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Use and Cost of Fee Basis Services in FY2007

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Terms

AAC	Austin Automation Center
AWP	Average Wholesale Price
CALM	Centralized Accounting for Local Management
CDR	Cost Distribution Report
CMS	Center for Medicare and Medicaid Services
CPT	Current Procedural Terminology
CTC	Cost to Charge
DHCP	Decentralized Hospital Computer Program
DSS	Decision Support System
E&M	Evaluation and management
FCDM	Financial and Clinical Data Mart
FMS	Financial Management System
HCPCS	Healthcare Common Procedure Coding System
ICD-9	International Classification of Disease, 9th Revision
IRMS	Information Resource Management Systems
MPCR	Monthly Program Cost Report
MST	Military Sexual Trauma
NDE	National Data Extract
NPCD	National Patient Care Database
OPC	Outpatient Care File
PTF	Patient Treatment File
RBRVS	Resource-Based Relative Value System
RVU	Relative Value Unit
VA	U.S. Department of Veterans Affairs
VERA	Veterans Equitable Resource Allocation
VHA	Veterans Health Administration
VISTA	Veterans Health Information Systems and Technology Architecture

1. Introduction

The Fee Basis program enables VA to purchase care from non-VA providers when VA cannot provide timely care, or when doing so would save VA money. The program has been growing rapidly over time, rising from a few percent of VHA spending in FY2000 to more than 10% in FY2010.

As shown in Table 1, payments for claims paid during FY2007 totaled over $2.3 billion, or roughly 7.5% of the FY2007 VA health care appropriation of $31.5 billion. These figures represent approximately 99% of FY2007 encounters. Fee Basis data represent a large share of care for services typically provided on contract, such as home-based care and community nursing home care.

Table 1: Fee Basis Utilization and Cost Summary: FY2007

Service type	Fee Basis Services	Total Payments
Inpatient[1]	96,253 stays	$ 1,154 million
Outpatient services (except pharmacy)	11,292,737 visits	$ 1,204 million
Outpatient pharmacy[2]	≥ 8,305 fills	$ 0.4 million
TOTAL		$ 2,358 million

[1] Includes long-term care and nursing home stays.
[2] Pharmacy data are monthly payments to individual vendors and may reflect fills for multiple individuals. There were 8,305 monthly payments to all vendors.

The purpose of this brief report is to describe major patterns in the Fee Basis data. The HERC guidebook on Fee Basis data (Smith and Chow 2010) describes the contents of the eight annual Fee Basis files. It also notes the variety of ways to access Fee Basis data. This report is a companion that provides specific data on spending and counts of services. The next chapter describes outpatient services and costs. It presents a number of tables that show the most common categories of outpatient care by type and frequency. Chapter 3 discusses inpatient data and the overlap of Fee Basis data with other VA administrative datasets.

Fee Basis data do not represent all purchased care. VA contracts with outside providers through several arrangements beyond the Fee Basis program, such as sharing agreements with affiliate medical schools and contracts with medical specialty groups. Estimating total spending on purchased care that occurs through other mechanisms requires analysis of VA financial datasets. Total purchased care spending was reported by fiscal year in the Cost Distribution Report (CDR). The final year of the CDR was FY2004; its successor, the Monthly Program Cost Report (MPCR), lists contract costs for each VA medical center and year. HERC does not recommend

using MPCR for research, however, because its figures are not reconciled to year-end totals. (See Wagner et al. (2006) for details.) Although MPCR figures may not be exactly accurate, most likely they provide a good guide to total spending on purchased care. With that figure in hand, one could determine the proportion represented by Fee Basis spending. To our knowledge no one has calculated this figure, and in general little is known among VA researchers about spending on sharing agreements.

2. Outpatient Utilization and Cost

In this chapter we provide statistics on the use and cost of common outpatient services in FY2007 paid through the Fee Basis program.

2.1 Method

The FY2007 Fee Basis files represent claims paid during that fiscal year rather than services provided during the year. Although most claims are paid within six months of a service, in some cases they are paid several years later. Our analyses indicate that about 99% of records for services in FY2007 were paid by the end of FY2009. We therefore extracted all Fee Basis records for FY2007-FY2009 (October 1, 2006 – September 30, 2009) and selected those whose service dates fell within FY2007. The analytic file therefore represents services rendered in FY2007 rather than claims paid in FY2007, although there is considerable overlap between those two concepts.

