



**PowerHealth Solutions**

# **Taking Service Line P&L's to the Next Level**

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# OUTLINE

## 1. Background

- **Current Status of Service Line Analysis**
- **Issues and Typical Roadblocks**

## 2. Costing Strategies

## 3. Other Considerations

## 4. Report Examples



# DRIVERS

- **Competition**
- **Aging of the population / Need to plan services**
- **Mergers / re-alignment of services**

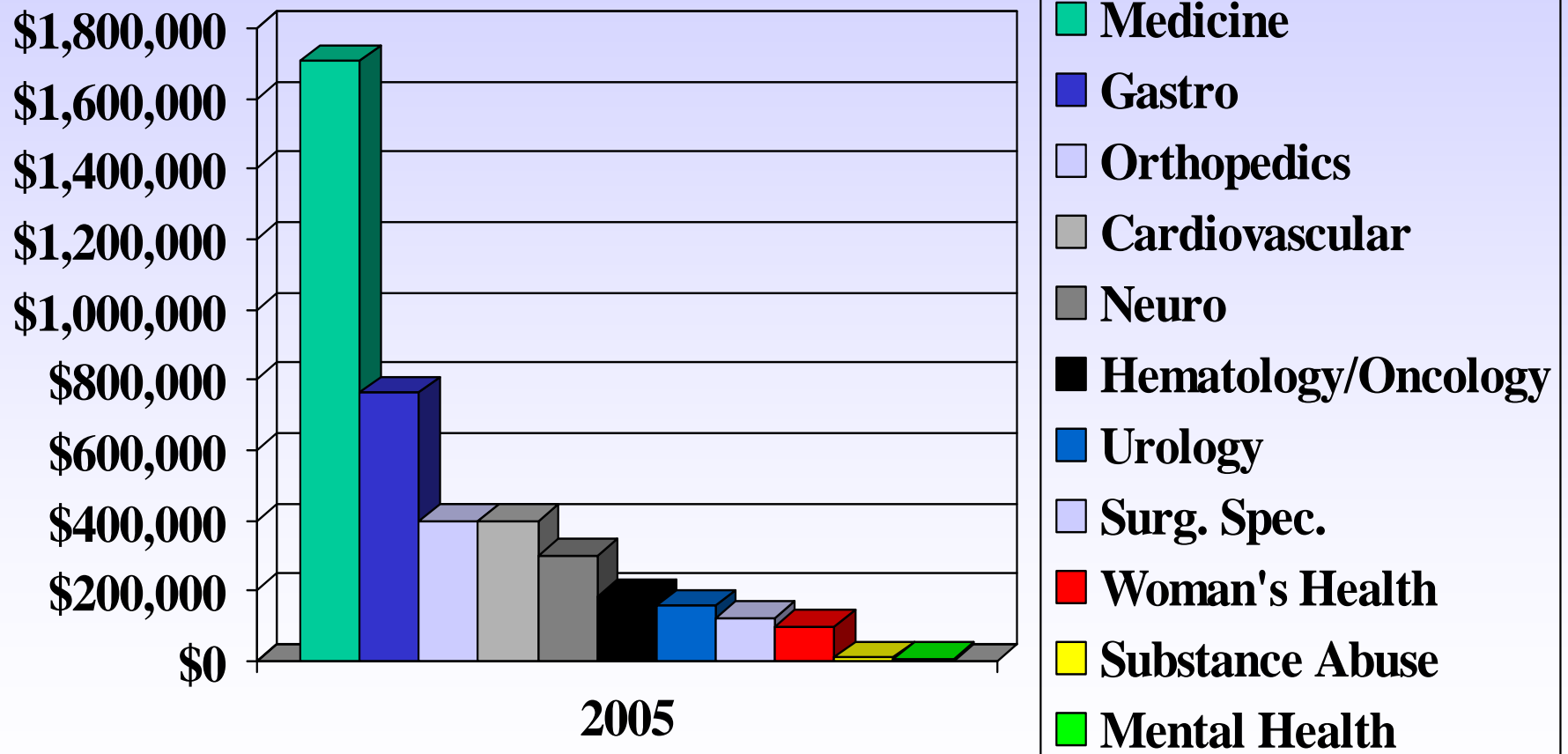
# GOALS OF SERVICE LINE ANALYSIS

- **Determine contribution margin/profitability by service line**
- **Be able to integrate with market share information, to identify areas of opportunity and growth (or decline)**
- **Provide meaningful information to senior management, to enable strategic decision-making**
- **Build a model that can be easily maintained**
- **Produce reports in a timely manner, to enable trending**



