper gastrointestinal endoscopy, bi	38,572	5.87	93,038	41.46
76: Colonoscopy and biopsy	20,313	3.09	45,493	44.65
47: Diagnostic cardiac catheterization,	20,116	3.06	135,230	14.88
193: Diagnostic ultrasound of heart (echo	19,099	2.91	47,766	39.98
39: Incision of pleura, thoracentesis, c	18,070	2.75	29,243	61.79
80: Appendectomy	17,480	2.66	33,217	52.62
37: Diagnostic bronchoscopy and biopsy o	17,142	2.61	24,885	68.88
4: Diagnostic spinal tap	16,300	2.48	27,745	58.75
231: Other therapeutic procedures	15,284	2.33	96,989	15.76
223: Enteral and parenteral nutrition	14,326	2.18	30,105	47.59
58: Hemodialysis	13,948	2.12	45,334	30.77
63: Other non-O.R. therapeutic cardiovas	10,599	1.61	75,558	14.03
84: Cholecystectomy and common duct expl	10,327	1.57	38,419	26.88
71: Gastrostomy, temporary and permanent	9,999	1.52	17,461	57.26
177: Computerized axial tomography (CT) s	9,523	1.45	9,523	100.00
78: Colorectal resection	8,962	1.36	26,364	33.99
171: Suture of skin and subcutaneous tiss	8,654	1.32	13,212	65.50
61: Other O.R. procedures on vessels oth	8,604	1.31	27,490	31.30
179: CT scan abdomen	8,531	1.30	8,531	100.00
188: Cerebral arteriogram	8,262	1.26	12,001	68.84
88: Abdominal paracentesis	8,254	1.26	12,933	63.82
90: Excision, lysis peritoneal adhesions	8,086	1.23	30,349	26.64

**All Listed Procedures
Top 25 Procedures
Percent All Records : 36.36**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
3893: VENOUS CATH NEC	49,888	7.59	102,939	48.46
9904: PACKED CELL TRANSFUSION	36,344	5.53	120,064	30.27
9604: INSERT ENDOTRACHEAL TUBE	24,419	3.72	49,083	49.75
9671: CONT MECH VENT < 96 HRS	22,573	3.43	46,801	48.23
4516: EGD WITH CLOSED BIOPSY	21,250	3.23	48,882	43.47
8872: DX ULTRASOUND-HEART	19,099	2.91	47,766	39.98
8856: CORONAR ARTERIOGR-2 CATH	17,634	2.68	121,417	14.52
0331: SPINAL TAP	16,300	2.48	27,745	58.75
3722: LEFT HEART CARDIAC CATH	15,851	2.41	115,623	13.71
4513: SM BOWEL ENDOSCOPY NEC	15,132	2.30	38,720	39.08
9672: CONT MECH VENT 96+ HRS	15,097	2.30	23,846	63.31
8853: LT HEART ANGIOCARDIOGRAM	14,973	2.28	106,340	14.08
3995: HEMODIALYSIS	13,948	2.12	45,334	30.77
3491: THORACENTESIS	10,629	1.62	16,173	65.72
4709: OTHER APPENDECTOMY	10,417	1.59	18,198	57.24
3324: CLOSED BRONCHIAL BIOPSY	10,209	1.55	13,634	74.88
8703: C.A.T. SCAN OF HEAD	9,523	1.45	9,523	100.00
4523: COLONOSCOPY	9,416	1.43	24,452	38.51
4525: CLOS LARGE BOWEL BIOPSY	9,380	1.43	17,462	53.72
9915: PARENT INFUS NUTRIT SUB	8,670	1.32	18,796	46.13
8659: SKIN CLOSURE NEC	8,636	1.31	13,193	65.46
8801: C.A.T. SCAN OF ABDOMEN	8,531	1.30	8,531	100.00
8841: CONTR CEREBR ARTERIOGRAM	8,262	1.26	12,001	68.84
5491: PERCU ABDOMINAL DRAINAGE	8,254	1.26	12,933	63.82
4311: PERCU ENDOSC GASTROSTOMY	8,013	1.22	12,707	63.06

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Chest X-ray
SAS name: U_CHESTXRAY
Number of records identified by flag: 775,740
Percentage of records: 25.1%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	23629.47
Min	61.00
10%	4136.00
25%	6825.00
50%	12646.00
75%	25684.00
90%	50777.00
Maximum	996285.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 59.71

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
122: Pneumonia (except that caused by tub	55,564	7.16	108,707	51.11
108: Congestive heart failure, nonhyperte	42,411	5.47	81,174	52.25
101: Coronary atherosclerosis	39,449	5.09	92,889	42.47
102: Nonspecific chest pain	33,161	4.27	71,011	46.70
127: Chronic obstructive pulmonary diseas	30,512	3.93	55,655	54.82
100: Acute myocardial infarction	28,158	3.63	63,009	44.69
106: Cardiac dysrhythmias	24,512	3.16	55,775	43.95
109: Acute cerebrovascular disease	17,144	2.21	46,308	37.02
128: Asthma	16,945	2.18	32,916	51.48
237: Complication of device, implant or g	15,741	2.03	49,925	31.53
218: Liveborn	14,754	1.90	330,415	4.47
55: Fluid and electrolyte disorders	14,371	1.85	47,395	30.32
2: Septicemia (except in labor)	13,727	1.77	28,567	48.05
131: Respiratory failure, insufficiency,	12,823	1.65	23,045	55.64
226: Fracture of neck of femur (hip)	11,941	1.54	26,225	45.53
159: Urinary tract infections	11,590	1.49	36,273	31.95
50: Diabetes mellitus with complications	11,331	1.46	36,165	31.33
205: Spondylosis, intervertebral disc dis	10,458	1.35	60,367	17.32
238: Complications of surgical procedures	9,982	1.29	38,082	26.21
129: Aspiration pneumonitis, food/vomitus	8,926	1.15	16,997	52.52
125: Acute bronchitis	8,466	1.09	17,147	49.37
149: Biliary tract disease	8,270	1.07	36,227	22.83
42: Secondary malignancies	7,669	0.99	20,455	37.49
153: Gastrointestinal hemorrhage	7,668	0.99	28,445	26.96
203: Osteoarthritis	7,655	0.99	54,442	14.06

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 41.49

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
47: Diagnostic cardiac catheterization,	58,414	7.53	135,230	43.20
54: Other vascular catheterization, not	56,835	7.33	112,473	50.53
222: Blood transfusion	51,679	6.66	139,668	37.00
216: Respiratory intubation and mechanical	43,324	5.58	84,487	51.28
70: Upper gastrointestinal endoscopy, bi	32,169	4.15	93,038	34.58
231: Other therapeutic procedures	30,570	3.94	96,989	31.52
63: Other non-O.R. therapeutic cardiovas	26,186	3.38	75,558	34.66
193: Diagnostic ultrasound of heart (echo	25,519	3.29	47,766	53.43
58: Hemodialysis	19,944	2.57	45,334	43.99
45: Percutaneous coronary angioplasty (P	19,380	2.50	62,846	30.84
44: Coronary artery bypass graft (CABG)	18,148	2.34	28,725	63.18
50: Extracorporeal circulation auxiliary	17,777	2.29	28,263	62.90
39: Incision of pleura, thoracentesis, c	16,075	2.07	29,243	54.97
48: Insertion, revision, replacement, re	15,104	1.95	25,562	59.09
37: Diagnostic bronchoscopy and biopsy o	14,339	1.85	24,885	57.62
76: Colonoscopy and biopsy	13,565	1.75	45,493	29.82
223: Enteral and parenteral nutrition	13,154	1.70	30,105	43.69
146: Treatment, fracture or dislocation o	10,368	1.34	25,770	40.23
61: Other O.R. procedures on vessels oth	10,311	1.33	27,490	37.51
4: Diagnostic spinal tap	10,165	1.31	27,745	36.64
84: Cholecystectomy and common duct expl	9,549	1.23	38,419	24.85
78: Colorectal resection	9,013	1.16	26,364	34.19
71: Gastrostomy, temporary and permanent	8,639	1.11	17,461	49.48
3: Laminectomy, excision intervertebral	8,303	1.07	47,346	17.54
153: Hip replacement, total and partial	7,862	1.01	32,231	24.39

**All Listed Procedures
Top 25 Procedures
Percent All Records : 32.69**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
8856: CORONAR ARTERIOGR-2 CATH	53,438	6.89	121,417	44.01
3893: VENOUS CATH NEC	51,627	6.66	102,939	50.15
3722: LEFT HEART CARDIAC CATH	49,804	6.42	115,623	43.07
8853: LT HEART ANGIOCARDIOGRAM	45,857	5.91	106,340	43.12
9904: PACKED CELL TRANSFUSION	45,599	5.88	120,064	37.98
9604: INSERT ENDOTRACHEAL TUBE	27,579	3.56	49,083	56.19
8872: DX ULTRASOUND-HEART	25,519	3.29	47,766	53.43
9671: CONT MECH VENT < 96 HRS	24,286	3.13	46,801	51.89
3995: HEMODIALYSIS	19,944	2.57	45,334	43.99
3961: EXTRACORPOREAL CIRCULAT	17,215	2.22	27,255	63.16
4516: EGD WITH CLOSED BIOPSY	16,889	2.18	48,882	34.55
3601: PTCA-1 VES/ATH W/O AGENT	16,368	2.11	52,556	31.14
3615: 1 INT MAM-COR ART BYPASS	14,412	1.86	22,625	63.70
4513: SM BOWEL ENDOSCOPY NEC	13,550	1.75	38,720	34.99
9672: CONT MECH VENT 96+ HRS	13,441	1.73	23,846	56.37
3606: INS NONDRUG ELUT COR ST	11,747	1.51	37,161	31.61
0331: SPINAL TAP	10,165	1.31	27,745	36.64
9920: INJ/INF PLATELET INHIBIT	8,931	1.15	31,113	28.71
3491: THORACENTESIS	8,761	1.13	16,173	54.17
9915: PARENT INFUS NUTRIT SUB	8,154	1.05	18,796	43.38
3891: ARTERIAL CATHETERIZATION	7,967	1.03	13,777	57.83
3324: CLOSED BRONCHIAL BIOPSY	7,763	1.00	13,634	56.94
4523: COLONOSCOPY	7,583	0.98	24,452	31.01
8842: CONTRAST AORTOGRAM	7,140	0.92	16,826	42.43
3404: INSERT INTERCOSTAL CATH	7,107	0.92	12,657	56.15

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Ultrasound
SAS name: U_ULTRASOUND
Number of records identified by flag: 300,237
Percentage of records: 9.7%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	33088.67
Min	97.00
10%	4618.00
25%	7871.00
50%	14689.00
75%	31536.00
90%	73274.00
Maximum	996285.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 54.9

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
149: Biliary tract disease	18,524	6.17	36,227	51.13
152: Pancreatic disorders (not diabetes)	11,557	3.85	23,811	48.54
108: Congestive heart failure, nonhyperte	9,882	3.29	81,174	12.17
122: Pneumonia (except that caused by tub	9,658	3.22	108,707	8.88
157: Acute and unspecified renal failure	9,376	3.12	18,019	52.03
218: Liveborn	9,292	3.09	330,415	2.81
159: Urinary tract infections	9,224	3.07	36,273	25.43
2: Septicemia (except in labor)	7,497	2.50	28,567	26.24
181: Other complications of pregnancy	7,269	2.42	38,247	19.01
237: Complication of device, implant or g	6,291	2.10	49,925	12.60
251: Abdominal pain	5,497	1.83	17,447	31.51
102: Nonspecific chest pain	5,129	1.71	71,011	7.22
195: Other complications of birth, puerpe	5,090	1.70	60,697	8.39
100: Acute myocardial infarction	5,051	1.68	63,009	8.02
101: Coronary atherosclerosis	5,006	1.67	92,889	5.39
50: Diabetes mellitus with complications	4,902	1.63	36,165	13.55
184: Early or threatened labor	4,888	1.63	18,619	26.25
238: Complications of surgical procedures	4,798	1.60	38,082	12.60
55: Fluid and electrolyte disorders	4,748	1.58	47,395	10.02
42: Secondary malignancies	3,884	1.29	20,455	18.99
109: Acute cerebrovascular disease	3,730	1.24	46,308	8.05
151: Other Liver diseases	3,647	1.21	8,194	44.51
99: Hypertension with complications and	3,598	1.20	15,695	22.92
183: Hypertension complicating pregnancy,	3,163	1.05	19,223	16.45
131: Respiratory failure, insufficiency,	3,124	1.04	23,045	13.56

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 54.61

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
54: Other vascular catheterization, not	42,439	14.14	112,473	37.73
222: Blood transfusion	24,311	8.10	139,668	17.41
70: Upper gastrointestinal endoscopy, bi	23,391	7.79	93,038	25.14
216: Respiratory intubation and mechanical	21,585	7.19	84,487	25.55
84: Cholecystectomy and common duct expl	17,926	5.97	38,419	46.66
231: Other therapeutic procedures	12,621	4.20	96,989	13.01
39: Incision of pleura, thoracentesis, c	11,800	3.93	29,243	40.35
47: Diagnostic cardiac catheterization,	11,011	3.67	135,230	8.14
58: Hemodialysis	10,741	3.58	45,334	23.69
63: Other non-O.R. therapeutic cardiovas	10,168	3.39	75,558	13.46
137: Other procedures to assist delivery	9,029	3.01	160,703	5.62
223: Enteral and parenteral nutrition	9,012	3.00	30,105	29.94
193: Diagnostic ultrasound of heart (echo	8,848	2.95	47,766	18.52
134: Cesarean section	8,810	2.93	90,038	9.78
76: Colonoscopy and biopsy	8,689	2.89	45,493	19.10
88: Abdominal paracentesis	7,695	2.56	12,933	59.50
184: Intraoperative cholangiogram	6,806	2.27	13,331	51.05
98: Other non-O.R. gastrointestinal ther	5,698	1.90	13,144	43.35
61: Other O.R. procedures on vessels oth	5,329	1.77	27,490	19.39
139: Fetal monitoring	5,232	1.74	58,222	8.99
37: Diagnostic bronchoscopy and biopsy o	5,097	1.70	24,885	20.48
197: Other diagnostic ultrasound	4,893	1.63	4,893	100.00
140: Repair of current obstetric lacerati	4,538	1.51	114,984	3.95
4: Diagnostic spinal tap	4,352	1.45	27,745	15.69
136: Artificial rupture of membranes to a	4,198	1.40	81,570	5.15

**All Listed Procedures
Top 25 Procedures
Percent All Records : 48.37**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
3893: VENOUS CATH NEC	39,586	13.18	102,939	38.46
9904: PACKED CELL TRANSFUSION	21,209	7.06	120,064	17.66
5123: LAPAROSCOPIC CHOLECYSTEC	14,560	4.85	27,605	52.74
9604: INSERT ENDOTRACHEAL TUBE	13,591	4.53	49,083	27.69
4516: EGD WITH CLOSED BIOPSY	13,206	4.40	48,882	27.02
3995: HEMODIALYSIS	10,741	3.58	45,334	23.69
9672: CONT MECH VENT 96+ HRS	9,854	3.28	23,846	41.32
3491: THORACENTESIS	9,568	3.19	16,173	59.16
9671: CONT MECH VENT < 96 HRS	9,496	3.16	46,801	20.29
4513: SM BOWEL ENDOSCOPY NEC	9,472	3.15	38,720	24.46
8856: CORONAR ARTERIOGR-2 CATH	9,325	3.11	121,417	7.68
8872: DX ULTRASOUND-HEART	8,848	2.95	47,766	18.52
741 : LOW CERVICAL C-SECTION	8,302	2.77	88,368	9.39
3722: LEFT HEART CARDIAC CATH	8,211	2.73	115,623	7.10
5491: PERCU ABDOMINAL DRAINAGE	7,695	2.56	12,933	59.50
8853: LT HEART ANGIOCARDIOGRAM	7,465	2.49	106,340	7.02
8753: INTRAOPER CHOLANGIOGRAM	6,806	2.27	13,331	51.05
9915: PARENT INFUS NUTRIT SUB	6,741	2.25	18,796	35.86
3895: VEN CATH RENAL DIALYSIS	6,608	2.20	13,424	49.23
7359: MANUAL ASSIST DELIV NEC	6,124	2.04	123,340	4.97
3891: ARTERIAL CATHETERIZATION	4,691	1.56	13,777	34.05
4523: COLONOSCOPY	4,469	1.49	24,452	18.28
0331: SPINAL TAP	4,352	1.45	27,745	15.69
7309: ARTIF RUPT MEMBRANES NEC	4,198	1.40	81,570	5.15
734 : MEDICAL INDUCTION LABOR	4,100	1.37	52,474	7.81

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Electroencephalogram
SAS name: U_EEG
Number of records identified by flag: 62,888
Percentage of records: 2.0%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	39497.79
Min	45.00
10%	6076.00
25%	9605.00
50%	17527.00
75%	38807.00
90%	89681.00
Maximum	984051.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 65.89

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
83: Epilepsy, convulsions	10,378	16.50	19,591	52.97
109: Acute cerebrovascular disease	5,009	7.96	46,308	10.82
245: Syncope	3,255	5.18	17,369	18.74
110: Occlusion or stenosis of precerebral	2,360	3.75	12,132	19.45
112: Transient cerebral ischemia	1,613	2.56	13,893	11.61
205: Spondylosis, intervertebral disc dis	1,586	2.52	60,367	2.63
95: Other nervous system disorders	1,420	2.26	10,236	13.87
68: Senility and organic mental disorder	1,306	2.08	12,044	10.84
69: Affective disorders	1,289	2.05	64,982	1.98
100: Acute myocardial infarction	1,201	1.91	63,009	1.91
131: Respiratory failure, insufficiency,	1,158	1.84	23,045	5.02
122: Pneumonia (except that caused by tub	1,113	1.77	108,707	1.02
233: Intracranial injury	979	1.56	12,797	7.65
106: Cardiac dysrhythmias	920	1.46	55,775	1.65
2: Septicemia (except in labor)	872	1.39	28,567	3.05
108: Congestive heart failure, nonhyperte	871	1.39	81,174	1.07
101: Coronary atherosclerosis	768	1.22	92,889	0.83
55: Fluid and electrolyte disorders	743	1.18	47,395	1.57
218: Liveborn	727	1.16	330,415	0.22
50: Diabetes mellitus with complications	705	1.12	36,165	1.95
254: Rehabilitation care, fitting of pros	653	1.04	43,124	1.51
84: Headache, including migraine	640	1.02	6,706	9.54
129: Aspiration pneumonitis, food/vomitus	636	1.01	16,997	3.74
237: Complication of device, implant or g	623	0.99	49,925	1.25
66: Alcohol-related mental disorders	615	0.98	20,267	3.03