After establishing the analytic file of FY2007 services, we developed a series of descriptive statistics. These appear in Tables 2-4 below.

2.2 Results

To illustrate both benefits and drawbacks of the Fee Basis data, we investigated the types of services found in outpatient (MED) files. By combining large numbers of observations, one can quickly determine average payments for a wide range of outpatient procedures. Coding of setting and treatment type appears to be uneven across variables, however, suggesting caution in the use of Fee Basis data for locating all instances of a particular form of care.

The 20 most common CPT procedure codes in FY2007 are listed in Table 2. Home health care services were responsible for nine of the twenty, including the top four. Together they accounted for approximately 2.9 million visits in FY2007. Kidney dialysis and related services appear four times and accounted for 648,000 services. The remaining codes pertain to a variety of other services.

Services labeled 'UNKNOWN' can be identified through their HCPCS (Healthcare Common Procedure Coding System) codes. There were five among the top 20: J2501 (paricalcitol injection); S5102 (adult day care services, per diem); Q4081 (epoetin alfa injection, 100 units); S5131 (homemaker service, NOS, per diem); and J0886 (epoetin alfa injection, 1000 units).

Although evaluation and management (E&M) codes are common in VA, only two among the top 20 pertained to E&M. This might occur because patients may use non-VA providers for procedures rather than for management of chronic illnesses, or providers may use alternative CPT codes in order to maximize payments.

Table 2: Top 20 CPT Procedure Codes and Average Payments, FY2007 Visits, MED File

Rank	CPT	Label	Frequency	Average Payment
1	G0156	SERV HOME HLTH AIDE / HOME / EA 15 MIN	1,588,832	$42.55
2	S9122	HOME HEALTH AIDE / CNA CARE / HOME / HOUR	458,245	$54.18
3	G0154	SERV SKL NURS / HOME HLTH SET / 15 MIN	432,880	$97.20
4	99509	HOM VISIT ASSTANCE W / ACTV DAILY LIVING&	246,898	$44.00
5	S5102	UNKNOWN (*Adult day care services; per diem*)	234,717	$63.92
6	97110	THERAP PROC 1 / > AREAS EA 15 MIN; EXERCIS	204,641	$52.82
7	90999	UNLISTED DIALYSIS PROCEDURE INPATIENT / OU	197,373	$201.16
8	Q4081	UNKNOWN (*100 units Epoetin Alfa Injection)*	188,677	$181.81
9	S5131	UNKNOWN *(Homemaker service, NOS; per diem)*	187,334	$50.69
10	S9126	HOSPICE HOME CARE PER DIEM	183,390	$135.25
11	A4657	SYRINGE WITH OR WITHOUT NEEDLE FOR DIALY	178,626	$10.85
12	90935	HEMODIALYSIS PROC W / SINGLE PHYSICIAN EVA	164,090	$152.91
13	J2501	UNKNOWN (*1mcg Paricalcitol Injection)*	145,770	$60.46
14	90937	HEMODIALYSIS PROC W / REPEAT EVAL W / WO REV	107,914	$162.36
15	99349	HOME VISIT E&M ESTAB PT MOD-HI SEVERITY-	104,800	$59.80
16	99347	HOME VISIT E&M ESTAB PT MINOR PROB - 15 MI	98,588	$44.46
17	85025	BLD CT; HG / PLATELET CT AUTO & AUTO COMPL	88,386	$37.94
18	J0886	UNKNOWN *(1000 units Epoetin Alfa Injection*)	87,402	$128.73
19	97140	MANUAL THERAPY TECH 1 / MORE REGIONS EA 15	85,321	$34.34
20	36415	ROUTINE VENIPUNCT / FNGR / HEEL / EAR STICK CL	76,619	$9.70

There is no strict relation between HCFATYPE and FPOV. For example, the number of hospice values reported through HCFATYPE in Table 4 (60,797) is significantly less than the total number by FPOV in Table 3 (231,330). To find all outpatient hospice care, the best approach is to use the union of those two sets of observations rather than their intersection.

Table 3 shows all values of the Fee Purpose of Visit (FPOV) codes that appear in FY2007, sorted by frequency. It also shows the average payment for services within each code. Thirty-six separate codes were used. A majority of records, about 2.75 million, were coded with clinically uninformative values pertaining to service connection status or payment authority. Ten more pertain to dental care. Three codes pertain to administrative encounters that do not constitute treatment. The remaining codes include a variety of purposes, such as kidney dialysis, treatment for military sexual trauma (MST), and chiropractic care.