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 52.62

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
216: Respiratory intubation and mechanical ventilation	9,006	14.32	84,487	10.66
54: Other vascular catheterization, not including coronary	6,418	10.21	112,473	5.71
4: Diagnostic spinal tap	5,237	8.33	27,745	18.88
222: Blood transfusion	3,364	5.35	139,668	2.41
227: Other diagnostic procedures (interview, physical, laboratory, radiology, etc.)	3,156	5.02	16,094	19.61
51: Endarterectomy, vessel of head and neck	2,374	3.77	11,137	21.32
199: Electroencephalogram (EEG)	2,367	3.76	2,367	100.00
193: Diagnostic ultrasound of heart (echo)	2,342	3.72	47,766	4.90
70: Upper gastrointestinal endoscopy, biopsy	2,191	3.48	93,038	2.35
158: Spinal fusion	2,181	3.47	30,332	7.19
71: Gastrostomy, temporary and permanent	2,110	3.36	17,461	12.08
47: Diagnostic cardiac catheterization, including coronary	2,105	3.35	135,230	1.56
58: Hemodialysis	2,040	3.24	45,334	4.50
223: Enteral and parenteral nutrition	2,018	3.21	30,105	6.70
188: Cerebral arteriogram	1,818	2.89	12,001	15.15
3: Laminectomy, excision intervertebral	1,650	2.62	47,346	3.48
9: Other O.R. therapeutic nervous system	1,527	2.43	15,867	9.62
231: Other therapeutic procedures	1,476	2.35	96,989	1.52
198: Magnetic resonance imaging	1,466	2.33	8,922	16.43
34: Tracheostomy, temporary and permanent	1,400	2.23	7,561	18.52
63: Other non-O.R. therapeutic cardiovascular	1,305	2.08	75,558	1.73
1: Incision and excision of CNS	1,052	1.67	8,699	12.09
37: Diagnostic bronchoscopy and biopsy	1,048	1.67	24,885	4.21
61: Other O.R. procedures on vessels other than coronary	901	1.43	27,490	3.28
50: Extracorporeal circulation auxiliary	865	1.38	28,263	3.06

**All Listed Procedures
Top 25 Procedures
Percent All Records : 47.51**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
3893: VENOUS CATH NEC	5,837	9.28	102,939	5.67
9604: INSERT ENDOTRACHEAL TUBE	5,303	8.43	49,083	10.80
0331: SPINAL TAP	5,237	8.33	27,745	18.88
9671: CONT MECH VENT < 96 HRS	4,307	6.85	46,801	9.20
9672: CONT MECH VENT 96+ HRS	4,213	6.70	23,846	17.67
9904: PACKED CELL TRANSFUSION	2,784	4.43	120,064	2.32
3812: HEAD & NECK ENDARTER NEC	2,374	3.77	11,137	21.32
8914: ELECTROENCEPHALOGRAM	2,367	3.76	2,367	100.00
8872: DX ULTRASOUND-HEART	2,342	3.72	47,766	4.90
3995: HEMODIALYSIS	2,040	3.24	45,334	4.50
8919: VIDEO/RADIO EEG MONITOR	1,939	3.08	1,939	100.00
8841: CONTR CEREBR ARTERIOGRAM	1,818	2.89	12,001	15.15
4311: PERCU ENDOSC GASTROSTOMY	1,812	2.88	12,707	14.26
8856: CORONAR ARTERIOGR-2 CATH	1,788	2.84	121,417	1.47
3722: LEFT HEART CARDIAC CATH	1,616	2.57	115,623	1.40
8853: LT HEART ANGIOCARDIOGRAM	1,426	2.27	106,340	1.34
966 : ENTRAL INFUS NUTRIT SUB	1,346	2.14	12,410	10.85
8891: MRI OF BRAIN & BRAINSTEM	1,315	2.09	5,873	22.39
311 : TEMPORARY TRACHEOSTOMY	1,288	2.05	6,904	18.66
8051: EXCISION INTERVERT DISC	1,197	1.90	33,462	3.58
3891: ARTERIAL CATHETERIZATION	1,124	1.79	13,777	8.16
4516: EGD WITH CLOSED BIOPSY	1,054	1.68	48,882	2.16
4513: SM BOWEL ENDOSCOPY NEC	881	1.40	38,720	2.28
9915: PARENT INFUS NUTRIT SUB	837	1.33	18,796	4.45
3961: EXTRACORPOREAL CIRCULAT	820	1.30	27,255	3.01

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Nuclear Medicine
SAS name: U_NUCMED
Number of records identified by flag: 181,913
Percentage of records: 5.9%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	28951.80
Min	166.00
10%	6668.00
25%	9607.00
50%	15625.00
75%	29010.00
90%	57807.00
Maximum	996285.00

Frequently Coded Diagnoses

Clinical Classification Software (CCS) for Principal Diagnosis

Top 25 Diagnoses

Percent All Records : 66.74

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
102: Nonspecific chest pain	27,008	14.85	71,011	38.03
101: Coronary atherosclerosis	13,110	7.21	92,889	14.11
108: Congestive heart failure, nonhyperte	9,822	5.40	81,174	12.10
106: Cardiac dysrhythmias	6,962	3.83	55,775	12.48
149: Biliary tract disease	6,002	3.30	36,227	16.57
122: Pneumonia (except that caused by tub	5,650	3.11	108,707	5.20
100: Acute myocardial infarction	4,777	2.63	63,009	7.58
42: Secondary malignancies	4,519	2.48	20,455	22.09
237: Complication of device, implant or g	4,116	2.26	49,925	8.24
127: Chronic obstructive pulmonary diseas	3,918	2.15	55,655	7.04
50: Diabetes mellitus with complications	3,212	1.77	36,165	8.88
19: Cancer of bronchus, lung	3,137	1.72	13,210	23.75
138: Esophageal disorders	2,915	1.60	15,323	19.02
245: Syncope	2,792	1.53	17,369	16.07
103: Pulmonary heart disease	2,663	1.46	11,399	23.36
2: Septicemia (except in labor)	2,389	1.31	28,567	8.36
146: Diverticulosis and diverticulitis	2,251	1.24	23,334	9.65
153: Gastrointestinal hemorrhage	2,194	1.21	28,445	7.71
99: Hypertension with complications and	2,182	1.20	15,695	13.90
251: Abdominal pain	2,125	1.17	17,447	12.18
133: Other lower respiratory disease	2,021	1.11	12,851	15.73
238: Complications of surgical procedures	1,994	1.10	38,082	5.24
205: Spondylosis, intervertebral disc dis	1,978	1.09	60,367	3.28
24: Cancer of breast	1,840	1.01	7,647	24.06
109: Acute cerebrovascular disease	1,830	1.01	46,308	3.95

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 49.34

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
47: Diagnostic cardiac catheterization,	19,663	10.81	135,230	14.54
70: Upper gastrointestinal endoscopy, bi	14,227	7.82	93,038	15.29
54: Other vascular catheterization, not	13,378	7.35	112,473	11.89
222: Blood transfusion	12,172	6.69	139,668	8.71
211: Therapeutic radiology	10,444	5.74	10,444	100.00
201: Cardiac stress tests	6,751	3.71	9,016	74.88
76: Colonoscopy and biopsy	6,562	3.61	45,493	14.42
231: Other therapeutic procedures	6,330	3.48	96,989	6.53
193: Diagnostic ultrasound of heart (echo	6,308	3.47	47,766	13.21
216: Respiratory intubation and mechanica	6,273	3.45	84,487	7.42
63: Other non-O.R. therapeutic cardiovas	6,018	3.31	75,558	7.96
45: Percutaneous coronary angioplasty (P	5,762	3.17	62,846	9.17
84: Cholecystectomy and common duct expl	5,568	3.06	38,419	14.49
58: Hemodialysis	4,597	2.53	45,334	10.14
37: Diagnostic bronchoscopy and biopsy o	4,532	2.49	24,885	18.21
209: Radioisotope scan and function studi	4,404	2.42	4,404	100.00
224: Cancer chemotherapy	3,365	1.85	19,560	17.20
39: Incision of pleura, thoracentesis, c	3,300	1.81	29,243	11.28
191: Arterio- or venogram (not heart and	2,732	1.50	17,445	15.66
61: Other O.R. procedures on vessels oth	2,680	1.47	27,490	9.75
189: Contrast aortogram	2,655	1.46	16,826	15.78
67: Other therapeutic procedures, hemic	2,517	1.38	22,882	11.00
223: Enteral and parenteral nutrition	2,407	1.32	30,105	8.00
48: Insertion, revision, replacement, re	2,112	1.16	25,562	8.26
174: Other non-O.R. therapeutic procedure	2,049	1.13	16,465	12.44

**All Listed Procedures
Top 25 Procedures
Percent All Records : 42.78**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
8856: CORONAR ARTERIOGR-2 CATH	18,063	9.93	121,417	14.88
3722: LEFT HEART CARDIAC CATH	16,746	9.21	115,623	14.48
8853: LT HEART ANGIOCARDIOGRAM	15,708	8.63	106,340	14.77
3893: VENOUS CATH NEC	12,928	7.11	102,939	12.56
9904: PACKED CELL TRANSFUSION	10,943	6.02	120,064	9.11
4516: EGD WITH CLOSED BIOPSY	8,119	4.46	48,882	16.61
8872: DX ULTRASOUND-HEART	6,308	3.47	47,766	13.21
4513: SM BOWEL ENDOSCOPY NEC	5,748	3.16	38,720	14.85
8944: CARDIAC STRESS TEST NEC	5,390	2.96	6,186	87.13
9229: RADIOTHERAPEUT PROC NEC	5,355	2.94	5,355	100.00
3601: PTCA-1 VES/ATH W/O AGENT	4,875	2.68	52,556	9.28
3995: HEMODIALYSIS	4,597	2.53	45,334	10.14
5123: LAPAROSCOPIC CHOLECYSTEC	4,452	2.45	27,605	16.13
4523: COLONOSCOPY	4,166	2.29	24,452	17.04
9604: INSERT ENDOTRACHEAL TUBE	3,825	2.10	49,083	7.79
9205: C-VASC SCAN/ISOTOP FUNCT	3,442	1.89	3,442	100.00
9227: RADIOACTIVE ELEM IMPLANT	3,380	1.86	3,380	100.00
9925: INJECT CA CHEMOTHER NEC	3,316	1.82	18,719	17.71
9671: CONT MECH VENT < 96 HRS	3,170	1.74	46,801	6.77
3606: INS NONDRUG ELUT COR ST	2,657	1.46	37,161	7.15
8842: CONTRAST AORTOGRAM	2,655	1.46	16,826	15.78
3324: CLOSED BRONCHIAL BIOPSY	2,540	1.40	13,634	18.63
3491: THORACENTESIS	2,482	1.36	16,173	15.35
9920: INJ/INF PLATELET INHIBIT	2,432	1.34	31,113	7.82
9672: CONT MECH VENT 96+ HRS	2,340	1.29	23,846	9.81

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Medical Resonance Technology
SAS name: U_MRT
Number of records identified by flag: 144,012
Percentage of records: 4.7%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	30276.89
Min	73.00
10%	6820.00
25%	9894.00
50%	16222.00
75%	30392.00
90%	61332.00
Maximum	994937.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 58.71

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
109: Acute cerebrovascular disease	20,665	14.35	46,308	44.63
205: Spondylosis, intervertebral disc dis	7,137	4.96	60,367	11.82
112: Transient cerebral ischemia	5,899	4.10	13,893	42.46
83: Epilepsy, convulsions	5,466	3.80	19,591	27.90
42: Secondary malignancies	4,336	3.01	20,455	21.20
95: Other nervous system disorders	3,661	2.54	10,236	35.77
245: Syncope	3,054	2.12	17,369	17.58
84: Headache, including migraine	2,622	1.82	6,706	39.10
231: Other fractures	2,471	1.72	15,629	15.81
50: Diabetes mellitus with complications	2,422	1.68	36,165	6.70
122: Pneumonia (except that caused by tub	2,217	1.54	108,707	2.04
35: Cancer of brain and nervous system	2,181	1.51	3,195	68.26
197: Skin and subcutaneous tissue infecti	1,894	1.32	31,471	6.02
93: Conditions associated with dizziness	1,888	1.31	5,485	34.42
55: Fluid and electrolyte disorders	1,881	1.31	47,395	3.97
207: Pathological fracture	1,849	1.28	6,557	28.20
233: Intracranial injury	1,790	1.24	12,797	13.99
152: Pancreatic disorders (not diabetes)	1,769	1.23	23,811	7.43
2: Septicemia (except in labor)	1,707	1.19	28,567	5.98
68: Senility and organic mental disorder	1,677	1.16	12,044	13.92
19: Cancer of bronchus, lung	1,647	1.14	13,210	12.47
69: Affective disorders	1,624	1.13	64,982	2.50
102: Nonspecific chest pain	1,612	1.12	71,011	2.27
106: Cardiac dysrhythmias	1,539	1.07	55,775	2.76
108: Congestive heart failure, nonhyperte	1,536	1.07	81,174	1.89

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 45.18

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
54: Other vascular catheterization, not	11,862	8.24	112,473	10.55
4: Diagnostic spinal tap	8,951	6.22	27,745	32.26
198: Magnetic resonance imaging	8,922	6.20	8,922	100.00
70: Upper gastrointestinal endoscopy, bi	6,993	4.86	93,038	7.52
193: Diagnostic ultrasound of heart (echo	6,991	4.85	47,766	14.64
222: Blood transfusion	6,915	4.80	139,668	4.95
216: Respiratory intubation and mechanica	6,906	4.80	84,487	8.17
188: Cerebral arteriogram	6,660	4.62	12,001	55.50
231: Other therapeutic procedures	4,927	3.42	96,989	5.08
47: Diagnostic cardiac catheterization,	3,711	2.58	135,230	2.74
58: Hemodialysis	3,509	2.44	45,334	7.74
1: Incision and excision of CNS	3,463	2.40	8,699	39.81
9: Other O.R. therapeutic nervous syste	3,323	2.31	15,867	20.94
3: Laminectomy, excision intervertebral	2,802	1.95	47,346	5.92
37: Diagnostic bronchoscopy and biopsy o	2,795	1.94	24,885	11.23
71: Gastrostomy, temporary and permanent	2,752	1.91	17,461	15.76
223: Enteral and parenteral nutrition	2,729	1.89	30,105	9.06
76: Colonoscopy and biopsy	2,644	1.84	45,493	5.81
63: Other non-O.R. therapeutic cardiovas	2,290	1.59	75,558	3.03
61: Other O.R. procedures on vessels oth	2,044	1.42	27,490	7.44
191: Arterio- or venogram (not heart and	2,000	1.39	17,445	11.46
169: Debridement of wound, infection or b	1,935	1.34	23,842	8.12
211: Therapeutic radiology	1,899	1.32	10,444	18.18
5: Insertion of catheter or spinal stim	1,846	1.28	33,418	5.52
39: Incision of pleura, thoracentesis, c	1,765	1.23	29,243	6.04

**All Listed Procedures
Top 25 Procedures
Percent All Records : 38.97**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
3893: VENOUS CATH NEC	11,301	7.85	102,939	10.98
0331: SPINAL TAP	8,951	6.22	27,745	32.26
8872: DX ULTRASOUND-HEART	6,991	4.85	47,766	14.64
8841: CONTR CEREBR ARTERIOGRAM	6,660	4.62	12,001	55.50
8891: MRI OF BRAIN & BRAINSTEM	5,873	4.08	5,873	100.00
9904: PACKED CELL TRANSFUSION	5,801	4.03	120,064	4.83
9604: INSERT ENDOTRACHEAL TUBE	3,963	2.75	49,083	8.07
3995: HEMODIALYSIS	3,509	2.44	45,334	7.74
4516: EGD WITH CLOSED BIOPSY	3,477	2.41	48,882	7.11
9671: CONT MECH VENT < 96 HRS	3,373	2.34	46,801	7.21
8856: CORONAR ARTERIOGR-2 CATH	3,217	2.23	121,417	2.65
9672: CONT MECH VENT 96+ HRS	2,963	2.06	23,846	12.43
3722: LEFT HEART CARDIAC CATH	2,837	1.97	115,623	2.45
8853: LT HEART ANGIOCARDIOGRAM	2,624	1.82	106,340	2.47
4513: SM BOWEL ENDOSCOPY NEC	2,536	1.76	38,720	6.55
4311: PERCU ENDOSC GASTROSTOMY	2,392	1.66	12,707	18.82
0159: OTHER BRAIN EXCISION	2,233	1.55	3,412	65.45
8897: MAGNETIC RES IMAGE UNSP	2,078	1.44	2,078	100.00
8051: EXCISION INTERVERT DISC	1,779	1.24	33,462	5.32
9923: INJECT STEROID	1,767	1.23	7,058	25.04
9925: INJECT CA CHEMOTHER NEC	1,690	1.17	18,719	9.03
8622: EXC WOUND DEBRIDEMENT	1,617	1.12	19,457	8.31
3324: CLOSED BRONCHIAL BIOPSY	1,502	1.04	13,634	11.02
966 : ENTRAL INFUS NUTRIT SUB	1,494	1.04	12,410	12.04
0392: SPINAL CANAL INJECT NEC	1,464	1.02	3,842	38.11

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Pacemaker
SAS name: U_PACEMAKER
Number of records identified by flag: 32,251
Percentage of records: 1.0%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	84498.28
Min	634.00
10%	22534.00
25%	42761.00
50%	65277.00
75%	92903.00
90%	153489.00
Maximum	979434.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 94.77

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
106: Cardiac dysrhythmias	10,455	32.42	55,775	18.74
105: Conduction disorders	4,254	13.19	5,426	78.40
101: Coronary atherosclerosis	3,987	12.36	92,889	4.29
100: Acute myocardial infarction	3,072	9.53	63,009	4.88
108: Congestive heart failure, nonhyperte	2,791	8.65	81,174	3.44
237: Complication of device, implant or g	1,905	5.91	49,925	3.82
96: Heart valve disorders	1,285	3.98	7,087	18.13
97: Peri-, endo-, and myocarditis, cardi	430	1.33	6,380	6.74
213: Cardiac and circulatory congenital a	359	1.11	3,481	10.31
107: Cardiac arrest and ventricular fibri	345	1.07	1,520	22.70
245: Syncope	262	0.81	17,369	1.51
109: Acute cerebrovascular disease	187	0.58	46,308	0.40
238: Complications of surgical procedures	167	0.52	38,082	0.44
99: Hypertension with complications and	137	0.42	15,695	0.87
115: Aortic, peripheral, and visceral art	125	0.39	6,621	1.89
122: Pneumonia (except that caused by tub	122	0.38	108,707	0.11
218: Liveborn	100	0.31	330,415	0.03
157: Acute and unspecified renal failure	95	0.29	18,019	0.53
102: Nonspecific chest pain	87	0.27	71,011	0.12
131: Respiratory failure, insufficiency,	76	0.24	23,045	0.33
219: Short gestation, low birth weight, a	72	0.22	3,578	2.01
55: Fluid and electrolyte disorders	70	0.22	47,395	0.15
153: Gastrointestinal hemorrhage	64	0.20	28,445	0.22
50: Diabetes mellitus with complications	59	0.18	36,165	0.16
226: Fracture of neck of femur (hip)	58	0.18	26,225	0.22

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 98.38

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
48: Insertion, revision, replacement, re	25,562	79.26	25,562	100.00
47: Diagnostic cardiac catheterization,	7,201	22.33	135,230	5.33
50: Extracorporeal circulation auxiliary	5,070	15.72	28,263	17.94
62: Other diagnostic cardiovascular proc	4,884	15.14	10,407	46.93
44: Coronary artery bypass graft (CABG)	4,283	13.28	28,725	14.91
49: Other O.R. heart procedures	3,115	9.66	13,944	22.34
45: Percutaneous coronary angioplasty (P	2,377	7.37	62,846	3.78
63: Other non-O.R. therapeutic cardiovas	2,272	7.04	75,558	3.01
222: Blood transfusion	1,944	6.03	139,668	1.39
43: Heart valve procedures	1,918	5.95	8,099	23.68
193: Diagnostic ultrasound of heart (echo	1,861	5.77	47,766	3.90
216: Respiratory intubation and mechanica	1,663	5.16	84,487	1.97
225: Conversion of cardiac rhythm	1,275	3.95	15,192	8.39
54: Other vascular catheterization, not	1,196	3.71	112,473	1.06
231: Other therapeutic procedures	1,188	3.68	96,989	1.22
191: Arterio- or venogram (not heart and	881	2.73	17,445	5.05
70: Upper gastrointestinal endoscopy, bi	720	2.23	93,038	0.77
61: Other O.R. procedures on vessels oth	605	1.88	27,490	2.20
39: Incision of pleura, thoracentesis, c	572	1.77	29,243	1.96
227: Other diagnostic procedures (intervi	474	1.47	16,094	2.95
58: Hemodialysis	468	1.45	45,334	1.03
204: Swan-Ganz catheterization for monito	451	1.40	5,882	7.67
189: Contrast aortogram	398	1.23	16,826	2.37
42: Other O.R. therapeutic procedures on	250	0.78	7,705	3.24
223: Enteral and parenteral nutrition	190	0.59	30,105	0.63

**All Listed Procedures
Top 25 Procedures
Percent All Records : 92.25**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
3783: INT INSERT DUAL-CHAM DEV	11,423	35.42	11,423	100.00
3772: INT INSER LEAD ATRI-VENT	11,321	35.10	11,321	100.00
8856: CORONAR ARTERIOGR-2 CATH	5,876	18.22	121,417	4.84
3722: LEFT HEART CARDIAC CATH	5,462	16.94	115,623	4.72
3961: EXTRACORPOREAL CIRCULAT	4,847	15.03	27,255	17.78
3794: IMPLT/REPL CARDDEFIB TOT	4,739	14.69	4,739	100.00
3726: CARDIAC ELECTROPHY STIM	4,627	14.35	8,604	53.78
8853: LT HEART ANGIOCARDIOGRAM	4,433	13.75	106,340	4.17
3615: 1 INT MAM-COR ART BYPASS	3,160	9.80	22,625	13.97
3778: INSER TEMP PACEMAKER SYS	3,140	9.74	3,140	100.00
3771: INT INSERT LEAD IN VENT	2,258	7.00	2,258	100.00
3601: PTCA-1 VES/ATH W/O AGENT	2,028	6.29	52,556	3.86
8872: DX ULTRASOUND-HEART	1,861	5.77	47,766	3.90
0051: IMPL CRT DEFIBRILLAT SYS	1,682	5.22	1,682	100.00
3606: INS NONDRUG ELUT COR ST	1,465	4.54	37,161	3.94
3612: AORTOCOR BYPAS-2 COR ART	1,448	4.49	9,450	15.32
9904: PACKED CELL TRANSFUSION	1,421	4.41	120,064	1.18
3613: AORTOCOR BYPAS-3 COR ART	1,322	4.10	8,692	15.21
3782: INT INSERT 1-CHAM	1,213	3.76	1,213	100.00
3723: RT/LEFT HEART CARD CATH	1,136	3.52	12,974	8.76
3781: INT INSERT 1-CHAM	1,027	3.18	1,027	100.00
3893: VENOUS CATH NEC	1,000	3.10	102,939	0.97
3734: EXC/DEST HRT LES OTHER	989	3.07	3,348	29.54
3787: REPL PACEM W DUAL-CHAM	984	3.05	984	100.00
9671: CONT MECH VENT < 96 HRS	946	2.93	46,801	2.02

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Other Implants
SAS name: U_OTHIMPLANTS
Number of records identified by flag: 312,796
Percentage of records: 10.1%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	39682.89
Min	106.00
10%	11176.00
25%	17331.00
50%	27033.00
75%	43452.00
90%	74685.00
Maximum	996285.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 73.3

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
203: Osteoarthritis	35,882	11.47	54,442	65.91
101: Coronary atherosclerosis	35,545	11.36	92,889	38.27
100: Acute myocardial infarction	22,891	7.32	63,009	36.33
205: Spondylosis, intervertebral disc dis	21,252	6.79	60,367	35.20
237: Complication of device, implant or g	17,247	5.51	49,925	34.55
226: Fracture of neck of femur (hip)	16,424	5.25	26,225	62.63
230: Fracture of lower limb	12,793	4.09	23,024	55.56
143: Abdominal hernia	6,124	1.96	14,217	43.08
110: Occlusion or stenosis of precerebral	5,997	1.92	12,132	49.43
229: Fracture of upper limb	4,769	1.52	11,178	42.66
212: Other bone disease and musculoskelet	4,618	1.48	8,497	54.35
58: Other nutritional, endocrine, and me	4,589	1.47	16,120	28.47
96: Heart valve disorders	3,822	1.22	7,087	53.93
114: Peripheral and visceral atherosclero	3,773	1.21	12,516	30.15
115: Aortic, peripheral, and visceral art	3,650	1.17	6,621	55.13
170: Prolapse of female genital organs	3,341	1.07	12,798	26.11
238: Complications of surgical procedures	3,266	1.04	38,082	8.58
106: Cardiac dysrhythmias	3,142	1.00	55,775	5.63
108: Congestive heart failure, nonhyperte	3,091	0.99	81,174	3.81
102: Nonspecific chest pain	2,965	0.95	71,011	4.18
160: Calculus of urinary tract	2,901	0.93	14,438	20.09
149: Biliary tract disease	2,871	0.92	36,227	7.93
209: Other acquired deformities	2,826	0.90	4,148	68.13
109: Acute cerebrovascular disease	2,797	0.89	46,308	6.04
42: Secondary malignancies	2,694	0.86	20,455	13.17

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 77.48

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
47: Diagnostic cardiac catheterization,	60,916	19.47	135,230	45.05
63: Other non-O.R. therapeutic cardiovas	52,891	16.91	75,558	70.00
45: Percutaneous coronary angioplasty (P	47,715	15.25	62,846	75.92
231: Other therapeutic procedures	28,935	9.25	96,989	29.83
222: Blood transfusion	27,955	8.94	139,668	20.02
152: Arthroplasty knee	27,371	8.75	39,861	68.67
158: Spinal fusion	23,940	7.65	30,332	78.93
153: Hip replacement, total and partial	22,082	7.06	32,231	68.51
3: Laminectomy, excision intervertebral	19,675	6.29	47,346	41.56
146: Treatment, fracture or dislocation o	16,707	5.34	25,770	64.83
54: Other vascular catheterization, not	16,403	5.24	112,473	14.58
50: Extracorporeal circulation auxiliary	13,648	4.36	28,263	48.29
61: Other O.R. procedures on vessels oth	13,579	4.34	27,490	49.40
44: Coronary artery bypass graft (CABG)	12,847	4.11	28,725	44.72
142: Partial excision bone	12,736	4.07	21,383	59.56
147: Treatment, fracture or dislocation o	12,665	4.05	19,948	63.49
216: Respiratory intubation and mechanica	11,356	3.63	84,487	13.44
9: Other O.R. therapeutic nervous syste	8,655	2.77	15,867	54.55
161: Other O.R. therapeutic procedures on	8,497	2.72	13,847	61.36
193: Diagnostic ultrasound of heart (echo	7,348	2.35	47,766	15.38
48: Insertion, revision, replacement, re	6,891	2.20	25,562	26.96
86: Other hernia repair	6,870	2.20	17,348	39.60
148: Other fracture and dislocation proce	6,716	2.15	11,629	57.75
70: Upper gastrointestinal endoscopy, bi	6,524	2.09	93,038	7.01
160: Other therapeutic procedures on musc	6,458	2.06	20,520	31.47

**All Listed Procedures
Top 25 Procedures
Percent All Records : 61.3**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
8856: CORONAR ARTERIOGR-2 CATH	53,458	17.09	121,417	44.03
3722: LEFT HEART CARDIAC CATH	52,778	16.87	115,623	45.65
8853: LT HEART ANGIOCARDIOGRAM	46,487	14.86	106,340	43.72
3601: PTCA-1 VES/ATH W/O AGENT	39,516	12.63	52,556	75.19
3606: INS NONDRUG ELUT COR ST	29,950	9.57	37,161	80.60
8154: TOTAL KNEE REPLACEMENT	24,141	7.72	35,168	68.64
9920: INJ/INF PLATELET INHIBIT	22,318	7.14	31,113	71.73
9904: PACKED CELL TRANSFUSION	21,858	6.99	120,064	18.21
3607: INS DRUG-ELUT CORONRY ST	17,361	5.55	20,587	84.33
8051: EXCISION INTERVERT DISC	15,616	4.99	33,462	46.67
3893: VENOUS CATH NEC	15,177	4.85	102,939	14.74
8151: TOTAL HIP REPLACEMENT	13,401	4.28	19,253	69.60
3961: EXTRACORPOREAL CIRCULAT	13,109	4.19	27,255	48.10
8108: LUMBAR/LUMBOSAC FUS POST	9,808	3.14	12,156	80.68
7935: OPEN REDUC-INT FIX FEMUR	9,686	3.10	13,599	71.23
3615: 1 INT MAM-COR ART BYPASS	9,676	3.09	22,625	42.77
8102: OTHER CERVICAL FUS ANT	9,344	2.99	12,032	77.66
7779: EXCISE BONE FOR GFT NEC	9,079	2.90	11,459	79.23
7936: OP RED-INT FIX TIB/FIBUL	8,650	2.77	12,474	69.34
3605: PTCA-MULTIPLE VESSEL/ATH	7,756	2.48	9,527	81.41
8451: INS SPINAL FUSION DEVICE	7,635	2.44	9,472	80.61
8872: DX ULTRASOUND-HEART	7,348	2.35	47,766	15.38
8842: CONTRAST AORTOGRAM	6,411	2.05	16,826	38.10
3812: HEAD & NECK ENDARTER NEC	6,249	2.00	11,137	56.11
3995: HEMODIALYSIS	6,156	1.97	45,334	13.58

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Lithotripsy
SAS name: U_LITHOTRIPSY
Number of records identified by flag: 972
Percentage of records: 0.0%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	34265.50
Min	4670.00
10%	10294.00
25%	13840.00
50%	18769.00
75%	30706.00
90%	66778.00
Maximum	466452.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 96.6

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
160: Calculus of urinary tract	798	82.10	14,438	5.53
159: Urinary tract infections	22	2.26	36,273	0.06
238: Complications of surgical procedures	19	1.95	38,082	0.05
2: Septicemia (except in labor)	15	1.54	28,567	0.05
237: Complication of device, implant or g	14	1.44	49,925	0.03
157: Acute and unspecified renal failure	9	0.93	18,019	0.05
152: Pancreatic disorders (not diabetes)	8	0.82	23,811	0.03
149: Biliary tract disease	7	0.72	36,227	0.02
161: Other disease of kidney and ureters	6	0.62	4,244	0.14
102: Nonspecific chest pain	5	0.51	71,011	0.01
106: Cardiac dysrhythmias	5	0.51	55,775	0.01
181: Other complications of pregnancy	4	0.41	38,247	0.01
55: Fluid and electrolyte disorders	3	0.31	47,395	0.01
108: Congestive heart failure, nonhyperte	3	0.31	81,174	0.00
122: Pneumonia (except that caused by tub	3	0.31	108,707	0.00
251: Abdominal pain	3	0.31	17,447	0.02
100: Acute myocardial infarction	2	0.21	63,009	0.00
103: Pulmonary heart disease	2	0.21	11,399	0.02
195: Other complications of birth, puerpe	2	0.21	60,697	0.00
205: Spondylosis, intervertebral disc dis	2	0.21	60,367	0.00
250: Nausea and vomiting	2	0.21	5,143	0.04
257: Other aftercare	2	0.21	2,357	0.08
4: Mycoses	1	0.10	1,598	0.06
6: Hepatitis	1	0.10	1,866	0.05
13: Cancer of stomach	1	0.10	1,759	0.06

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 98.15

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
107: Extracorporeal lithotripsy, urinary	855	87.96	1,123	76.14
102: Ureteral catheterization	473	48.66	12,574	3.76
226: Other diagnostic radiology and relat	203	20.88	14,156	1.43
100: Endoscopy and endoscopic biopsy of t	191	19.65	15,758	1.21
101: Transurethral excision, drainage, or	167	17.18	8,863	1.88
111: Other non-O.R. therapeutic procedure	76	7.82	14,695	0.52
103: Nephrotomy and nephrostomy	53	5.45	3,258	1.63
187: Intravenous pyelogram	22	2.26	1,118	1.97
109: Procedures on the urethra	21	2.16	2,913	0.72
54: Other vascular catheterization, not	20	2.06	112,473	0.02
230: Extracorporeal shock wave lithotripsy	19	1.95	19	100.00
98: Other non-O.R. gastrointestinal ther	17	1.75	13,144	0.13
231: Other therapeutic procedures	12	1.23	96,989	0.01
222: Blood transfusion	11	1.13	139,668	0.01
70: Upper gastrointestinal endoscopy, bi	10	1.03	93,038	0.01
58: Hemodialysis	6	0.62	45,334	0.01
112: Other O.R. therapeutic procedures of	6	0.62	9,175	0.07
216: Respiratory intubation and mechanica	6	0.62	84,487	0.01
47: Diagnostic cardiac catheterization,	5	0.51	135,230	0.00
82: Endoscopic cannulation of pancreas (5	0.51	3,998	0.13
179: CT scan abdomen	5	0.51	8,531	0.06
63: Other non-O.R. therapeutic cardiovas	4	0.41	75,558	0.01
76: Colonoscopy and biopsy	4	0.41	45,493	0.01
113: Transurethral prostatectomy (TURP)	4	0.41	7,980	0.05
169: Debridement of wound, infection or b	4	0.41	23,842	0.02

**All Listed Procedures
Top 25 Procedures
Percent All Records : 97.84**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
9851: ESWL KID/URETER/BLADDER	850	87.45	850	100.00
598 : URETERAL CATHETERIZATION	473	48.66	12,574	3.76
8774: RETROGRADE PYELOGRAM	189	19.44	7,680	2.46
5732: CYSTOSCOPY NEC	144	14.81	13,295	1.08
560 : TU REMOV URETER OBSTRUCT	136	13.99	4,078	3.33
5631: URETEROSCOPY	58	5.97	1,746	3.32
9762: REMOV URETERAL DRAIN	55	5.66	923	5.96
5503: PERCU NEPHROSTM W/O FRAG	37	3.81	2,206	1.68
570 : TU BLADDER CLEARANCE	27	2.78	1,966	1.37
8773: INTRAVENOUS PYELOGRAM	22	2.26	1,118	1.97
3893: VENOUS CATH NEC	19	1.95	102,939	0.02
586 : URETHRAL DILATION	16	1.65	1,558	1.03
5504: PERCU NEPHROSTMY W FRAG	10	1.03	723	1.38
9852: ESWL GB/BILE DUCT	10	1.03	10	100.00
5593: REPLACE NEPHROSTOMY TUBE	9	0.93	541	1.66
5995: ULTRASON FRAGMENT-STONE	9	0.93	277	3.25
9859: ESWL OTHER SITES	9	0.93	9	100.00
8775: PERCUTANEOUS PYELOGRAM	8	0.82	530	1.51
9929: INJECT/INFUSE NEC	8	0.82	15,573	0.05
4516: EGD WITH CLOSED BIOPSY	7	0.72	48,882	0.01
5185: ENDOSC SPHINCTEROTOMY	7	0.72	7,281	0.10
5502: NEPHROSTOMY	7	0.72	272	2.57
9904: PACKED CELL TRANSFUSION	7	0.72	120,064	0.01
9921: INJECT ANTIBIOTIC	7	0.72	11,194	0.06
3995: HEMODIALYSIS	6	0.62	45,334	0.01

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Occupational Therapy
SAS name: U_OCCTHERAPY

Number of records identified by flag: 298,527
Percentage of records: 9.6%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	38693.78
Min	134.00
10%	7433.00
25%	12204.00
50%	22006.00
75%	39494.00
90%	79804.00
Maximum	994937.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 68.36

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
254: Rehabilitation care, fitting of pros	40,104	13.43	43,124	93.00
203: Osteoarthritis	29,288	9.81	54,442	53.80
109: Acute cerebrovascular disease	24,403	8.17	46,308	52.70
205: Spondylosis, intervertebral disc dis	12,628	4.23	60,367	20.92
226: Fracture of neck of femur (hip)	8,858	2.97	26,225	33.78
122: Pneumonia (except that caused by tub	8,578	2.87	108,707	7.89
237: Complication of device, implant or g	7,902	2.65	49,925	15.83
69: Affective disorders	7,556	2.53	64,982	11.63
108: Congestive heart failure, nonhyperte	7,221	2.42	81,174	8.90
233: Intracranial injury	5,108	1.71	12,797	39.92
231: Other fractures	4,888	1.64	15,629	31.28
230: Fracture of lower limb	4,698	1.57	23,024	20.40
100: Acute myocardial infarction	4,585	1.54	63,009	7.28
131: Respiratory failure, insufficiency,	4,088	1.37	23,045	17.74
127: Chronic obstructive pulmonary diseas	3,513	1.18	55,655	6.31
55: Fluid and electrolyte disorders	3,508	1.18	47,395	7.40
2: Septicemia (except in labor)	3,481	1.17	28,567	12.19
101: Coronary atherosclerosis	3,473	1.16	92,889	3.74
159: Urinary tract infections	3,131	1.05	36,273	8.63
238: Complications of surgical procedures	3,018	1.01	38,082	7.93
112: Transient cerebral ischemia	2,898	0.97	13,893	20.86
68: Senility and organic mental disorder	2,865	0.96	12,044	23.79
50: Diabetes mellitus with complications	2,862	0.96	36,165	7.91
157: Acute and unspecified renal failure	2,762	0.93	18,019	15.33
229: Fracture of upper limb	2,661	0.89	11,178	23.81