FPOV values may change over time. When looking across years for a particular FPOV type, one must begin by printing out all formatted values of FPOV for each year to determine which value (number) represents which type of care each year. The current list of FPOV codes appears in the "Fee Purpose of Visit (POV) Document" on the Fee Program Office intranet web site.

Table 4 presents the frequency of HCFA Service Type (HCFATYPE) incurred in FY2007 visits recorded in the MED file, and the average payment for each. A majority of observations falls under two uninformative codes, "medical care" and "other medical service." The values have moderate specificity in some cases, such as anesthesia, pneumococcal vaccination, blood/packed cells, and radiation therapy. Letter values (C, D, F, G, I, P) had no assigned formats, and thus their meanings are unknown. The table indicates the meaning assigned to all but one of those values by another federal agency, the Centers for Medicare and Medicaid Services (CMS). We cannot be certain that VA uses them in the same manner as CMS.

Table 3: Fee Purpose of Visit (FPOV) Codes in Outpatient Services (MED) File with Average Payment Amount, FY2007 Services

FPOV Value	Label	Frequency	Average Payment
	Eligibility Status		
5	OPT FOR NSC	2,673,621	$154.35
10	OPT > OR =50% SC	2,064,781	$119.33
9	OPT < 50% SC	790,074	$140.48
52	OPT 38 U.S.C. 1725	709,211	$77.62
2	OPT UNAUTH CLAIM	263,267	$102.05
11	OBVIATE NEED	89,955	$92.80
6	AA/HB BENEFITS	43,293	$102.08
8	OPT WWI MEX BOR	117	$204.69
	Home Health Care		
71	HOME HEALTH	2,558,782	$46.45
70	HOME HEALTH NURS	806,874	$90.32
74	HHS (NON-NURSE PROF)	211,744	$53.88
72	RESPITE CARE IN HOME/HOME HAS	89,030	$68.63
	Dental Care		
22	CLASS IV DENTAL	144,454	$286.34
16	CLASS II DENTAL	30,235	$262.79
24	CLASS VI DENTAL	16,465	$190.31
15	CLASS I DENTAL	5,262	$292.81
23	CLASS V DENTAL	2,887	$235.35
21	CLASS III DENTAL	2,666	$272.45
19	CLASS IIC DENTAL	1,618	$195.83
17	CLASS IIA DENTAL	1,109	$297.95
20	CLASS IIR DENTAL	165	$259.90
18	CLASS IIB DENTAL	121	$173.64

Table 3: Fee Purpose of Visit (FPOV) Codes in Outpatient Services (MED) File with Average Payment Amount, FY2007 Services (cont'd)

FPOV Value	Label	Frequency	Average Payment
	Administrative (Non-Care)		
1	COMP AND PEN	71,792	$131.02
3	APP-MED BENEFIT	3,306	$61.72
4	VA INSURANCE	3,239	$242.26
	Other Codes		
76	ADULT DAY HEALTH CARE (ADHC)	394,700	$60.09
77	OPT HOSPICE FEE	150,065	$137.26
78	OPT HOSPICE CONT	81,265	$136.87
75	CHIROPRACTIC CARE	48,091	$29.40
7	MISCELLANEOUS	22,902	$92.40
79	RESPITE CARE OTHER	5,774	$100.34
73	RESPITE CARE IN ADHC	5,608	$58.47
55	MST	199	$82.25
56	DIALYSIS	45	$70.81
83	OPT INPATIENTS [1]	18	$68.20
84	SUPP ALLERGY [1]	2	$613.25

[1] This code is no longer active.