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 52.83

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
222: Blood transfusion	27,121	9.08	139,668	19.42
54: Other vascular catheterization, not	22,811	7.64	112,473	20.28
216: Respiratory intubation and mechanical	20,286	6.80	84,487	24.01
153: Hip replacement, total and partial	19,166	6.42	32,231	59.46
152: Arthroplasty knee	18,880	6.32	39,861	47.36
215: Other physical therapy and rehabilit	16,898	5.66	18,426	91.71
213: Physical therapy exercises, manipula	13,539	4.54	19,381	69.86
3: Laminectomy, excision intervertebral	10,725	3.59	47,346	22.65
70: Upper gastrointestinal endoscopy, bi	9,951	3.33	93,038	10.70
158: Spinal fusion	9,745	3.26	30,332	32.13
193: Diagnostic ultrasound of heart (echo	8,809	2.95	47,766	18.44
231: Other therapeutic procedures	8,117	2.72	96,989	8.37
146: Treatment, fracture or dislocation o	8,081	2.71	25,770	31.36
223: Enteral and parenteral nutrition	7,606	2.55	30,105	25.26
58: Hemodialysis	7,052	2.36	45,334	15.56
47: Diagnostic cardiac catheterization,	6,721	2.25	135,230	4.97
71: Gastrostomy, temporary and permanent	6,196	2.08	17,461	35.48
142: Partial excision bone	6,145	2.06	21,383	28.74
9: Other O.R. therapeutic nervous syste	5,759	1.93	15,867	36.30
39: Incision of pleura, thoracentesis, c	5,258	1.76	29,243	17.98
61: Other O.R. procedures on vessels oth	5,188	1.74	27,490	18.87
169: Debridement of wound, infection or b	4,728	1.58	23,842	19.83
63: Other non-O.R. therapeutic cardiovas	4,616	1.55	75,558	6.11
37: Diagnostic bronchoscopy and biopsy o	4,615	1.55	24,885	18.55
188: Cerebral arteriogram	4,489	1.50	12,001	37.41

**All Listed Procedures
Top 25 Procedures
Percent All Records : 44.97**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
9904: PACKED CELL TRANSFUSION	21,615	7.24	120,064	18.00
3893: VENOUS CATH NEC	21,239	7.11	102,939	20.63
8154: TOTAL KNEE REPLACEMENT	17,285	5.79	35,168	49.15
9383: OCCUPATIONAL THERAPY	15,010	5.03	15,010	100.00
8151: TOTAL HIP REPLACEMENT	13,225	4.43	19,253	68.69
9339: PHYSICAL THERAPY NEC	13,017	4.36	17,508	74.35
9604: INSERT ENDOTRACHEAL TUBE	10,742	3.60	49,083	21.89
9672: CONT MECH VENT 96+ HRS	9,593	3.21	23,846	40.23
8872: DX ULTRASOUND-HEART	8,809	2.95	47,766	18.44
9671: CONT MECH VENT < 96 HRS	8,772	2.94	46,801	18.74
3995: HEMODIALYSIS	7,052	2.36	45,334	15.56
8051: EXCISION INTERVERT DISC	6,719	2.25	33,462	20.08
9381: RECREATIONAL THERAPY	6,029	2.02	6,976	86.42
8856: CORONAR ARTERIOGR-2 CATH	5,366	1.80	121,417	4.42
8108: LUMBAR/LUMBOSAC FUS POST	5,274	1.77	12,156	43.39
3722: LEFT HEART CARDIAC CATH	5,049	1.69	115,623	4.37
4311: PERCU ENDOSC GASTROSTOMY	5,042	1.69	12,707	39.68
7935: OPEN REDUC-INT FIX FEMUR	4,663	1.56	13,599	34.29
4513: SM BOWEL ENDOSCOPY NEC	4,611	1.54	38,720	11.91
0309: SPINAL CANAL EXPLOR NEC	4,565	1.53	15,984	28.56
8841: CONTR CEREBR ARTERIOGRAM	4,489	1.50	12,001	37.41
0331: SPINAL TAP	4,424	1.48	27,745	15.95
4516: EGD WITH CLOSED BIOPSY	4,381	1.47	48,882	8.96
7779: EXCISE BONE FOR GFT NEC	4,207	1.41	11,459	36.71
966 : ENTRAL INFUS NUTRIT SUB	4,200	1.41	12,410	33.84

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Physical Therapy
SAS name: U_PHYTHERAPY
Number of records identified by flag: 620,502
Percentage of records: 20.0%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	32510.50
Min	42.00
10%	6572.00
25%	10768.00
50%	19589.00
75%	34832.00
90%	65496.00
Maximum	996285.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 65.42

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
203: Osteoarthritis	53,039	8.55	54,442	97.42
254: Rehabilitation care, fitting of pros	40,552	6.54	43,124	94.04
109: Acute cerebrovascular disease	32,737	5.28	46,308	70.69
205: Spondylosis, intervertebral disc dis	31,412	5.06	60,367	52.04
122: Pneumonia (except that caused by tub	24,730	3.99	108,707	22.75
226: Fracture of neck of femur (hip)	24,530	3.95	26,225	93.54
108: Congestive heart failure, nonhyperte	21,061	3.39	81,174	25.95
230: Fracture of lower limb	20,389	3.29	23,024	88.56
237: Complication of device, implant or g	18,112	2.92	49,925	36.28
100: Acute myocardial infarction	13,061	2.10	63,009	20.73
101: Coronary atherosclerosis	11,948	1.93	92,889	12.86
231: Other fractures	11,559	1.86	15,629	73.96
127: Chronic obstructive pulmonary diseas	10,636	1.71	55,655	19.11
55: Fluid and electrolyte disorders	9,959	1.60	47,395	21.01
2: Septicemia (except in labor)	9,050	1.46	28,567	31.68
50: Diabetes mellitus with complications	8,921	1.44	36,165	24.67
238: Complications of surgical procedures	8,754	1.41	38,082	22.99
131: Respiratory failure, insufficiency,	8,717	1.40	23,045	37.83
159: Urinary tract infections	8,430	1.36	36,273	23.24
197: Skin and subcutaneous tissue infecti	6,858	1.11	31,471	21.79
233: Intracranial injury	6,780	1.09	12,797	52.98
106: Cardiac dysrhythmias	6,763	1.09	55,775	12.13
157: Acute and unspecified renal failure	6,503	1.05	18,019	36.09
129: Aspiration pneumonitis, food/vomit	5,744	0.93	16,997	33.79
212: Other bone disease and musculoskelet	5,698	0.92	8,497	67.06

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 53.82

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
222: Blood transfusion	62,176	10.02	139,668	44.52
54: Other vascular catheterization, not	46,525	7.50	112,473	41.37
152: Arthroplasty knee	39,531	6.37	39,861	99.17
216: Respiratory intubation and mechanica	33,787	5.45	84,487	39.99
153: Hip replacement, total and partial	31,852	5.13	32,231	98.82
146: Treatment, fracture or dislocation o	23,853	3.84	25,770	92.56
3: Laminectomy, excision intervertebral	23,827	3.84	47,346	50.33
70: Upper gastrointestinal endoscopy, bi	23,016	3.71	93,038	24.74
158: Spinal fusion	19,678	3.17	30,332	64.88
213: Physical therapy exercises, manipula	19,381	3.12	19,381	100.00
47: Diagnostic cardiac catheterization,	19,009	3.06	135,230	14.06
147: Treatment, fracture or dislocation o	18,002	2.90	19,948	90.24
231: Other therapeutic procedures	17,410	2.81	96,989	17.95
193: Diagnostic ultrasound of heart (echo	16,454	2.65	47,766	34.45
215: Other physical therapy and rehabilit	15,145	2.44	18,426	82.19
142: Partial excision bone	14,572	2.35	21,383	68.15
58: Hemodialysis	14,413	2.32	45,334	31.79
44: Coronary artery bypass graft (CABG)	13,912	2.24	28,725	48.43
223: Enteral and parenteral nutrition	12,911	2.08	30,105	42.89
169: Debridement of wound, infection or b	12,745	2.05	23,842	53.46
50: Extracorporeal circulation auxiliary	12,700	2.05	28,263	44.94
39: Incision of pleura, thoracentesis, c	10,965	1.77	29,243	37.50
63: Other non-O.R. therapeutic cardiovas	10,887	1.75	75,558	14.41
160: Other therapeutic procedures on musc	10,696	1.72	20,520	52.12
76: Colonoscopy and biopsy	10,449	1.68	45,493	22.97

**All Listed Procedures
Top 25 Procedures
Percent All Records : 44.91**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
9904: PACKED CELL TRANSFUSION	51,689	8.33	120,064	43.05
3893: VENOUS CATH NEC	44,015	7.09	102,939	42.76
8154: TOTAL KNEE REPLACEMENT	35,042	5.65	35,168	99.64
8151: TOTAL HIP REPLACEMENT	19,172	3.09	19,253	99.58
9604: INSERT ENDOTRACHEAL TUBE	19,121	3.08	49,083	38.96
9339: PHYSICAL THERAPY NEC	17,508	2.82	17,508	100.00
8872: DX ULTRASOUND-HEART	16,454	2.65	47,766	34.45
8856: CORONAR ARTERIOGR-2 CATH	16,008	2.58	121,417	13.18
9671: CONT MECH VENT < 96 HRS	15,726	2.53	46,801	33.60
8051: EXCISION INTERVERT DISC	15,317	2.47	33,462	45.77
3722: LEFT HEART CARDIAC CATH	15,017	2.42	115,623	12.99
3995: HEMODIALYSIS	14,413	2.32	45,334	31.79
9672: CONT MECH VENT 96+ HRS	14,125	2.28	23,846	59.23
7935: OPEN REDUC-INT FIX FEMUR	13,043	2.10	13,599	95.91
9383: OCCUPATIONAL THERAPY	12,996	2.09	15,010	86.58
8853: LT HEART ANGIOCARDIOGRAM	12,682	2.04	106,340	11.93
3961: EXTRACORPOREAL CIRCULAT	12,405	2.00	27,255	45.51
7936: OP RED-INT FIX TIB/FIBUL	11,655	1.88	12,474	93.43
4516: EGD WITH CLOSED BIOPSY	11,040	1.78	48,882	22.59
8108: LUMBAR/LUMBOSAC FUS POST	11,007	1.77	12,156	90.55
3615: 1 INT MAM-COR ART BYPASS	10,762	1.73	22,625	47.57
8622: EXC WOUND DEBRIDEMENT	10,423	1.68	19,457	53.57
4513: SM BOWEL ENDOSCOPY NEC	10,311	1.66	38,720	26.63
0309: SPINAL CANAL EXPLOR NEC	9,849	1.59	15,984	61.62
8152: PARTIAL HIP REPLACEMENT	9,144	1.47	9,381	97.47

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Therapeutic Radiology and Chemotherapy
SAS name: U_RADTHERAPY

Number of records identified by flag: 37,845
Percentage of records: 1.2%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	33122.18
Min	711.00
10%	5852.00
25%	9522.00
50%	17065.00
75%	32252.00
90%	62053.00
Maximum	994015.00

Frequently Coded Diagnoses

Clinical Classification Software (CCS) for Principal Diagnosis

Top 25 Diagnoses

Percent All Records : 78.2

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
45: Maintenance chemotherapy, radiothera	12,090	31.95	13,244	91.29
42: Secondary malignancies	4,238	11.20	20,455	20.72
237: Complication of device, implant or g	1,954	5.16	49,925	3.91
19: Cancer of bronchus, lung	1,866	4.93	13,210	14.13
39: Leukemias	1,382	3.65	3,250	42.52
38: Non-Hodgkins lymphoma	1,153	3.05	3,586	32.15
101: Coronary atherosclerosis	813	2.15	92,889	0.88
36: Cancer of thyroid	682	1.80	1,866	36.55
122: Pneumonia (except that caused by tub	636	1.68	108,707	0.59
55: Fluid and electrolyte disorders	590	1.56	47,395	1.24
26: Cancer of cervix	505	1.33	2,136	23.64
40: Multiple myeloma	430	1.14	1,353	31.78
100: Acute myocardial infarction	316	0.83	63,009	0.50
2: Septicemia (except in labor)	302	0.80	28,567	1.06
35: Cancer of brain and nervous system	299	0.79	3,195	9.36
63: Disease of white blood cells	279	0.74	4,029	6.92
11: Cancer of head and neck	268	0.71	2,584	10.37
254: Rehabilitation care, fitting of pros	253	0.67	43,124	0.59
238: Complications of surgical procedures	246	0.65	38,082	0.65
59: Anemia	233	0.62	13,194	1.77
29: Cancer of prostate	225	0.59	7,864	2.86
118: Phlebitis, thrombophlebitis and thro	223	0.59	12,040	1.85
108: Congestive heart failure, nonhyperte	207	0.55	81,174	0.26
157: Acute and unspecified renal failure	204	0.54	18,019	1.13
103: Pulmonary heart disease	199	0.53	11,399	1.75

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 86.5

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
224: Cancer chemotherapy	19,560	51.68	19,560	100.00
211: Therapeutic radiology	10,444	27.60	10,444	100.00
54: Other vascular catheterization, not	4,601	12.16	112,473	4.09
222: Blood transfusion	4,099	10.83	139,668	2.93
45: Percutaneous coronary angioplasty (P	2,568	6.79	62,846	4.09
231: Other therapeutic procedures	2,483	6.56	96,989	2.56
47: Diagnostic cardiac catheterization,	2,036	5.38	135,230	1.51
174: Other non-O.R. therapeutic procedure	1,948	5.15	16,465	11.83
65: Bone marrow biopsy	1,923	5.08	7,708	24.95
37: Diagnostic bronchoscopy and biopsy o	1,658	4.38	24,885	6.66
223: Enteral and parenteral nutrition	1,305	3.45	30,105	4.33
63: Other non-O.R. therapeutic cardiovas	1,239	3.27	75,558	1.64
70: Upper gastrointestinal endoscopy, bi	1,236	3.27	93,038	1.33
4: Diagnostic spinal tap	1,125	2.97	27,745	4.05
5: Insertion of catheter or spinal stim	1,072	2.83	33,418	3.21
39: Incision of pleura, thoracentesis, c	1,061	2.80	29,243	3.63
64: Bone marrow transplant	763	2.02	943	80.91
216: Respiratory intubation and mechanica	718	1.90	84,487	0.85
71: Gastrostomy, temporary and permanent	590	1.56	17,461	3.38
193: Diagnostic ultrasound of heart (echo	546	1.44	47,766	1.14
67: Other therapeutic procedures, hemic	545	1.44	22,882	2.38
214: Traction, splints, and other wound c	486	1.28	8,920	5.45
198: Magnetic resonance imaging	475	1.26	8,922	5.32
76: Colonoscopy and biopsy	456	1.20	45,493	1.00
58: Hemodialysis	412	1.09	45,334	0.91

**All Listed Procedures
Top 25 Procedures
Percent All Records : 81.63**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
9925: INJECT CA CHEMOTHER NEC	18,719	49.46	18,719	100.00
9229: RADIOTHERAPEUT PROC NEC	5,355	14.15	5,355	100.00
3893: VENOUS CATH NEC	4,450	11.76	102,939	4.32
9904: PACKED CELL TRANSFUSION	3,621	9.57	120,064	3.02
9227: RADIOACTIVE ELEM IMPLANT	3,380	8.93	3,380	100.00
3601: PTCA-1 VES/ATH W/O AGENT	2,170	5.73	52,556	4.13
4131: BONE MARROW BIOPSY	1,923	5.08	7,708	24.95
8856: CORONAR ARTERIOGR-2 CATH	1,780	4.70	121,417	1.47
8607: INSERT VASC ACCESS DEV	1,704	4.50	6,712	25.39
3722: LEFT HEART CARDIAC CATH	1,666	4.40	115,623	1.44
8853: LT HEART ANGIOCARDIOGRAM	1,285	3.40	106,340	1.21
0331: SPINAL TAP	1,125	2.97	27,745	4.05
9905: PLATELET TRANSFUSION	1,116	2.95	8,108	13.76
9224: TELERADIO USING PHOTONS	1,059	2.80	1,059	100.00
9928: IMMUNOTHERAPY AS ANTINEO	1,033	2.73	1,033	100.00
9915: PARENT INFUS NUTRIT SUB	987	2.61	18,796	5.25
3324: CLOSED BRONCHIAL BIOPSY	941	2.49	13,634	6.90
9920: INJ/INF PLATELET INHIBIT	836	2.21	31,113	2.69
0392: SPINAL CANAL INJECT NEC	766	2.02	3,842	19.94
3491: THORACENTESIS	730	1.93	16,173	4.51
3606: INS NONDRUG ELUT COR ST	688	1.82	37,161	1.85
4516: EGD WITH CLOSED BIOPSY	638	1.69	48,882	1.31
8872: DX ULTRASOUND-HEART	546	1.44	47,766	1.14
9929: INJECT/INFUSE NEC	544	1.44	15,573	3.49
4513: SM BOWEL ENDOSCOPY NEC	505	1.33	38,720	1.30

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Respiratory Services
SAS name: U_RESPTHERAPY
Number of records identified by flag: 731,340
Percentage of records: 23.6%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	23864.10
Min	27.00
10%	3860.00
25%	6745.00
50%	12784.00
75%	26380.00
90%	52064.00
Maximum	994937.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 63.78

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
122: Pneumonia (except that caused by tub	80,920	11.06	108,707	74.44
127: Chronic obstructive pulmonary diseas	49,001	6.70	55,655	88.04
108: Congestive heart failure, nonhyperte	40,044	5.48	81,174	49.33
128: Asthma	29,791	4.07	32,916	90.51
101: Coronary atherosclerosis	28,176	3.85	92,889	30.33
218: Liveborn	25,934	3.55	330,415	7.85
100: Acute myocardial infarction	22,492	3.08	63,009	35.70
131: Respiratory failure, insufficiency,	22,120	3.02	23,045	95.99
125: Acute bronchitis	14,330	1.96	17,147	83.57
203: Osteoarthritis	12,949	1.77	54,442	23.78
129: Aspiration pneumonitis, food/vomitus	12,546	1.72	16,997	73.81
2: Septicemia (except in labor)	12,114	1.66	28,567	42.41
109: Acute cerebrovascular disease	12,026	1.64	46,308	25.97
102: Nonspecific chest pain	10,243	1.40	71,011	14.42
237: Complication of device, implant or g	10,149	1.39	49,925	20.33
106: Cardiac dysrhythmias	9,908	1.35	55,775	17.76
254: Rehabilitation care, fitting of pros	9,811	1.34	43,124	22.75
205: Spondylosis, intervertebral disc dis	9,559	1.31	60,367	15.83
226: Fracture of neck of femur (hip)	9,413	1.29	26,225	35.89
149: Biliary tract disease	8,708	1.19	36,227	24.04
55: Fluid and electrolyte disorders	8,260	1.13	47,395	17.43
19: Cancer of bronchus, lung	8,089	1.11	13,210	61.23
238: Complications of surgical procedures	7,707	1.05	38,082	20.24
133: Other lower respiratory disease	6,291	0.86	12,851	48.95
50: Diabetes mellitus with complications	5,859	0.80	36,165	16.20

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 43.13

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
216: Respiratory intubation and mechanical ventilation	82,423	11.27	84,487	97.56
54: Other vascular catheterization, not including coronary	60,346	8.25	112,473	53.65
222: Blood transfusion	52,118	7.13	139,668	37.32
47: Diagnostic cardiac catheterization, including coronary	38,529	5.27	135,230	28.49
44: Coronary artery bypass graft (CABG)	27,762	3.80	28,725	96.65
50: Extracorporeal circulation auxiliary	27,004	3.69	28,263	95.55
70: Upper gastrointestinal endoscopy, including esophagoscopy	25,826	3.53	93,038	27.76
231: Other therapeutic procedures	25,542	3.49	96,989	26.33
37: Diagnostic bronchoscopy and biopsy	19,139	2.62	24,885	76.91
193: Diagnostic ultrasound of heart (echocardiography)	18,773	2.57	47,766	39.30
39: Incision of pleura, thoracentesis, chest tube placement	18,195	2.49	29,243	62.22
223: Enteral and parenteral nutrition	16,918	2.31	30,105	56.20
63: Other non-O.R. therapeutic cardiovascular procedures	14,866	2.03	75,558	19.67
58: Hemodialysis	14,555	1.99	45,334	32.11
217: Other respiratory therapy	14,241	1.95	14,241	100.00
84: Cholecystectomy and common duct exploration	11,768	1.61	38,419	30.63
78: Colorectal resection	11,348	1.55	26,364	43.04
61: Other O.R. procedures on vessels other than coronary	11,051	1.51	27,490	40.20
124: Hysterectomy, abdominal and vaginal	11,035	1.51	56,519	19.52
76: Colonoscopy and biopsy	10,883	1.49	45,493	23.92
71: Gastrostomy, temporary and permanent	10,514	1.44	17,461	60.21
90: Excision, lysis peritoneal adhesions	10,066	1.38	30,349	33.17
152: Arthroplasty knee	10,004	1.37	39,861	25.10
119: Oophorectomy, unilateral and bilateral	9,273	1.27	43,545	21.30
153: Hip replacement, total and partial	9,126	1.25	32,231	28.31

**All Listed Procedures
Top 25 Procedures
Percent All Records : 35.26**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
3893: VENOUS CATH NEC	53,016	7.25	102,939	51.50
9604: INSERT ENDOTRACHEAL TUBE	47,194	6.45	49,083	96.15
9671: CONT MECH VENT < 96 HRS	46,801	6.40	46,801	100.00
9904: PACKED CELL TRANSFUSION	45,475	6.22	120,064	37.88
8856: CORONAR ARTERIOGR-2 CATH	32,771	4.48	121,417	26.99
3722: LEFT HEART CARDIAC CATH	30,156	4.12	115,623	26.08
8853: LT HEART ANGIOCARDIOGRAM	27,223	3.72	106,340	25.60
3961: EXTRACORPOREAL CIRCULAT	26,349	3.60	27,255	96.68
9672: CONT MECH VENT 96+ HRS	23,846	3.26	23,846	100.00
3615: 1 INT MAM-COR ART BYPASS	21,827	2.98	22,625	96.47
8872: DX ULTRASOUND-HEART	18,773	2.57	47,766	39.30
3995: HEMODIALYSIS	14,555	1.99	45,334	32.11
4516: EGD WITH CLOSED BIOPSY	12,218	1.67	48,882	24.99
3891: ARTERIAL CATHETERIZATION	11,527	1.58	13,777	83.67
4513: SM BOWEL ENDOSCOPY NEC	11,491	1.57	38,720	29.68
3324: CLOSED BRONCHIAL BIOPSY	11,101	1.52	13,634	81.42
9390: CONT POS AIRWAY PRESSURE	10,815	1.48	10,815	100.00
9396: OXYGEN ENRICHMENT NEC	10,434	1.43	10,434	100.00
3491: THORACENTESIS	9,934	1.36	16,173	61.42
9915: PARENT INFUS NUTRIT SUB	9,773	1.34	18,796	52.00
3612: AORTOCOR BYPAS-2 COR ART	9,129	1.25	9,450	96.60
8154: TOTAL KNEE REPLACEMENT	9,052	1.24	35,168	25.74
5459: OTH PERITON ADHESIOLYSIS	8,725	1.19	25,229	34.58
3613: AORTOCOR BYPAS-3 COR ART	8,427	1.15	8,692	96.95
3404: INSERT INTERCOSTAL CATH	8,098	1.11	12,657	63.98

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Speech - Language Pathology
SAS name: U_SPEECHTHERAPY

Number of records identified by flag: 120,295
Percentage of records: 3.9%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	47365.78
Min	416.00
10%	7190.00
25%	11602.00
50%	21635.00
75%	47584.50
90%	112394.00
Maximum	996285.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 74.67

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
109: Acute cerebrovascular disease	22,156	18.42	46,308	47.84
254: Rehabilitation care, fitting of pros	16,666	13.85	43,124	38.65
129: Aspiration pneumonitis, food/vomitus	7,000	5.82	16,997	41.18
122: Pneumonia (except that caused by tub	6,337	5.27	108,707	5.83
233: Intracranial injury	3,574	2.97	12,797	27.93
131: Respiratory failure, insufficiency,	3,437	2.86	23,045	14.91
2: Septicemia (except in labor)	2,732	2.27	28,567	9.56
108: Congestive heart failure, nonhyperte	2,594	2.16	81,174	3.20
218: Liveborn	2,504	2.08	330,415	0.76
100: Acute myocardial infarction	2,470	2.05	63,009	3.92
112: Transient cerebral ischemia	2,099	1.74	13,893	15.11
159: Urinary tract infections	1,938	1.61	36,273	5.34
55: Fluid and electrolyte disorders	1,901	1.58	47,395	4.01
226: Fracture of neck of femur (hip)	1,798	1.49	26,225	6.86
127: Chronic obstructive pulmonary diseas	1,461	1.21	55,655	2.63
68: Senility and organic mental disorder	1,446	1.20	12,044	12.01
157: Acute and unspecified renal failure	1,437	1.19	18,019	7.97
83: Epilepsy, convulsions	1,357	1.13	19,591	6.93
95: Other nervous system disorders	1,173	0.98	10,236	11.46
101: Coronary atherosclerosis	1,146	0.95	92,889	1.23
237: Complication of device, implant or g	1,032	0.86	49,925	2.07
231: Other fractures	899	0.75	15,629	5.75
106: Cardiac dysrhythmias	893	0.74	55,775	1.60
42: Secondary malignancies	890	0.74	20,455	4.35
238: Complications of surgical procedures	887	0.74	38,082	2.33

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 49.77

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
216: Respiratory intubation and mechanical	15,961	13.27	84,487	18.89
54: Other vascular catheterization, not	14,332	11.91	112,473	12.74
222: Blood transfusion	8,729	7.26	139,668	6.25
71: Gastrostomy, temporary and permanent	8,121	6.75	17,461	46.51
215: Other physical therapy and rehabilit	7,041	5.85	18,426	38.21
223: Enteral and parenteral nutrition	6,748	5.61	30,105	22.41
70: Upper gastrointestinal endoscopy, bi	6,638	5.52	93,038	7.13
213: Physical therapy exercises, manipula	5,420	4.51	19,381	27.97
193: Diagnostic ultrasound of heart (echo	4,888	4.06	47,766	10.23
37: Diagnostic bronchoscopy and biopsy o	3,859	3.21	24,885	15.51
34: Tracheostomy, temporary and permanen	3,847	3.20	7,561	50.88
231: Other therapeutic procedures	3,282	2.73	96,989	3.38
188: Cerebral arteriogram	3,165	2.63	12,001	26.37
58: Hemodialysis	3,091	2.57	45,334	6.82
39: Incision of pleura, thoracentesis, c	2,951	2.45	29,243	10.09
4: Diagnostic spinal tap	2,940	2.44	27,745	10.60
47: Diagnostic cardiac catheterization,	2,851	2.37	135,230	2.11
1: Incision and excision of CNS	2,644	2.20	8,699	30.39
61: Other O.R. procedures on vessels oth	2,476	2.06	27,490	9.01
9: Other O.R. therapeutic nervous syste	2,085	1.73	15,867	13.14
63: Other non-O.R. therapeutic cardiovas	2,079	1.73	75,558	2.75
177: Computerized axial tomography (CT) s	1,871	1.56	9,523	19.65
50: Extracorporeal circulation auxiliary	1,865	1.55	28,263	6.60
198: Magnetic resonance imaging	1,849	1.54	8,922	20.72
44: Coronary artery bypass graft (CABG)	1,684	1.40	28,725	5.86

**All Listed Procedures
Top 25 Procedures
Percent All Records : 44.37**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
3893: VENOUS CATH NEC	13,404	11.14	102,939	13.02
9604: INSERT ENDOTRACHEAL TUBE	9,068	7.54	49,083	18.47
9672: CONT MECH VENT 96+ HRS	8,252	6.86	23,846	34.61
9904: PACKED CELL TRANSFUSION	7,603	6.32	120,064	6.33
4311: PERCU ENDOSC GASTROSTOMY	7,183	5.97	12,707	56.53
9671: CONT MECH VENT < 96 HRS	6,648	5.53	46,801	14.20
9339: PHYSICAL THERAPY NEC	5,299	4.41	17,508	30.27
9383: OCCUPATIONAL THERAPY	5,006	4.16	15,010	33.35
8872: DX ULTRASOUND-HEART	4,888	4.06	47,766	10.23
966 : ENTRAL INFUS NUTRIT SUB	4,603	3.83	12,410	37.09
9375: OTHER SPEECH THERAPY	4,430	3.68	4,430	100.00
311 : TEMPORARY TRACHEOSTOMY	3,556	2.96	6,904	51.51
4513: SM BOWEL ENDOSCOPY NEC	3,184	2.65	38,720	8.22
8841: CONTR CEREBR ARTERIOGRAM	3,165	2.63	12,001	26.37
3995: HEMODIALYSIS	3,091	2.57	45,334	6.82
0331: SPINAL TAP	2,940	2.44	27,745	10.60
4516: EGD WITH CLOSED BIOPSY	2,760	2.29	48,882	5.65
9915: PARENT INFUS NUTRIT SUB	2,415	2.01	18,796	12.85
3324: CLOSED BRONCHIAL BIOPSY	2,222	1.85	13,634	16.30
9381: RECREATIONAL THERAPY	2,220	1.85	6,976	31.82
8856: CORONAR ARTERIOGR-2 CATH	2,182	1.81	121,417	1.80
3722: LEFT HEART CARDIAC CATH	2,024	1.68	115,623	1.75
3891: ARTERIAL CATHETERIZATION	1,898	1.58	13,777	13.78
8703: C.A.T. SCAN OF HEAD	1,871	1.56	9,523	19.65
3961: EXTRACORPOREAL CIRCULAT	1,794	1.49	27,255	6.58

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Blood
SAS name: U_BLOOD

Number of records identified by flag: 369,134
Percentage of records: 11.9%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	48159.17
Min	36.00
10%	5316.00
25%	11770.00
50%	26132.00
75%	55267.00
90%	108888.00
Maximum	996285.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 56.53

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
203: Osteoarthritis	21,669	5.87	54,442	39.80
153: Gastrointestinal hemorrhage	19,369	5.25	28,445	68.09
101: Coronary atherosclerosis	17,520	4.75	92,889	18.86
226: Fracture of neck of femur (hip)	13,340	3.61	26,225	50.87
237: Complication of device, implant or g	13,113	3.55	49,925	26.27
100: Acute myocardial infarction	12,159	3.29	63,009	19.30
59: Anemia	11,741	3.18	13,194	88.99
122: Pneumonia (except that caused by tub	10,076	2.73	108,707	9.27
108: Congestive heart failure, nonhyperte	9,262	2.51	81,174	11.41
218: Liveborn	7,707	2.09	330,415	2.33
2: Septicemia (except in labor)	7,422	2.01	28,567	25.98
238: Complications of surgical procedures	7,200	1.95	38,082	18.91
205: Spondylosis, intervertebral disc dis	6,137	1.66	60,367	10.17
146: Diverticulosis and diverticulitis	5,933	1.61	23,334	25.43
157: Acute and unspecified renal failure	5,291	1.43	18,019	29.36
42: Secondary malignancies	4,987	1.35	20,455	24.38
96: Heart valve disorders	4,739	1.28	7,087	66.87
109: Acute cerebrovascular disease	4,431	1.20	46,308	9.57
131: Respiratory failure, insufficiency,	4,110	1.11	23,045	17.83
195: Other complications of birth, puerpe	4,081	1.11	60,697	6.72
230: Fracture of lower limb	4,066	1.10	23,024	17.66
50: Diabetes mellitus with complications	4,009	1.09	36,165	11.09
115: Aortic, peripheral, and visceral art	3,450	0.93	6,621	52.11
233: Intracranial injury	3,450	0.93	12,797	26.96
114: Peripheral and visceral atherosclero	3,411	0.92	12,516	27.25

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 77.99

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
222: Blood transfusion	139,668	37.84	139,668	100.00
54: Other vascular catheterization, not	44,703	12.11	112,473	39.75
70: Upper gastrointestinal endoscopy, bi	41,133	11.14	93,038	44.21
216: Respiratory intubation and mechanical	33,523	9.08	84,487	39.68
47: Diagnostic cardiac catheterization,	23,647	6.41	135,230	17.49
50: Extracorporeal circulation auxiliary	22,486	6.09	28,263	79.56
44: Coronary artery bypass graft (CABG)	22,266	6.03	28,725	77.51
76: Colonoscopy and biopsy	19,596	5.31	45,493	43.07
153: Hip replacement, total and partial	17,579	4.76	32,231	54.54
152: Arthroplasty knee	15,146	4.10	39,861	38.00
231: Other therapeutic procedures	14,591	3.95	96,989	15.04
58: Hemodialysis	14,519	3.93	45,334	32.03
63: Other non-O.R. therapeutic cardiovas	13,294	3.60	75,558	17.59
146: Treatment, fracture or dislocation o	13,235	3.59	25,770	51.36
61: Other O.R. procedures on vessels oth	12,807	3.47	27,490	46.59
223: Enteral and parenteral nutrition	11,744	3.18	30,105	39.01
193: Diagnostic ultrasound of heart (echo	11,192	3.03	47,766	23.43
39: Incision of pleura, thoracentesis, c	10,065	2.73	29,243	34.42
78: Colorectal resection	9,387	2.54	26,364	35.61
93: Other non-O.R. upper GI therapeutic	8,599	2.33	13,757	62.51
158: Spinal fusion	8,508	2.30	30,332	28.05
99: Other O.R. gastrointestinal therapeu	8,127	2.20	19,446	41.79
37: Diagnostic bronchoscopy and biopsy o	7,729	2.09	24,885	31.06
137: Other procedures to assist delivery	7,235	1.96	160,703	4.50
49: Other O.R. heart procedures	7,219	1.96	13,944	51.77

**All Listed Procedures
Top 25 Procedures
Percent All Records : 66.76**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
9904: PACKED CELL TRANSFUSION	120,064	32.53	120,064	100.00
3893: VENOUS CATH NEC	41,155	11.15	102,939	39.98
3961: EXTRACORPOREAL CIRCULAT	21,940	5.94	27,255	80.50
4516: EGD WITH CLOSED BIOPSY	20,447	5.54	48,882	41.83
9604: INSERT ENDOTRACHEAL TUBE	19,572	5.30	49,083	39.88
4513: SM BOWEL ENDOSCOPY NEC	19,322	5.23	38,720	49.90
8856: CORONAR ARTERIOGR-2 CATH	18,843	5.10	121,417	15.52
3722: LEFT HEART CARDIAC CATH	18,786	5.09	115,623	16.25
3615: 1 INT MAM-COR ART BYPASS	17,192	4.66	22,625	75.99
9671: CONT MECH VENT < 96 HRS	15,619	4.23	46,801	33.37
9907: SERUM TRANSFUSION NEC	15,369	4.16	15,369	100.00
8853: LT HEART ANGIOCARDIOGRAM	15,356	4.16	106,340	14.44
9672: CONT MECH VENT 96+ HRS	14,974	4.06	23,846	62.79
3995: HEMODIALYSIS	14,519	3.93	45,334	32.03
8154: TOTAL KNEE REPLACEMENT	13,748	3.72	35,168	39.09
4523: COLONOSCOPY	12,574	3.41	24,452	51.42
8872: DX ULTRASOUND-HEART	11,192	3.03	47,766	23.43
8151: TOTAL HIP REPLACEMENT	10,268	2.78	19,253	53.33
7935: OPEN REDUC-INT FIX FEMUR	8,402	2.28	13,599	61.78
9905: PLATELET TRANSFUSION	8,108	2.20	8,108	100.00
9915: PARENT INFUS NUTRIT SUB	8,039	2.18	18,796	42.77
3612: AORTOCOR BYPAS-2 COR ART	7,460	2.02	9,450	78.94
3613: AORTOCOR BYPAS-3 COR ART	6,907	1.87	8,692	79.46
3895: VEN CATH RENAL DIALYSIS	6,834	1.85	13,424	50.91
3891: ARTERIAL CATHETERIZATION	6,502	1.76	13,777	47.19

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Renal Dialysis
SAS name: U_DIALYSIS

Number of records identified by flag: 56,548
Percentage of records: 1.8%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	85457.77
Min	613.00
10%	7346.00
25%	13154.00
50%	32362.00
75%	104029.00
90%	235614.00
Maximum	994259.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 73.53

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
237: Complication of device, implant or g	7,742	13.69	49,925	15.51
99: Hypertension with complications and	4,450	7.87	15,695	28.35
108: Congestive heart failure, nonhyperte	3,892	6.88	81,174	4.79
50: Diabetes mellitus with complications	3,272	5.79	36,165	9.05
157: Acute and unspecified renal failure	2,719	4.81	18,019	15.09
122: Pneumonia (except that caused by tub	2,166	3.83	108,707	1.99
2: Septicemia (except in labor)	2,110	3.73	28,567	7.39
55: Fluid and electrolyte disorders	1,690	2.99	47,395	3.57
100: Acute myocardial infarction	1,448	2.56	63,009	2.30
101: Coronary atherosclerosis	1,416	2.50	92,889	1.52
238: Complications of surgical procedures	1,235	2.18	38,082	3.24
254: Rehabilitation care, fitting of pros	1,038	1.84	43,124	2.41
158: Chronic renal failure	1,030	1.82	1,647	62.54
106: Cardiac dysrhythmias	881	1.56	55,775	1.58
131: Respiratory failure, insufficiency,	815	1.44	23,045	3.54
109: Acute cerebrovascular disease	806	1.43	46,308	1.74
153: Gastrointestinal hemorrhage	762	1.35	28,445	2.68
102: Nonspecific chest pain	709	1.25	71,011	1.00
114: Peripheral and visceral atherosclero	556	0.98	12,516	4.44
133: Other lower respiratory disease	522	0.92	12,851	4.06
117: Other circulatory disease	510	0.90	9,406	5.42
152: Pancreatic disorders (not diabetes)	483	0.85	23,811	2.03
248: Gangrene	476	0.84	2,912	16.35
197: Skin and subcutaneous tissue infecti	431	0.76	31,471	1.37
127: Chronic obstructive pulmonary diseas	420	0.74	55,655	0.75