Table 4: HCFA Type of Service (HCFATYPE) Codes in Outpatient Services (MED) File with Average Payment Amount, FY2007 Visits

Value	Meaning	Frequency	Average Payment
1	MEDICAL CARE	6,338,712	$104.75
9	OTHER MED SER	2,561,483	$81.92
[blank]	UNKNOWN	977,179	$111.33
5	DIAG LAB	326,571	$59.78
4	DIAG XRAY	268,229	$179.56
6	RADIATION THERAP	216,815	$277.10
M	ALT PAY MN DIAL	142,110	$87.61
Y	2ND OP ELEC SURG	139,795	$95.63
2	SURGERY	109,343	$331.40
3	CONSULTATION	83,002	$75.85
H	HOSPICE	60,797	$147.47
N	KIDNEY DONOR	34,245	$122.31
43	DIAG XRAY PROF C	14,323	$43.73
7	ANESTHESIA	12,211	$567.01
53	DIAG LAB PROF CO	3,256	$37.65
F	F *(no format assigned)*	1,495	$385.23
0	BLD/PACKED CELLS	974	$93.63
V	PNEUMOCCAL VACC	726	$60.19
8	ASSIST SURG	643	$93.62
L	RENTAL SUPP HOME	290	$69.44
Z	3RD OP ELEC SURG	245	$117.95
A	USED DME	131	$255.48
P	P (*no format assigned)*[1]	104	$69.01
C	C (*no format assigned)*[1]	31	$129.13
I	I (*no format assigned)*[1]	21	$146.14
D	D (*no format assigned)*[1]	4	$36.56
G	G (*no format assigned)*[1]	2	$290.00

[1] Although their meaning in VA is unclear, we note that values P, C, D, and G are assigned the following values by the federal Centers for Medicare and Medicaid Services (CMS): P=Lump sum purchase of DME, Prosthetics, Orthotics; C=Low Risk Screening Mammography; D=Ambulance; G = Immunosuppressive Drugs. CMS does not use value I.

3. Inpatient and Ancillary Data

Paid claims for inpatient care through Fee Basis appear in two files each year. The INPT file records paid claims from inpatient facilities. The ANCIL file records paid claims for ancillary charges, such as laboratory exams, plus professional fees from providers in cases where they bill separately from the facility. VA typically follows Medicare rules for determining whether it is authorized to pay a separate fee for the provider.

Inpatient Fee Basis payments, like outpatient payments, are organized by Fee Purpose of Visit (FPOV). There are 10 FPOV values pertaining to acute-care facilities, including inpatient hospice and palliative care, and 5 additional FPOV values pertaining to community nursing homes. Care provided in state Veterans homes does not appear in Fee Basis records.

Tables 5 and 6 provide descriptive data on FY2007 inpatient encounters that were paid between FY2007 and FY2009. We estimate that they represent 99% of all claims for FY2007 encounters that VA will ever pay through the Fee Basis program. Table 5 presents data on facility claims from the INPT dataset, while Table 6 shows data on ancillary claims from the ANCIL dataset. The figures include total number of paid claims for each FPOV, total number of unique persons per FPOV, and the average payment per record within each FPOV. Note that the same individual could appear in multiple FPOVs in the same year. Thus the total number of individuals served would be less than the sum of unique individuals within FPOVs.

The Fee Purpose of Visit field uses abbreviated labels. A footnote to each table explains the abbreviations. Readers interested in additional detail can consult the HERC guidebook on Fee Basis data (Smith and Chow 2010), which includes as an appendix an official description of each FPOV from the National Fee Program Office.

It is very important to note that the average payment figures are for each *record* and not for each person or each encounter. Separate inpatient claims are submitted for each calendar month. Thus there will be two paid claims (two records) for an inpatient stay that includes days in two calendar months. An encounter-level discharge database for Fee Basis care, similar to those in the Medical SAS datasets ("PTF") and in the DSS inpatient national data extracts, is not created as a regular part of Fee Basis processing. HERC is currently developing such a dataset.

The most common FPOV in both tables refers to the "Millenium Bill" or "Mill Bill," 38 U.S.C. 1725. This authority enables VA to pay for unauthorized care – that is, care that was not authorized prior to admission – if the Veteran meets certain requirements, most importantly that s/he have no other health insurance.

There are 10-15 times as many ancillary file claims as acute-care facility claims. The most common explanation is that a single stay, even one portion of a stay, may require many laboratory tests plus one or more professional fees. A second is that there can be ancillary

Table 5: Inpatient Facility Claims by Setting and Purpose of Visit, FY2007 Encounters