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 94.69

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
58: Hemodialysis	45,334	80.17	45,334	100.00
63: Other non-O.R. therapeutic cardiovas	13,865	24.52	75,558	18.35
222: Blood transfusion	6,348	11.23	139,668	4.55
54: Other vascular catheterization, not	5,683	10.05	112,473	5.05
216: Respiratory intubation and mechanica	5,206	9.21	84,487	6.16
57: Creation, revision and removal of ar	3,754	6.64	4,436	84.63
61: Other O.R. procedures on vessels oth	3,684	6.51	27,490	13.40
70: Upper gastrointestinal endoscopy, bi	3,105	5.49	93,038	3.34
47: Diagnostic cardiac catheterization,	2,848	5.04	135,230	2.11
174: Other non-O.R. therapeutic procedure	2,828	5.00	16,465	17.18
231: Other therapeutic procedures	2,420	4.28	96,989	2.50
191: Arterio- or venogram (not heart and	2,079	3.68	17,445	11.92
91: Peritoneal dialysis	2,069	3.66	2,069	100.00
193: Diagnostic ultrasound of heart (echo	2,036	3.60	47,766	4.26
157: Amputation of lower extremity	1,492	2.64	10,335	14.44
169: Debridement of wound, infection or b	1,362	2.41	23,842	5.71
39: Incision of pleura, thoracentesis, c	1,328	2.35	29,243	4.54
76: Colonoscopy and biopsy	1,230	2.18	45,493	2.70
223: Enteral and parenteral nutrition	1,159	2.05	30,105	3.85
99: Other O.R. gastrointestinal therapeu	1,057	1.87	19,446	5.44
37: Diagnostic bronchoscopy and biopsy o	952	1.68	24,885	3.83
45: Percutaneous coronary angioplasty (P	914	1.62	62,846	1.45
50: Extracorporeal circulation auxiliary	844	1.49	28,263	2.99
225: Conversion of cardiac rhythm	836	1.48	15,192	5.50
34: Tracheostomy, temporary and permanen	818	1.45	7,561	10.82

**All Listed Procedures
Top 25 Procedures
Percent All Records : 93.58**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
3995: HEMODIALYSIS	45,334	80.17	45,334	100.00
3895: VEN CATH RENAL DIALYSIS	12,843	22.71	13,424	95.67
9904: PACKED CELL TRANSFUSION	5,647	9.99	120,064	4.70
3893: VENOUS CATH NEC	5,316	9.40	102,939	5.16
9604: INSERT ENDOTRACHEAL TUBE	3,207	5.67	49,083	6.53
9671: CONT MECH VENT < 96 HRS	2,346	4.15	46,801	5.01
9672: CONT MECH VENT 96+ HRS	2,346	4.15	23,846	9.84
8856: CORONAR ARTERIOGR-2 CATH	2,330	4.12	121,417	1.92
5498: PERITONEAL DIALYSIS	2,069	3.66	2,069	100.00
3722: LEFT HEART CARDIAC CATH	2,059	3.64	115,623	1.78
3927: DIALYSIS ARTERIOVENOSTOM	2,043	3.61	2,498	81.79
8872: DX ULTRASOUND-HEART	2,036	3.60	47,766	4.26
3950: ANGIO/ATH NON-CORO VES	1,788	3.16	8,694	20.57
8853: LT HEART ANGIOCARDIOGRAM	1,699	3.00	106,340	1.60
4516: EGD WITH CLOSED BIOPSY	1,575	2.79	48,882	3.22
3949: VASC PROC REVISION NEC	1,321	2.34	3,619	36.50
4513: SM BOWEL ENDOSCOPY NEC	1,301	2.30	38,720	3.36
8607: INSERT VASC ACCESS DEV	1,280	2.26	6,712	19.07
3942: REVIS REN DIALYSIS SHUNT	1,263	2.23	1,408	89.70
8622: EXC WOUND DEBRIDEMENT	1,152	2.04	19,457	5.92
9907: SERUM TRANSFUSION NEC	1,017	1.80	15,369	6.62
3491: THORACENTESIS	978	1.73	16,173	6.05
8849: CONTRAST ARTERIOGRAM NEC	957	1.69	2,406	39.78
8605: SKIN INCIS & FB REMOVAL	878	1.55	3,289	26.70
3961: EXTRACORPOREAL CIRCULAT	801	1.42	27,255	2.94

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: EPO
SAS name: U_EPO

Number of records identified by flag: 11,406
Percentage of records: 0.4%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	49373.90
Min	1079.00
10%	7287.00
25%	12057.50
50%	22663.50
75%	48106.00
90%	112364.00
Maximum	967064.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 67.2

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
237: Complication of device, implant or g	1,278	11.20	49,925	2.56
108: Congestive heart failure, nonhyperte	700	6.14	81,174	0.86
99: Hypertension with complications and	678	5.94	15,695	4.32
50: Diabetes mellitus with complications	586	5.14	36,165	1.62
122: Pneumonia (except that caused by tub	510	4.47	108,707	0.47
157: Acute and unspecified renal failure	488	4.28	18,019	2.71
2: Septicemia (except in labor)	356	3.12	28,567	1.25
101: Coronary atherosclerosis	326	2.86	92,889	0.35
238: Complications of surgical procedures	304	2.67	38,082	0.80
100: Acute myocardial infarction	297	2.60	63,009	0.47
55: Fluid and electrolyte disorders	269	2.36	47,395	0.57
254: Rehabilitation care, fitting of pros	180	1.58	43,124	0.42
153: Gastrointestinal hemorrhage	172	1.51	28,445	0.60
131: Respiratory failure, insufficiency,	158	1.39	23,045	0.69
42: Secondary malignancies	156	1.37	20,455	0.76
106: Cardiac dysrhythmias	149	1.31	55,775	0.27
109: Acute cerebrovascular disease	148	1.30	46,308	0.32
158: Chronic renal failure	136	1.19	1,647	8.26
45: Maintenance chemotherapy, radiothera	128	1.12	13,244	0.97
102: Nonspecific chest pain	123	1.08	71,011	0.17
59: Anemia	109	0.96	13,194	0.83
159: Urinary tract infections	107	0.94	36,273	0.29
226: Fracture of neck of femur (hip)	103	0.90	26,225	0.39
129: Aspiration pneumonitis, food/vomit	102	0.89	16,997	0.60
197: Skin and subcutaneous tissue infecti	102	0.89	31,471	0.32

Frequently Coded Procedures**Clinical Classification Software (CCS) for All Listed Procedures****Top 25 Procedures****Percent of All Records : 80.5**

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
58: Hemodialysis	5,975	52.38	45,334	13.18
63: Other non-O.R. therapeutic cardiovas	1,808	15.85	75,558	2.39
222: Blood transfusion	1,538	13.48	139,668	1.10
54: Other vascular catheterization, not	1,400	12.27	112,473	1.24
216: Respiratory intubation and mechanica	1,011	8.86	84,487	1.20
47: Diagnostic cardiac catheterization,	659	5.78	135,230	0.49
70: Upper gastrointestinal endoscopy, bi	649	5.69	93,038	0.70
57: Creation, revision and removal of ar	575	5.04	4,436	12.96
61: Other O.R. procedures on vessels oth	550	4.82	27,490	2.00
174: Other non-O.R. therapeutic procedure	499	4.37	16,465	3.03
39: Incision of pleura, thoracentesis, c	393	3.45	29,243	1.34
193: Diagnostic ultrasound of heart (echo	379	3.32	47,766	0.79
37: Diagnostic bronchoscopy and biopsy o	361	3.17	24,885	1.45
231: Other therapeutic procedures	353	3.09	96,989	0.36
169: Debridement of wound, infection or b	337	2.95	23,842	1.41
76: Colonoscopy and biopsy	295	2.59	45,493	0.65
34: Tracheostomy, temporary and permanen	293	2.57	7,561	3.88
157: Amputation of lower extremity	277	2.43	10,335	2.68
191: Arterio- or venogram (not heart and	262	2.30	17,445	1.50
50: Extracorporeal circulation auxiliary	233	2.04	28,263	0.82
99: Other O.R. gastrointestinal therapeu	231	2.03	19,446	1.19
223: Enteral and parenteral nutrition	218	1.91	30,105	0.72
45: Percutaneous coronary angioplasty (P	202	1.77	62,846	0.32
44: Coronary artery bypass graft (CABG)	194	1.70	28,725	0.68
88: Abdominal paracentesis	191	1.67	12,933	1.48

**All Listed Procedures
Top 25 Procedures
Percent All Records : 77.7**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
3995: HEMODIALYSIS	5,975	52.38	45,334	13.18
3895: VEN CATH RENAL DIALYSIS	1,585	13.90	13,424	11.81
9904: PACKED CELL TRANSFUSION	1,393	12.21	120,064	1.16
3893: VENOUS CATH NEC	1,286	11.27	102,939	1.25
9604: INSERT ENDOTRACHEAL TUBE	605	5.30	49,083	1.23
9672: CONT MECH VENT 96+ HRS	544	4.77	23,846	2.28
8856: CORONAR ARTERIOGR-2 CATH	488	4.28	121,417	0.40
3722: LEFT HEART CARDIAC CATH	434	3.81	115,623	0.38
9671: CONT MECH VENT < 96 HRS	419	3.67	46,801	0.90
8872: DX ULTRASOUND-HEART	379	3.32	47,766	0.79
8853: LT HEART ANGIOCARDIOGRAM	375	3.29	106,340	0.35
4516: EGD WITH CLOSED BIOPSY	361	3.17	48,882	0.74
3927: DIALYSIS ARTERIOVENOSTOM	333	2.92	2,498	13.33
8622: EXC WOUND DEBRIDEMENT	291	2.55	19,457	1.50
311 : TEMPORARY TRACHEOSTOMY	285	2.50	6,904	4.13
3491: THORACENTESIS	248	2.17	16,173	1.53
3950: ANGIO/ATH NON-CORO VES	244	2.14	8,694	2.81
4513: SM BOWEL ENDOSCOPY NEC	240	2.10	38,720	0.62
3324: CLOSED BRONCHIAL BIOPSY	239	2.10	13,634	1.75
3961: EXTRACORPOREAL CIRCULAT	228	2.00	27,255	0.84
8607: INSERT VASC ACCESS DEV	201	1.76	6,712	2.99
5491: PERCU ABDOMINAL DRAINAGE	191	1.67	12,933	1.48
5523: CLOSED RENAL BIOPSY	180	1.58	2,393	7.52
3601: PTCA-1 VES/ATH W/O AGENT	170	1.49	52,556	0.32
3404: INSERT INTERCOSTAL CATH	168	1.47	12,657	1.33

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Mental Health and Substance Abuse
SAS name: U_MHSA
Number of records identified by flag: 153,691
Percentage of records: 5.0%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	12892.14
Min	30.00
10%	2561.00
25%	4312.00
50%	7691.00
75%	14458.00
90%	26545.00
Maximum	951011.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 96.04

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
69: Affective disorders	58,429	38.02	64,982	89.92
70: Schizophrenia and related disorders	17,525	11.40	19,926	87.95
66: Alcohol-related mental disorders	15,191	9.88	20,267	74.95
67: Substance-related mental disorders	13,308	8.66	16,416	81.07
74: Other mental conditions	12,921	8.41	15,470	83.52
254: Rehabilitation care, fitting of pros	6,952	4.52	43,124	16.12
68: Senility and organic mental disorder	5,699	3.71	12,044	47.32
71: Other psychoses	4,785	3.11	6,226	76.86
72: Anxiety, somatoform, dissociative, a	4,322	2.81	6,873	62.88
73: Preadult disorders	1,378	0.90	1,497	92.05
242: Poisoning by other medications and d	1,173	0.76	11,880	9.87
241: Poisoning by psychotropic agents	939	0.61	6,544	14.35
181: Other complications of pregnancy	924	0.60	38,247	2.42
152: Pancreatic disorders (not diabetes)	623	0.41	23,811	2.62
109: Acute cerebrovascular disease	486	0.32	46,308	1.05
150: Liver disease, alcohol-related	425	0.28	5,088	8.35
233: Intracranial injury	389	0.25	12,797	3.04
83: Epilepsy, convulsions	373	0.24	19,591	1.90
55: Fluid and electrolyte disorders	317	0.21	47,395	0.67
122: Pneumonia (except that caused by tub	305	0.20	108,707	0.28
102: Nonspecific chest pain	248	0.16	71,011	0.35
153: Gastrointestinal hemorrhage	239	0.16	28,445	0.84
203: Osteoarthritis	235	0.15	54,442	0.43
127: Chronic obstructive pulmonary diseas	213	0.14	55,655	0.38
50: Diabetes mellitus with complications	211	0.14	36,165	0.58

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 27.94

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
219: Alcohol and drug rehabilitation/deto	28,273	18.40	28,273	100.00
218: Psychological and psychiatric evalua	7,340	4.78	7,340	100.00
215: Other physical therapy and rehabilit	5,008	3.26	18,426	27.18
213: Physical therapy exercises, manipula	1,722	1.12	19,381	8.88
216: Respiratory intubation and mechanica	1,348	0.88	84,487	1.60
70: Upper gastrointestinal endoscopy, bi	1,056	0.69	93,038	1.14
54: Other vascular catheterization, not	1,044	0.68	112,473	0.93
222: Blood transfusion	854	0.56	139,668	0.61
171: Suture of skin and subcutaneous tiss	851	0.55	13,212	6.44
231: Other therapeutic procedures	680	0.44	96,989	0.70
227: Other diagnostic procedures (intervi	619	0.40	16,094	3.85
58: Hemodialysis	498	0.32	45,334	1.10
202: Electrocardiogram	475	0.31	4,712	10.08
193: Diagnostic ultrasound of heart (echo	421	0.27	47,766	0.88
223: Enteral and parenteral nutrition	393	0.26	30,105	1.31
217: Other respiratory therapy	365	0.24	14,241	2.56
214: Traction, splints, and other wound c	341	0.22	8,920	3.82
4: Diagnostic spinal tap	340	0.22	27,745	1.23
169: Debridement of wound, infection or b	336	0.22	23,842	1.41
76: Colonoscopy and biopsy	333	0.22	45,493	0.73
93: Other non-O.R. upper GI therapeutic	333	0.22	13,757	2.42
177: Computerized axial tomography (CT) s	326	0.21	9,523	3.42
226: Other diagnostic radiology and relat	276	0.18	14,156	1.95
174: Other non-O.R. therapeutic procedure	264	0.17	16,465	1.60
61: Other O.R. procedures on vessels oth	256	0.17	27,490	0.93

**All Listed Procedures
Top 25 Procedures
Percent All Records : 25.59**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
9462: ALCOHOL DETOXIFICATION	13,129	8.54	13,129	100.00
9465: DRUG DETOXIFICATION	4,115	2.68	4,115	100.00
9383: OCCUPATIONAL THERAPY	3,550	2.31	15,010	23.65
9381: RECREATIONAL THERAPY	3,475	2.26	6,976	49.81
9463: ALCOHOL REHAB/DETOX	2,399	1.56	2,399	100.00
9468: COMB ALCOHOL/DRUG DETOX	2,371	1.54	2,371	100.00
9444: OTHER GROUP THERAPY	2,076	1.35	2,076	100.00
9466: DRUG REHAB/DETOX	2,050	1.33	2,050	100.00
9427: ELECTROSHOCK THERAPY NEC	2,017	1.31	2,017	100.00
9339: PHYSICAL THERAPY NEC	1,699	1.11	17,508	9.70
9469: COMB ALCO/DRUG REHA/DETO	1,524	0.99	1,524	100.00
9425: PSYCHIAT DRUG THERAP NEC	1,148	0.75	1,148	100.00
9467: COMB ALCOHOL/DRUG REHAB	1,120	0.73	1,120	100.00
3893: VENOUS CATH NEC	1,000	0.65	102,939	0.97
9464: DRUG REHABILITATION	887	0.58	887	100.00
8659: SKIN CLOSURE NEC	851	0.55	13,193	6.45
9671: CONT MECH VENT < 96 HRS	851	0.55	46,801	1.82
9408: PSYCHOL EVAL & TEST NEC	794	0.52	794	100.00
9439: INDIVID PSYCHOTHERAP NEC	781	0.51	781	100.00
9375: OTHER SPEECH THERAPY	767	0.50	4,430	17.31
9461: ALCOHOL REHABILITATION	760	0.49	760	100.00
9604: INSERT ENDOTRACHEAL TUBE	754	0.49	49,083	1.54
9904: PACKED CELL TRANSFUSION	710	0.46	120,064	0.59
9419: PSYCHIA INTERV/EVAL NEC	573	0.37	573	100.00
4513: SM BOWEL ENDOSCOPY NEC	542	0.35	38,720	1.40

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Emergency Room
SAS name: U_ED
Number of records identified by flag: 1,286,907
Percentage of records: 41.6%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	17002.07
Min	27.00
10%	3678.00
25%	5745.00
50%	9804.00
75%	17831.00
90%	33662.00
Maximum	994259.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 57.5

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
122: Pneumonia (except that caused by tub	77,575	6.03	108,707	71.36
108: Congestive heart failure, nonhyperte	57,802	4.49	81,174	71.21
102: Nonspecific chest pain	56,735	4.41	71,011	79.90
100: Acute myocardial infarction	39,752	3.09	63,009	63.09
127: Chronic obstructive pulmonary diseas	39,520	3.07	55,655	71.01
101: Coronary atherosclerosis	38,854	3.02	92,889	41.83
109: Acute cerebrovascular disease	37,129	2.89	46,308	80.18
106: Cardiac dysrhythmias	33,114	2.57	55,775	59.37
55: Fluid and electrolyte disorders	29,558	2.30	47,395	62.37
69: Affective disorders	28,465	2.21	64,982	43.80
159: Urinary tract infections	27,138	2.11	36,273	74.82
50: Diabetes mellitus with complications	23,754	1.85	36,165	65.68
2: Septicemia (except in labor)	22,245	1.73	28,567	77.87
128: Asthma	21,664	1.68	32,916	65.82
226: Fracture of neck of femur (hip)	21,562	1.68	26,225	82.22
153: Gastrointestinal hemorrhage	21,163	1.64	28,445	74.40
149: Biliary tract disease	20,704	1.61	36,227	57.15
197: Skin and subcutaneous tissue infecti	19,026	1.48	31,471	60.46
152: Pancreatic disorders (not diabetes)	18,594	1.44	23,811	78.09
145: Intestinal obstruction without herni	18,551	1.44	24,173	76.74
142: Appendicitis and other appendiceal c	18,432	1.43	24,014	76.76
230: Fracture of lower limb	17,740	1.38	23,024	77.05
238: Complications of surgical procedures	17,451	1.36	38,082	45.82
131: Respiratory failure, insufficiency,	17,368	1.35	23,045	75.37
237: Complication of device, implant or g	16,012	1.24	49,925	32.07