FPOV	Label	Records	Unique Persons	Average Payment per Record
	Acute Care Facilities			
39	IPT 38 U.S.C. 1725 *("Mill Bill")*	26,468	20,945	$ 5,233.24
32	CON HOSP EMER VA	20,729	18,095	$ 11,016.36
30	CON HOSP FOR SC	11,297	9,187	$ 9,077.05
31	UNAUTH CON HOSP	10,384	8,767	$ 8,093.56
35	CON HOSP NSC	5,067	3,992	$ 11,523.77
33	CON HOSP EMER FED	2,720	2,434	$ 9,273.40
36	CON HOSP FED HOS	2,154	1,927	$ 14,737.23
34	CON HOSP WOMEN	1,800	1,590	$ 6,062.90
38	IPT HOSPICE CONT	57	51	$ 7,876.00
37	IPT HOSPICE FEE	37	36	$ 7,617.88
	Community Nursing Homes			
40	CNH SC DIS 38 USC 1710	63,708	8,732	$ 4,499.36
41	CNH NSC DISABL	15,181	4,770	$ 4,088.65
43	CNH HOSPICE & PALLIATIVE	1,539	576	$ 3,286.70
44	CNH RESPITE CARE	1,117	609	$ 1,958.29
42	CNH ACTIVE DUTY	62	14	$ 4,772.45

Abbreviations: CNH = community nursing home; CON = contract; DIS and DISABL = disability; EMER = emergency; FED = federal; FEE = Fee Basis; HOSP = hospital; IPT = inpatient; NSC = not (for a) service-connected condition; SC = (for a) service-connected condition; UNAUTH = unauthorized (*i.e.*, not a pre-authorized encounter)

Table 6: Inpatient Ancillary Claims by Setting and Purpose of Visit, FY2007 Encounters

Rank	FPOV	Label	Records	Unique Persons	Average Payment per Record
		Acute-Care Facilities			
1	39	IPT 38 U.S.C. 1725 *("Mill Bill")*	357,203	24,801	$ 76.01
2	32	CON HOSP EMER VA	305,841	17,241	$ 127.63
3	30	CON HOSP FOR SC	162,607	8,534	$ 110.86
4	31	UNAUTH CON HOSP	118,844	9,828	$ 106.20
5	35	CON HOSP NSC	66,148	3,376	$ 149.80
6	33	CON HOSP EMER FED	25,626	1,760	$ 133.02
7	36	CON HOSP FED HOS	18,336	1,050	$ 158.42
8	34	CON HOSP WOMEN	14,863	1,436	$ 189.22
9	38	IPT HOSPICE CONT	850	55	$ 122.86
10	37	IPT HOSPICE FEE	56	26	$ 279.48
		Community Nursing Homes			
1	40	CNH SC DIS 38 USC 1710	2,672	450	$ 289.01
2	41	CNH NSC DISABL	1,159	223	$ 173.05
3	43	CNH HOSPICE & PALLIATIVE	63	36	$ 496.27
4	44	CNH RESPITE CARE	24	9	$ 98.41
5	42	CNH ACTIVE DUTY	0	0	$ 0

Abbreviations: CNH = community nursing home; CON = contract; DIS and DISABL = disability; EMER = emergency; FED = federal; FEE = Fee Basis; HOSP = hospital; IPT = inpatient; NSC = not (for a) service-connected condition; SC = (for a) service-connected condition; UNAUTH = unauthorized (i.e., not a pre-authorized encounter)

charges without a facility charge. This may occur if the facility is performing ancillary work for someone being treated at a VA facility. On rare occasions it can happen when the facility payment is not approved for payment but the ancillary or professional charge is approved and paid.

In contrast to acute-care facilities, nursing homes produce many fewer ancillary and professional records than facility records. Nursing home patients who need tests may go to a separate facility to obtain them, in which case the Fee Basis record would be for that facility – possibly recorded as an outpatient encounter – rather than the nursing home. As well, community nursing homes may have relatively limited ability to perform ancillary procedures. Finally, professional fees for a nursing home stay would be billed separately only if the care provided is not covered by the standard payment.

Fee Basis claims provide some insight into the use of hospice and palliative care. Note that this type of care appears in both acute-care and extended care facilities, under FPOVs 37-38 (IPT HOSPICE FEE and IPT HOSPICE CONT) and 43 (CNH HOSPICE & PALLIATIVE). These codes are uncommon in the Fee Basis data, accounting for only 609 patients in FY2007 based on facility claims. These underestimate the full extent of palliative and hospice care at non-VA facilities, however, because coding may not capture all instances of such care, and because Fee Basis records do not report care provided in state Veterans homes.

4. Overlap with Other VA Data Files

4.1 Overview

The Fee Basis system is the only method for reporting payments to non-VA providers for care at non-VA facilities. We therefore expect little overlap between Fee Basis data and records in other VA databases. VA funds distributed through the VERA system depend on workload, however, and so there is a natural incentive to capture as much workload as possible.

There are two significant instances in which Fee Basis data are transmitted to other utilization data files: nursing home care and completed inpatient stays. Nearly all community nursing home care is also reported in the DSS NDE for outpatient care.[1] It appears in the outpatient file instead of the inpatient file so that interim workload may be reported before the patient is discharged. A single service date is recorded for the invoice rather than the invoice period. A completed inpatient hospital stay may appear in two VHA files. The Health Information Management Section at each medical center enters information on non-VA inpatient stays into VISTA. The data later become part of the Non-VA Hospitalization (NVH) file within the Patient Treatment File (PTF) as well. This enables the medical center to obtain credit for workload, which in turn affects medical center payments through the Veterans Equitable Resource Allocation (VERA) system. The data enter NVH only after a discharge occurs.

4.2 Comparing Fee Basis and Non-VA Hospitalization Records

Notes from national Fee Basis conference calls indicate that some non-VA discharges do not make it into the NVH files. We therefore compared the contents of the two files for FY2007 to determine the proportion of completed stays that were entered into the NVH. As noted earlier, the Fee Basis data includes FY2007 discharges paid anytime in the period FY2007-FY2009. The FY2007 PTF NVH already contains all discharges for FY2007, and so it was not necessary to search for stays in later years.

NVH is a file of completed stays plus stub records for authorized Fee Basis stays whose claims have not yet been submitted. We created a temporary file of completed stays using the invoice-level records in the Fee Basis INPT file. Using patient ID, vendor ID, and invoice start and end dates as matching variables, we concatenated individual claims into chains having no break of one day or more.[2] The first day (TREATDTF) of the first invoice in the chain was considered to be the admission date, and the last day (TREATDTO) of the last invoice in the chain was considered to be the discharge date. We eliminated stays whose last day was September 30, 2007, the last day of FY2007, because many of these will have continued into FY2008. This yielded a total of 75,503 stays that finished during FY2007. We will refer to them as the *New Fee Basis Discharge File*.

[1] Personal communication, Steven Porter (HAC DSS office), 2005.

[2] For example, suppose that an invoice period (TREATDTF to TREATDTO) ended on January 12. If the period of the next invoice began on January 12 or January 13, then the two were considered parts of a single stay. Otherwise they were considered parts of distinct stays.

Table 7: Number of FY2007 Stays in Fee Basis INPT and PTF Non-VA Hospitalization Files

No. of Stays per User	New Fee Basis Discharge File		PTF Non-VA Hospitalization	
	Frequency	**Percent**	**Frequency**	**Percent**
1	61,946	82.0	49,903	83.6
2	9,495	12.6	6,875	11.5
3	2,465	3.3	1,746	2.9
4	881	1.2	659	1.1
5 or more	716	0.9	545	0.9
TOTAL	75,503	100.0	59,728	100.0

Note: Percentages may not add to 100% due to rounding.

Table 7 shows the distribution of the count of stays among users, those having any stays. There are approximately 25% more stays in the New Fee Basis Discharge File than in the PTF NVH file. An earlier analysis of FY2003 data found a similar difference (Smith and Chow 2007). More than 80 percent of inpatient users had only a single stay recorded in the Fee Basis files, and nearly 95 percent had no more than two. The average count was slightly greater in the Fee Basis data than in the NVH. Some types of Fee Basis stays do not enter the PTF NVH files, such as community nursing home and state home stays. As well, some VA sites appear not to create NVH records for every qualified stay in the Fee Basis data. Finally, the PTF NVH files may contain contract care that is not paid through the Fee Basis program.[3]

Length of stay (LOS) is a common outcome of health services studies. We therefore investigated whether LOS for matched stays in Fee Basis and NVH files were similar. For our Fee Basis discharge file we defined length of stay by the formula *LOS = max (1, (discharge date – admission date)),* where admission and discharge dates were formatted in numeric values (Julian or SAS). We then compared this to the LOS variable in the NVH file. Table 8 shows the distribution of LOS in the two sources. The distributions have moderate similarity. They had similar proportions of one-day stays, but the Fee Basis data had fewer stays of 2-9 days' length and more of 10 days or more.