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 34.73

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
222: Blood transfusion	70,504	5.48	139,668	50.48
47: Diagnostic cardiac catheterization,	65,097	5.06	135,230	48.14
54: Other vascular catheterization, not	60,885	4.73	112,473	54.13
70: Upper gastrointestinal endoscopy, bi	59,949	4.66	93,038	64.43
216: Respiratory intubation and mechanica	52,502	4.08	84,487	62.14
231: Other therapeutic procedures	33,496	2.60	96,989	34.54
76: Colonoscopy and biopsy	28,560	2.22	45,493	62.78
193: Diagnostic ultrasound of heart (echo	27,845	2.16	47,766	58.29
63: Other non-O.R. therapeutic cardiovas	27,291	2.12	75,558	36.12
58: Hemodialysis	26,323	2.05	45,334	58.06
80: Appendectomy	21,439	1.67	33,217	64.54
45: Percutaneous coronary angioplasty (P	21,416	1.66	62,846	34.08
84: Cholecystectomy and common duct expl	19,592	1.52	38,419	51.00
146: Treatment, fracture or dislocation o	19,340	1.50	25,770	75.05
4: Diagnostic spinal tap	18,652	1.45	27,745	67.23
39: Incision of pleura, thoracentesis, c	17,408	1.35	29,243	59.53
219: Alcohol and drug rehabilitation/deto	14,487	1.13	28,273	51.24
223: Enteral and parenteral nutrition	13,488	1.05	30,105	44.80
147: Treatment, fracture or dislocation o	13,084	1.02	19,948	65.59
37: Diagnostic bronchoscopy and biopsy o	12,445	0.97	24,885	50.01
169: Debridement of wound, infection or b	11,840	0.92	23,842	49.66
171: Suture of skin and subcutaneous tiss	11,502	0.89	13,212	87.06
71: Gastrostomy, temporary and permanent	9,856	0.77	17,461	56.45
93: Other non-O.R. upper GI therapeutic	9,408	0.73	13,757	68.39
61: Other O.R. procedures on vessels oth	9,306	0.72	27,490	33.85

**All Listed Procedures
Top 25 Procedures
Percent All Records : 28.76**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
9904: PACKED CELL TRANSFUSION	63,598	4.94	120,064	52.97
8856: CORONAR ARTERIOGR-2 CATH	59,931	4.66	121,417	49.36
3893: VENOUS CATH NEC	58,306	4.53	102,939	56.64
3722: LEFT HEART CARDIAC CATH	57,455	4.46	115,623	49.69
8853: LT HEART ANGIOCARDIOGRAM	53,065	4.12	106,340	49.90
4516: EGD WITH CLOSED BIOPSY	32,088	2.49	48,882	65.64
9604: INSERT ENDOTRACHEAL TUBE	31,766	2.47	49,083	64.72
9671: CONT MECH VENT < 96 HRS	30,687	2.38	46,801	65.57
8872: DX ULTRASOUND-HEART	27,845	2.16	47,766	58.29
3995: HEMODIALYSIS	26,323	2.05	45,334	58.06
4513: SM BOWEL ENDOSCOPY NEC	25,411	1.97	38,720	65.63
0331: SPINAL TAP	18,652	1.45	27,745	67.23
3601: PTCA-1 VES/ATH W/O AGENT	18,264	1.42	52,556	34.75
5123: LAPAROSCOPIC CHOLECYSTEC	15,964	1.24	27,605	57.83
4523: COLONOSCOPY	15,791	1.23	24,452	64.58
9672: CONT MECH VENT 96+ HRS	14,396	1.12	23,846	60.37
3606: INS NONDRUG ELUT COR ST	13,547	1.05	37,161	36.45
4709: OTHER APPENDECTOMY	12,900	1.00	18,198	70.89
9920: INJ/INF PLATELET INHIBIT	11,634	0.90	31,113	37.39
8659: SKIN CLOSURE NEC	11,483	0.89	13,193	87.04
7935: OPEN REDUC-INT FIX FEMUR	11,083	0.86	13,599	81.50
4525: CLOS LARGE BOWEL BIOPSY	10,846	0.84	17,462	62.11
3491: THORACENTESIS	9,715	0.75	16,173	60.07
8622: EXC WOUND DEBRIDEMENT	9,331	0.73	19,457	47.96
7936: OP RED-INT FIX TIB/FIBUL	9,094	0.71	12,474	72.90

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Observation Room
SAS name: U_OBSERVATION

Number of records identified by flag: 94,334
Percentage of records: 3.0%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	12504.88
Min	53.00
10%	2967.00
25%	4789.00
50%	8080.50
75%	13794.00
90%	24167.00
Maximum	974174.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 52.17

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
101: Coronary atherosclerosis	4,065	4.31	92,889	4.38
102: Nonspecific chest pain	3,784	4.01	71,011	5.33
122: Pneumonia (except that caused by tub	3,321	3.52	108,707	3.06
55: Fluid and electrolyte disorders	2,923	3.10	47,395	6.17
181: Other complications of pregnancy	2,599	2.76	38,247	6.80
108: Congestive heart failure, nonhyperte	2,516	2.67	81,174	3.10
195: Other complications of birth, puerpe	2,449	2.60	60,697	4.03
127: Chronic obstructive pulmonary diseas	2,440	2.59	55,655	4.38
193: Trauma to perineum and vulva	2,224	2.36	61,697	3.60
149: Biliary tract disease	2,125	2.25	36,227	5.87
106: Cardiac dysrhythmias	1,842	1.95	55,775	3.30
159: Urinary tract infections	1,782	1.89	36,273	4.91
218: Liveborn	1,664	1.76	330,415	0.50
238: Complications of surgical procedures	1,570	1.66	38,082	4.12
128: Asthma	1,548	1.64	32,916	4.70
184: Early or threatened labor	1,435	1.52	18,619	7.71
205: Spondylosis, intervertebral disc dis	1,434	1.52	60,367	2.38
109: Acute cerebrovascular disease	1,323	1.40	46,308	2.86
100: Acute myocardial infarction	1,308	1.39	63,009	2.08
251: Abdominal pain	1,292	1.37	17,447	7.41
183: Hypertension complicating pregnancy,	1,236	1.31	19,223	6.43
197: Skin and subcutaneous tissue infecti	1,152	1.22	31,471	3.66
160: Calculus of urinary tract	1,079	1.14	14,438	7.47
245: Syncope	1,060	1.12	17,369	6.10
50: Diabetes mellitus with complications	1,044	1.11	36,165	2.89

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 36.73

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
137: Other procedures to assist delivery	5,892	6.25	160,703	3.67
47: Diagnostic cardiac catheterization,	5,456	5.78	135,230	4.03
70: Upper gastrointestinal endoscopy, bi	4,443	4.71	93,038	4.78
140: Repair of current obstetric lacerati	3,749	3.97	114,984	3.26
136: Artificial rupture of membranes to a	3,581	3.80	81,570	4.39
134: Cesarean section	3,194	3.39	90,038	3.55
231: Other therapeutic procedures	3,152	3.34	96,989	3.25
222: Blood transfusion	3,023	3.20	139,668	2.16
139: Fetal monitoring	2,705	2.87	58,222	4.65
54: Other vascular catheterization, not	2,531	2.68	112,473	2.25
76: Colonoscopy and biopsy	2,444	2.59	45,493	5.37
63: Other non-O.R. therapeutic cardiovas	2,146	2.27	75,558	2.84
84: Cholecystectomy and common duct expl	1,971	2.09	38,419	5.13
45: Percutaneous coronary angioplasty (P	1,915	2.03	62,846	3.05
5: Insertion of catheter or spinal stim	1,856	1.97	33,418	5.55
133: Episiotomy	1,419	1.50	35,532	3.99
135: Forceps, vacuum, and breech delivery	1,097	1.16	29,822	3.68
193: Diagnostic ultrasound of heart (echo	1,066	1.13	47,766	2.23
80: Appendectomy	1,056	1.12	33,217	3.18
121: Ligation of fallopian tubes	984	1.04	26,834	3.67
58: Hemodialysis	881	0.93	45,334	1.94
216: Respiratory intubation and mechanica	870	0.92	84,487	1.03
90: Excision, lysis peritoneal adhesions	865	0.92	30,349	2.85
226: Other diagnostic radiology and relat	823	0.87	14,156	5.81
4: Diagnostic spinal tap	793	0.84	27,745	2.86

**All Listed Procedures
Top 25 Procedures
Percent All Records : 31.46**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
8856: CORONAR ARTERIOGR-2 CATH	5,217	5.53	121,417	4.30
3722: LEFT HEART CARDIAC CATH	4,923	5.22	115,623	4.26
8853: LT HEART ANGIOCARDIOGRAM	4,846	5.14	106,340	4.56
7359: MANUAL ASSIST DELIV NEC	4,813	5.10	123,340	3.90
7309: ARTIF RUPT MEMBRANES NEC	3,581	3.80	81,570	4.39
7569: REPAIR OB LACERATION NEC	3,247	3.44	102,035	3.18
741 : LOW CERVICAL C-SECTION	3,091	3.28	88,368	3.50
4516: EGD WITH CLOSED BIOPSY	2,832	3.00	48,882	5.79
9904: PACKED CELL TRANSFUSION	2,746	2.91	120,064	2.29
3893: VENOUS CATH NEC	2,468	2.62	102,939	2.40
3601: PTCA-1 VES/ATH W/O AGENT	1,714	1.82	52,556	3.26
5123: LAPAROSCOPIC CHOLECYSTEC	1,680	1.78	27,605	6.09
734 : MEDICAL INDUCTION LABOR	1,627	1.72	52,474	3.10
7532: FETAL EKG	1,529	1.62	21,211	7.21
4513: SM BOWEL ENDOSCOPY NEC	1,480	1.57	38,720	3.82
736 : EPISIOTOMY	1,419	1.50	35,532	3.99
4523: COLONOSCOPY	1,279	1.36	24,452	5.23
7534: OTHER FETAL MONITORING	1,099	1.17	37,090	2.96
9920: INJ/INF PLATELET INHIBIT	1,074	1.14	31,113	3.45
8872: DX ULTRASOUND-HEART	1,066	1.13	47,766	2.23
3606: INS NONDRUG ELUT COR ST	1,053	1.12	37,161	2.83
4525: CLOS LARGE BOWEL BIOPSY	1,028	1.09	17,462	5.89
9929: INJECT/INFUSE NEC	1,026	1.09	15,573	6.59
0390: INSERT SPINAL CANAL CATH	931	0.99	19,363	4.81
3995: HEMODIALYSIS	881	0.93	45,334	1.94

Appendix E: Utilization Flag Statistics for Development Database

Utilization Flag: Organ Acquisition
SAS name: U_ORGANACQ
Number of records identified by flag: 2,445
Percentage of records: 0.1%
Number of records in development file: 3,096,356
SID States in development file: KY, MN, NC, NV, WA

Charges	
Mean	152408.23
Min	1045.00
10%	66559.00
25%	81606.00
50%	113933.00
75%	174938.00
90%	297282.00
Maximum	994015.00

Frequently Coded Diagnoses
Clinical Classification Software (CCS) for Principal Diagnosis
Top 25 Diagnoses
Percent All Records : 93.33

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
99: Hypertension with complications and	648	26.50	15,695	4.13
50: Diabetes mellitus with complications	361	14.76	36,165	1.00
151: Other Liver diseases	181	7.40	8,194	2.21
39: Leukemias	168	6.87	3,250	5.17
158: Chronic renal failure	146	5.97	1,647	8.86
237: Complication of device, implant or g	114	4.66	49,925	0.23
127: Chronic obstructive pulmonary diseas	63	2.58	55,655	0.11
108: Congestive heart failure, nonhyperte	59	2.41	81,174	0.07
150: Liver disease, alcohol-related	56	2.29	5,088	1.10
38: Non-Hodgkins lymphoma	48	1.96	3,586	1.34
6: Hepatitis	46	1.88	1,866	2.47
101: Coronary atherosclerosis	46	1.88	92,889	0.05
215: Genitourinary congenital anomalies	45	1.84	991	4.54
156: Nephritis, nephrosis, renal sclerosi	39	1.60	921	4.23
97: Peri-, endo-, and myocarditis, cardi	37	1.51	6,380	0.58
56: Cystic fibrosis	32	1.31	851	3.76
133: Other lower respiratory disease	32	1.31	12,851	0.25
59: Anemia	31	1.27	13,194	0.23
58: Other nutritional, endocrine, and me	28	1.15	16,120	0.17
44: Neoplasms of unspecified nature or u	26	1.06	3,793	0.69
37: Hodgkins disease	18	0.74	414	4.35
40: Multiple myeloma	17	0.70	1,353	1.26
149: Biliary tract disease	14	0.57	36,227	0.04
152: Pancreatic disorders (not diabetes)	14	0.57	23,811	0.06
16: Cancer of liver and intrahepatic bil	13	0.53	1,159	1.12

Frequently Coded Procedures

Clinical Classification Software (CCS) for All Listed Procedures

Top 25 Procedures

Percent of All Records : 98.77

CCS	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
105: Kidney transplant	1,263	51.66	1,330	94.96
176: Other organ transplantation	842	34.44	868	97.00
222: Blood transfusion	651	26.63	139,668	0.47
54: Other vascular catheterization, not	458	18.73	112,473	0.41
64: Bone marrow transplant	349	14.27	943	37.01
58: Hemodialysis	292	11.94	45,334	0.64
99: Other O.R. gastrointestinal therapeu	222	9.08	19,446	1.14
37: Diagnostic bronchoscopy and biopsy o	216	8.83	24,885	0.87
50: Extracorporeal circulation auxiliary	201	8.22	28,263	0.71
110: Other diagnostic procedures of urina	200	8.18	2,742	7.29
112: Other O.R. therapeutic procedures of	190	7.77	9,175	2.07
216: Respiratory intubation and mechanica	177	7.24	84,487	0.21
102: Ureteral catheterization	126	5.15	12,574	1.00
224: Cancer chemotherapy	116	4.74	19,560	0.59
61: Other O.R. procedures on vessels oth	111	4.54	27,490	0.40
62: Other diagnostic cardiovascular proc	110	4.50	10,407	1.06
65: Bone marrow biopsy	90	3.68	7,708	1.17
49: Other O.R. heart procedures	89	3.64	13,944	0.64
98: Other non-O.R. gastrointestinal ther	88	3.60	13,144	0.67
223: Enteral and parenteral nutrition	88	3.60	30,105	0.29
70: Upper gastrointestinal endoscopy, bi	86	3.52	93,038	0.09
63: Other non-O.R. therapeutic cardiovas	81	3.31	75,558	0.11
104: Nephrectomy, partial or complete	73	2.99	5,182	1.41
231: Other therapeutic procedures	72	2.94	96,989	0.07
47: Diagnostic cardiac catheterization,	69	2.82	135,230	0.05

**All Listed Procedures
Top 25 Procedures
Percent All Records : 95.87**

ICD-9-CM Code	Number of Discharges	Percent of Total	Total Number of Discharges	Percent of Overall
5569: KIDNEY TRANSPLANT NEC	1,262	51.62	1,326	95.17
9904: PACKED CELL TRANSFUSION	530	21.68	120,064	0.44
3893: VENOUS CATH NEC	447	18.28	102,939	0.43
5059: LIVER TRANSPLANT NEC	341	13.95	344	99.13
3995: HEMODIALYSIS	292	11.94	45,334	0.64
3961: EXTRACORPOREAL CIRCULAT	196	8.02	27,255	0.72
5523: CLOSED RENAL BIOPSY	172	7.03	2,393	7.19
4105: ALLO HEM STEM CT W/O PUR	167	6.83	334	50.00
9905: PLATELET TRANSFUSION	160	6.54	8,108	1.97
5674: URETERONEOCYSTOSTOMY	158	6.46	1,146	13.79
5282: PANCREATIC HOMOTRANSPLAN	144	5.89	146	98.63
3324: CLOSED BRONCHIAL BIOPSY	142	5.81	13,634	1.04
9907: SERUM TRANSFUSION NEC	135	5.52	15,369	0.88
375 : HEART TRANSPLANTATION	126	5.15	132	95.45
598 : URETERAL CATHETERIZATION	126	5.15	12,574	1.00
9925: INJECT CA CHEMOTHER NEC	111	4.54	18,719	0.59
3725: CARDIAC BIOPSY	107	4.38	488	21.93
3352: BILAT LUNG TRANSPLANT	98	4.01	100	98.00
4131: BONE MARROW BIOPSY	90	3.68	7,708	1.17
9672: CONT MECH VENT 96+ HRS	89	3.64	23,846	0.37
4106: CORD BLD STEM CELL TRANS	88	3.60	132	66.67
5412: REOPEN RECENT LAP SITE	79	3.23	1,493	5.29
9915: PARENT INFUS NUTRIT SUB	72	2.94	18,796	0.38
9671: CONT MECH VENT < 96 HRS	71	2.90	46,801	0.15
8872: DX ULTRASOUND-HEART	64	2.62	47,766	0.13

Appendix F.1: Variation in the Utilization Flags Across SID States

Percentage of Records in the Utilization Flag

	Mean Across States	Minimum Across States	Maximum Across States	Arizona*	Connecticut*	Florida*	Georgia*	Iowa*	Kentucky	Maine	Maryland*
Utilization Flag											
Accomodation											
Intensive Care Unit (ICU)	15.45	9.12	22.98	21.67	--	22.98	13.71	--	16.53	11.06	13.08
Coronary Care Unit (CCU)	6.45	2.70	10.84	7.31	--	10.84	6.29	--	5.02	4.75	6.57
Nursery Level II	0.44	0.01	0.84	--	--	--	--	--	0.33	0.33	--
Nursery Level III	0.51	0.03	1.03	--	--	--	--	--	0.30	0.20	--
Nursery Level IV	0.60	0.09	1.02	--	--	--	1.01	--	0.55	0.68	--
Cardiac Services											
Cardiac Catheterization Lab	4.74	0.00	5.95	--	--	--	--	--	5.95	5.79	--
Cardiac Stress Test	3.01	0.00	6.59	--	--	--	--	--	2.81	3.72	--
Echocardiology	3.48	0.00	8.60	--	--	--	--	--	1.16	5.33	--
Electrocardiogram (EKG)	43.82	34.48	54.80	--	--	--	--	--	45.60	43.41	--
Imaging											
Computed Tomography (CT) Scan	22.39	17.68	28.18	23.94	--	27.19	19.78	--	22.71	18.09	26.04
Chest X-Ray	24.44	0.01	43.50	--	--	--	--	--	41.07	13.37	--
Ultrasound	9.55	0.62	14.11	--	--	--	--	--	9.77	8.17	--
Electroencephalogram (EEG)	2.23	1.32	3.34	2.23	--	--	--	--	2.79	1.39	3.02
Nuclear Medicine	6.68	3.48	12.00	6.09	6.53	9.50	5.98	4.78	6.64	5.47	8.44
Magnetic Resonance Technology (MRT)	4.60	2.45	6.86	5.22	--	5.83	4.14	--	4.18	2.45	--
Devices											
Pacemaker	0.97	0.00	1.35	--	--	--	0.75	--	1.24	0.91	--
Other Implants	8.30	0.00	12.82	--	--	--	--	--	9.79	6.28	--
Therapeutic Services											
Lithotripsy	0.04	0.01	0.07	0.03	--	--	0.04	--	0.05	0.02	--
Occupational Therapy	10.28	4.71	20.17	8.50	--	6.62	--	--	6.45	20.17	16.42
Physical Therapy	21.34	17.50	27.02	17.50	22.06	21.12	--	24.10	17.91	25.69	22.91
Theurapeutic Radiology	1.17	0.77	1.50	0.77	--	1.19	0.95	1.02	0.98	1.42	1.22
Respiratory Therapy	24.63	16.44	32.76	21.83	21.62	24.72	24.81	24.67	30.92	22.89	32.76
Speech-Language Pathology	3.63	2.59	5.56	3.24	--	--	--	--	3.28	4.04	--
Blood	12.76	8.91	18.95	11.84	--	--	--	--	10.79	11.23	14.10
Renal Dialysis	1.82	1.15	2.44	2.10	--	--	--	--	1.58	1.15	--
EPO	0.35	0.00	0.74	--	--	--	--	--	0.69	0.28	--
Mental Health and Substance Abuse	5.42	1.50	9.98	--	--	--	--	--	5.95	9.98	--
Other											
Emergency Department	43.01	28.74	52.81	40.74	49.30	51.97	37.44	--	43.26	43.58	52.81
Observation Room	3.55	0.58	9.64	--	--	--	--	--	6.45	2.68	--
Organ Acquisition	0.06	0.02	0.13	0.05	--	--	--	--	0.05	0.04	--

* These state provide pre-defined charge buckets instead of charges by revenue codes. Information for a utilization flag is only provided if the state had a pre-defined charge buck

Appendix F.1: Variation in the Utilization Flags A

Percentage of Records in the Utilization Flag

Utilization Flag	Massachusetts	Minnesota	Nevada	Nebraska	New Jersey*	New York	North Carolina	Pennsylvania	Rhode Island*	South Carolina*
Accommodation										
Intensive Care Unit (ICU)	11.33	10.55	19.56	15.30	--	9.12	15.72	16.45	--	15.91
Coronary Care Unit (CCU)	2.70	5.13	3.65	4.18	--	4.18	8.16	9.85	--	10.39
Nursery Level II	0.01	0.84	0.53	0.66	--	0.13	0.43	0.08	--	0.81
Nursery Level III	0.03	0.54	0.93	0.95	--	0.18	0.49	0.29	--	0.58
Nursery Level IV	0.09	0.39	0.73	0.54	0.89	1.02	0.48	0.66	--	0.16
Cardiac Services										
Cardiac Catheterization Lab	0.00	4.05	5.38	5.53	--	4.17	5.28	5.50	--	--
Cardiac Stress Test	0.00	2.42	6.59	2.49	--	2.33	3.41	3.99	--	--
Echocardiology	0.00	4.22	4.74	1.23	--	5.50	8.60	3.75	--	--
Electrocardiogram (EKG)	46.70	35.72	48.06	34.48	--	43.58	45.81	50.62	--	--
Imaging										
Computed Tomography (CT) Scan	23.35	19.11	28.18	17.84	--	22.33	21.86	24.70	--	21.75
Chest X-Ray	0.01	20.69	24.71	22.58	--	35.11	27.39	30.21	--	--
Ultrasound	0.62	8.60	14.11	9.52	--	12.00	10.86	11.33	--	--
Electroencephalogram (EEG)	2.84	1.62	2.00	1.64	--	2.31	2.20	3.34	--	2.19
Nuclear Medicine	6.35	3.48	12.00	4.92	--	5.94	6.30	8.44	--	6.64
Magnetic Resonance Technology (MRT)	4.15	4.34	6.86	4.28	--	3.50	5.30	5.31	--	4.71
Devices										
Pacemaker	0.00	1.15	1.06	1.28	--	0.97	0.94	1.35	--	--
Other Implants	0.00	10.33	12.36	4.99	--	7.69	10.15	7.98	--	--
Therapeutic Services										
Lithotripsy	0.03	0.03	0.01	0.04	--	0.02	0.02	0.07	--	0.06
Occupational Therapy	9.82	12.63	12.93	11.07	--	7.12	8.23	16.77	--	6.78
Physical Therapy	25.75	18.71	22.42	21.37	--	18.98	20.37	27.02	--	19.23
Therapeutic Radiology	1.31	1.22	0.94	1.17	--	1.50	1.34	1.39	--	0.95
Respiratory Therapy	19.70	16.44	25.12	28.61	--	19.21	25.73	25.98	--	24.33
Speech-Language Pathology	3.34	2.83	5.56	2.97	--	2.59	3.83	4.89	--	--
Blood	18.95	8.91	10.84	11.14	--	11.88	13.33	13.92	15.21	--
Renal Dialysis	1.69	1.28	1.84	1.27	--	1.98	2.38	1.98	--	2.36
EPO	0.00	0.36	0.06	0.10	--	0.74	0.33	0.63	--	--
Mental Health and Substance Abuse	6.98	6.24	1.50	4.64	--	8.50	4.91	6.79	--	--
Other										
Emergency Department	47.97	39.48	48.08	29.85	--	44.12	42.91	48.75	--	41.55
Observation Room	2.23	1.99	3.67	2.81	--	0.58	2.43	2.76	--	--
Organ Acquisition	0.07	0.13	0.02	0.09	0.04	0.05	0.06	0.09	--	0.04

* These states provide pre-defined charge buckets in set that exactly matched the utilization flag definition

Appendix F.1: Variation in the Utilization Flags A

Percentage of Records in the Utilization Flag

Utilization Flag	South Dakota*	Tennessee	Texas	Utah*	Washington	West Virginia
Accomodation						
Intensive Care Unit (ICU)	--	16.49	18.34	--	13.92	16.40
Coronary Care Unit (CCU)	--	6.80	4.91	--	7.20	8.23
Nursery Level II	--	0.42	0.63	--	0.82	0.20
Nursery Level III	--	0.37	1.03	--	0.85	0.45
Nursery Level IV	--	0.69	0.74	--	0.43	0.57
Cardiac Services						
Cardiac Catheterization Lab	--	5.81	4.73	--	4.11	5.34
Cardiac Stress Test	--	3.21	2.52	--	1.00	4.60
Echocardiology	--	2.86	2.25	--	2.32	3.33
Electrocardiogram (EKG)	--	46.78	38.58	--	35.51	54.80
Imaging						
Computed Tomography (CT) Scan	--	23.54	19.73	--	17.68	25.15
Chest X-Ray	--	28.86	22.13	--	8.04	43.50
Ultrasound	--	10.68	10.97	--	6.77	10.78
Electroencephalogram (EEG)	--	2.44	2.27	--	1.32	2.15
Nuclear Medicine	5.52	7.41	6.07	--	4.10	9.60
Magnetic Resonance Technology (MRT)	--	5.25	5.20	--	3.37	4.06
Devices						
Pacemaker	--	1.10	0.92	--	0.91	0.94
Other Implants	--	12.82	10.49	--	9.20	5.78
Therapeutic Services						
Lithotripsy	--	0.05	0.04	--	0.04	0.05
Occupational Therapy	--	6.38	8.76	--	11.39	4.71
Physical Therapy	--	20.33	18.62	--	22.04	19.29
Theurapeutic Radiology	--	1.28	1.14	--	1.38	1.06
Respiratory Therapy	--	28.11	24.52	--	18.29	32.35
Speech-Language Pathology	--	3.35	3.29	--	4.96	2.60
Blood	--	12.46	12.11	--	13.92	13.45
Renal Dialysis	--	1.97	2.44	--	1.60	1.73
EPO	--	0.38	0.23	--	0.23	0.47
Mental Health and Substance Abuse	--	4.52	4.03	--	4.20	2.28
Other						
Emergency Department	--	44.25	38.58	28.74	36.64	50.10
Observation Room	--	6.56	3.12	--	1.29	9.64
Organ Acquisition	--	0.06	0.07	--	0.12	0.02

* These state provide pre-defined charge buckets ins

Appendix F.2: Variation in the Utilization Flags Across SASD States

Percentage of Records in the Utilization Flag

Utilization Flag	Mean Across States	Minimum Across States	Maximum Across States	Connecticut*	Florida*	Georgia*	Kentucky	Maine	Minnesota	Nebraska
Accomodation										
Intensive Care Unit (ICU)	0.0052	0.0000	0.0365	--	--	0.0010	0.0019	0.0000	0.0000	0.0005
Coronary Care Unit (CCU)	0.0029	0.0000	0.0188	--	--	0.0017	0.0004	0.0000	0.0000	0.0000
Nursery Level II	0.0000	0.0000	0.0001	--	--	--	0.0000	0.0000	0.0000	0.0000
Nursery Level III	0.0000	0.0000	0.0003	--	--	--	0.0000	0.0000	0.0000	0.0000
Nursery Level IV	0.0002	0.0000	0.0012	--	--	0.0001	0.0000	0.0000	0.0000	0.0000
Cardiac Services										
Cardiac Catheterization Lab	2.7083	1.0116	4.9232	--	--	--	3.7620	1.0116	1.0939	2.2525
Cardiac Stress Test	0.1151	0.0092	0.3630	--	--	--	0.0612	0.3630	0.1161	0.0415
Echocardiology	0.1367	0.0665	0.2452	--	--	--	0.1441	0.1201	0.2452	0.0849
Electrocardiogram (EKG)	7.7689	3.8969	15.8800	--	--	--	10.7681	5.1519	5.1062	5.8102
Imaging										
Computed Tomography (CT) Scan	2.5056	0.7458	3.9620	--	1.5136	3.5568	2.5003	1.8816	3.2092	2.6850
Chest X-Ray	2.9250	0.4995	6.0388	--	--	--	5.2524	0.4995	2.2670	1.9057
Ultrasound	2.6503	1.6770	4.2036	--	--	--	2.5088	1.7623	4.2036	2.4227
Electroencephalogram (EEG)	0.0326	0.0064	0.0827	--	--	--	0.0827	0.0098	0.0316	0.0124
Nuclear Medicine	0.3632	0.2271	0.5532	0.3528	--	0.3356	0.3760	0.2481	0.3307	0.3000
Magnetic Resonance Technology (MRT)	0.1855	0.0515	0.3636	--	0.1314	0.1511	0.1222	0.3636	0.2921	0.3186
Devices										
Pacemaker	0.2705	0.1288	0.3761	--	--	0.2857	0.3661	0.1288	0.1725	0.3090
Other Implants	5.5977	1.2413	10.2481	--	--	--	7.8564	1.2413	3.7833	2.1151
Therapeutic Services										
Lithotripsy	0.2653	0.0534	0.5839	--	--	0.1579	0.2041	0.2225	0.1787	0.4874
Occupational Therapy	0.0764	0.0264	0.2133	--	--	--	0.0264	0.1092	0.2133	0.0940
Physical Therapy	1.0596	0.3890	1.9692	0.3890	--	--	1.0058	0.4783	1.1177	1.9692
Theurapeutic Radiology	0.4146	0.0288	0.9677	--	--	0.0963	0.2152	0.7063	0.5767	0.3319
Respiratory Therapy	2.1298	1.2550	3.1559	2.6257	--	2.0725	3.1559	1.4650	1.2550	2.4146
Speech-Language Pathology	0.0125	0.0016	0.0278	--	--	--	0.0144	0.0040	0.0278	0.0062
Blood	0.6851	0.2674	1.5175	--	--	--	0.2674	0.9346	1.5175	0.6162
Renal Dialysis	0.0677	0.0077	0.1653	--	--	--	0.1284	0.0077	0.0305	0.0563
EPO	0.0273	0.0044	0.0666	--	--	--	0.0666	0.0079	0.0624	0.0110
Mental Health and Substance Abuse	0.0298	0.0033	0.0963	--	--	--	0.0157	0.0183	0.0963	0.0033
Other										
Emergency Department	18.2349	2.2611	35.9776	19.7304	--	35.9776	10.4413	17.8599	22.8279	14.7776
Observation Room	5.3246	1.0559	9.7142	--	--	--	6.9193	1.3835	4.1537	9.7142
Organ Acquisition	0.0051	0.0008	0.0136	--	--	--	0.0031	--	0.0034	0.0029

* These state provide pre-defined charge buckets instead of charges by revenue codes. Information for a utilization flag is only provided if the state had a pre-defined charge

Appendix F.2: Variation in the Utilization Flags A

Percentage of Records in the Utilization Flag

Utilization Flag	New Jersey*	New York	South Carolina*	Tennessee
Accomodation				
Intensive Care Unit (ICU)	--	0.0000	0.0016	0.0365
Coronary Care Unit (CCU)	--	0.0000	0.0021	0.0188
Nursery Level II	--	0.0000	--	0.0001
Nursery Level III	--	0.0000	--	0.0003
Nursery Level IV	0.0012	0.0000	--	0.0000
Cardiac Services				
Cardiac Catheterization Lab	--	3.2066	--	4.9232
Cardiac Stress Test	--	0.0092	--	0.0996
Echocardiology	--	0.0665	--	0.1594
Electrocardiogram (EKG)	--	3.8969	--	15.8800
Imaging				
Computed Tomography (CT) Scan	--	0.7458	2.4963	3.9620
Chest X-Ray	--	1.5862	--	6.0388
Ultrasound	--	1.6770	--	3.3276
Electroencephalogram (EEG)	--	0.0482	0.0064	0.0367
Nuclear Medicine	--	0.5532	0.2271	0.5456
Magnetic Resonance Technology (MRT)	--	0.0610	0.0515	0.1776
Devices				
Pacemaker	--	0.2556	--	0.3761
Other Implants	--	8.3422	--	10.2481
Therapeutic Services				
Lithotripsy	--	0.5839	0.0534	0.2343
Occupational Therapy	--	0.0278	0.0310	0.0331
Physical Therapy	--	1.4720	0.7785	1.2667
Theurapeutic Radiology	--	0.3941	0.0288	0.9677
Respiratory Therapy	--	1.7991	1.6826	2.6977
Speech-Language Pathology	--	0.0016	--	0.0213
Blood	--	0.3369	--	0.4381
Renal Dialysis	--	0.0259	0.0600	0.1653
EPO	--	0.0044	--	0.0116
Mental Health and Substance Abuse	--	0.0048	--	0.0401
Other				
Emergency Department	--	2.2611	16.7435	23.4945
Observation Room	--	1.0559	--	8.7211
Organ Acquisition	0.0099	0.0018	0.0136	0.0008

* These state provide pre-defined charge buckets inæ bucket that exactly matched the utilization flag definition

Appendix F.3: Variation in the Utilization Flags Across SEDD States

Percentage of Records in the Utilization Flag

Utilization Flag	Mean Across States	Minimum Across States	Maximum Across States	Connecticut*	Georgia*	Maine	Minnesota	Nebraska	South Carolina*	Tennessee	Utah*
Accommodation											
Intensive Care Unit (ICU)	0.004	0.000	0.023	--	0.002	0.000	0.001	0.001	0.001	0.023	--
Coronary Care Unit (CCU)	0.003	0.000	0.011	--	0.002	0.000	0.000	0.001	0.002	0.011	--
Nursery Level II	--	--	--	--	--	0.000	0.000	0.000	--	0.000	--
Nursery Level III	--	--	--	--	--	0.000	0.000	0.000	--	0.000	--
Nursery Level IV	0.000	0.000	0.000	--	--	0.000	0.000	0.000	--	0.000	--
Cardiac Services											
Cardiac Catheterization Lab	0.012	0.002	0.033	--	--	0.005	0.002	0.007	--	0.033	--
Cardiac Stress Test	0.409	0.259	0.559	--	--	0.378	0.259	0.440	--	0.559	--
Echocardiology	0.063	0.017	0.149	--	--	0.057	0.149	0.017	--	0.029	--
Electrocardiogram (EKG)	10.722	9.419	12.411	--	--	9.419	9.867	11.189	--	12.411	--
Imaging											
Computed Tomography (CT) Scan	6.815	4.458	8.543	--	7.074	4.458	7.386	6.824	6.606	8.543	--
Chest X-Ray	8.110	3.625	11.227	.	.	3.625	8.330	9.258	.	11.227	.
Ultrasound	1.787	1.049	2.566	.	.	1.049	2.566	1.826	.	1.706	.
Electroencephalogram (EEG)	0.028	0.011	0.053	.	.	0.012	0.011	0.053	0.017	0.048	.
Nuclear Medicine	0.301	0.161	0.599	0.244	0.432	0.161	0.171	0.243	0.253	0.599	.
Magnetic Resonance Technology (MRT)	0.160	0.060	0.234	--	0.128	0.060	0.210	0.234	0.096	0.233	--
Devices											
Pacemaker	0.001	0.000	0.002	--	0.001	0.000	0.001	0.000	--	0.002	--
Other Implants	0.030	0.008	0.063	--	--	0.008	0.011	0.036	--	0.063	--
Therapeutic Services											
Lithotripsy	0.002	0.000	0.007	--	0.001	0.000	0.000	0.000	0.002	0.007	--
Occupational Therapy	0.027	0.011	0.047	--	--	0.031	0.031	0.047	0.013	0.011	--
Physical Therapy	0.130	0.084	0.259	0.108	.	0.126	0.117	0.259	0.085	0.084	.
Theurapeutic Radiology	0.026	0.003	0.112	--	0.004	0.018	0.112	0.015	0.003	0.005	--
Respiratory Therapy	3.800	2.772	4.746	3.158	4.538	2.772	3.308	4.308	3.772	4.746	.
Speech-Language Pathology	0.006	0.004	0.008	--	--	0.004	0.005	0.008	--	0.008	--
Blood	0.101	0.055	0.136	--	--	0.136	0.055	0.111	--	0.104	--
Renal Dialysis	0.003	0.001	0.006	--	--	0.001	0.001	0.002	0.006	0.006	--
EPO	0.003	0.001	0.006	--	--	0.006	0.002	0.001	--	0.001	--
Mental Health and Substance Abuse	0.232	0.018	0.582	--	--	0.290	0.582	0.038	--	0.018	--
Other											
Emergency Department	99.925	99.596	100.000	100.000	99.852	99.596	99.965	100.000	100.000	100.000	99.986
Observation Room	2.195	1.121	3.557	--	--	1.121	1.552	3.557	--	2.550	--
Organ Acquisition	--	--	--	--	--	0.000	0.000	0.000	--	0.000	--

* These state provide pre-defined charge buckets instead of charges by revenue codes. Information for a utilization flag is only provided if the state had a pre-defined charge bucket that exactly matched the utilization flag definition.