[3] Nancy Hedrick, personal communication, 26 January 2006.

Table 8: Length of Stay among FY2007 Inpatient Discharges in the INPT and PTF Non-VA Hospitalization Files

Length (days)	New Fee Basis Discharge File		PTF Non-VA Hospitalization	
	Frequency	Percent	Frequency	Percent
1	15,748	20.9	12,521	21.0
2	11,212	14.9	10,296	17.2
3	8,143	10.8	7,721	12.9
4-5	9,751	12.9	9,834	16.5
6-7	5,757	7.6	5,855	9.8
8-9	3,528	4.7	3,549	6.0
10+	21,364	28.3	9,952	16.66
TOTAL	75,503	100.0	59,728	100.0

Note: Percentages may not add to 100% due to rounding.

We next attempted to match admission and discharge dates for particular stays. Results appear in Table 9. Merging attempts were done sequentially by method, starting from the top method listed. Ninety percent of stays appearing in both files matched by both admission and discharge dates and had identical lengths of stay. In most other cases, LOS differed by one or two days. Only 1,816 (4.2%) did not match by admission date or discharge date.

Table 9: Comparing Length of Stay in FY2007 INPT and PTF Non-VA Hospitalization Files

Matching method	LOS equal	LOS differs by 1 day	LOS differs by 2 days	TOTAL
Admission and discharge dates	38,508	4	4	38,516
-- Admission date only	93	249	649	991
---- Discharge date only	99	1,455	609	2,163
------ Other	56	93	1,667	1,816
TOTAL	38,756	1,801	2,929	43,486

Key: LOS = length of stay

The discrepancy in admission and discharge dates may be significantly greater among stays authorized by the 'Millennium Bill.' One VA station reports that the TREATTO (discharge) date in the Fee file and the discharge date in the PTF file may differ by up to 60 days. Allowing matches with large differences in discharge dates will likely increase the number of correct matches, but it may also increase false matches. For example, suppose that a patient is discharged from a Fee Basis stay and then is readmitted within 60 days to the same facility. If an analyst allows a 60-day window for matching PTF to Fee Basis stays, then the PTF record for the earlier stay would be incorrectly matched to *both* Fee Basis records.

4.3 Matching INPT and ANIP Records

The ANIP file contains ancillary inpatient services, such as laboratory tests, and physician payments for inpatient care. Payments for physicians employed directly by the hospital, such as anesthesiologists, will appear within the facility payments in the INPT file. Ancillary and physician payments accounted for more than $116 million in FY2007 payments. These values represent payments during the fiscal year, some of which correspond to stays in prior years.

Each inpatient stay paid by VA should have at least one INPT record. We believe that nearly all stays lasting two days or more should have a matching ANIP record as well. Only stays involving no ancillaries and no outside physicians would have only a INPT record. Thus, we expect that nearly all ANIP records could be matched to INPT records. The facility and the physician may submit invoices to VA at different times, however, and so some stays, particularly those near the end of a fiscal year, may lack ANIP or INPT records in that year.

To determine the correspondence between the two files, we attempted to merge them by patient ID (SCRSSN), facility ID (VENDID), and service dates. The service dates for the inpatient stay consisted of the first and last dates of the chain of invoices, as described above. The service date for the ANIP file is a single date (TREATDT). We considered an ANIP record to match an INPT record if the patient and facility IDs matched and if the ANIP service date fell within the service dates of the INPT record(s).

Results appear in Table 10. Eighty-four percent of FY2007 ANIP records could be matched to a FY2007 INPT record. Fifteen percent of ANIP records could not be matched to an INPT record. These records either contain errors in one or more of the matching variables or correspond to INPT records from an earlier fiscal year. One percent was excluded because the ANIP service date was either the first day or the last day of FY2007. In such cases, the inpatient stay likely began prior to FY2007 or ended after FY2007, making a match unlikely.

Table 10: Matching Ancillary (ANIP) and Inpatient (INPT) Records, FY2007

Status of ANIP Record	# Records	Percent of Records	Total Payments	Percent of Payments
Matching INPT record	486,723	85%	$98.3 million	84%
No matching INPT record	81,499	14%	$17.6 million	15%
Excluded: ANIP service date on boundary[1]	2,658	0%	$435,832	0%

[1] Service date was the first or last day of FY2007.

References

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