# Sample

## Inpatient Contribution Margin By Service Line



# SERVICE LINE ANALYSIS

**“*Service lines are back.*”** (March 2004 HFM article)

**What’s different this time around?**

**“Service line strategy is not viewed as just a marketing function this time around. This time, senior managers seem to be on board, and they realize that the concept not only hold great financial promise, but also offers potential for gaining a competitive edge.”**

**“The second wave of service-line strategy - driven by more competitive forces and constrained payment - is likely to garner greater attention and improved execution as it is seen as more organizationally pervasive and market relevant.”**

**E. Preston Lee, *Divide and Compete: A New Look at Service Lines*,  
Healthcare Financial Management: March 2004.**

# SERVICE LINE ANALYSIS

What's different this time around?

- **Service Line Definitions:** We've had more experience with defining service lines, and now understand the need for service line definitions to be;

*Data driven,*

*Market comparable*

*Logical from an organizational perspective.*

- **Profit/Loss Analysis:** More attention is being paid to accuracy of assigning both costs and net revenue to the service line level.

# POTENTIAL ROADBLOCKS

- **Skepticism about the accuracy of the data.**
- **The Financial Management team is not comfortable with the net revenue calculations.**
- **Not ready to use net revenue from the Decision Support System (“DSS”) in a profit/loss analysis.**
- **DSS is used for part of the analysis, with other calculations done offline.**
- **The Cost Accounting data is not adequately maintained.**
- **There are too many caveats to the cost accounting and net revenue information.**
- **An audit process is not in place to verify the cost and net revenue data on an on-going basis.**



# **PAYMENTS (“NET REVENUE”) IN U.S. HEALTHCARE: A PRIMER**

**Payments come from a number of insurers:**

- **Medicare: healthcare for elderly (age 65+), through Federal government**
- **Medicaid: healthcare for indigent/underprivileged, funded primarily by the states, with partial funding from the Federal government**
- **Managed Care insurance plans (also referred to as HMO’s or “Health Maintenance Organizations”): Insurers that pay negotiated rates for services, based on a contract with the hospital or provider**
- **Workers Compensation: healthcare for job-related injuries and illnesses (all employers over a certain size are required to carry this insurance)**
- **Commercial insurance plans: Insurers that do not necessarily have a contract with the hospital and will pay based on the bill (charges) or a percentage thereof.**

***For timely service line profit/loss reports, a hospital needs a method of estimating payments for ALL patients that have been treated. Hence, a contract management” system is often used to calculate net revenue.***

# ACTION PLAN

- **Enhance the accuracy of service line reporting so that the output is credible as well as timely.**
- **Adjust top level allocations and statistics.**
- **Focus on accuracy of cost and net revenue information at the patient and service line level.**
- **Take the extra steps to ensure this accuracy.**
- **Develop a plan for maintenance and ongoing auditing of the DSS results so that requests for service line information can be quickly turned around.**

# **COST ACCOUNTING STRATEGIES TO CONSIDER**

## **PHASE I: DEPARTMENT-LEVEL COSTING**

- **Move costs from indirect to direct**
- **Assign overhead costs (vs. allocate)**

## **PHASE II: SERVICE ITEM AND PATIENT COSTING**

- **Assign direct costs to service lines**
  - *Accurate cost standards*
  - *Patient-specific costing*
- **Assign program-specific costs**

## **DEPARTMENT COST STRATEGIES: MOVE COSTS FROM INDIRECT TO DIRECT**

- **Costs that directly support clinical departments, but flow through overhead departments should be reclassified as direct costs.**
- **If costs are classified as overhead in the cost model, this results in a misrepresentation of the direct cost and hence, contribution margin, of the service line.**
- **Examples include:**
  - Radiology Support (transcriptionists, file clerks, etc.)**
  - Lab Information Systems**
  - Clinical Administration; e.g. Psych Admin, Cardiac Admin**
- **Other costs to consider classifying as direct include:**
  - Major moveable equipment depreciation**
  - Payroll taxes and other employee benefits**
  - Teaching costs (the portion of intern/resident/faculty time that is patient care vs. admin or educational)**

# DEPARTMENT COST STRATEGIES: “ASSIGN” OVERHEAD COSTS VS “ALLOCATE”

## Borrowing from “ABC” (Activity Based Costing)

### DEPARTMENT LEVEL:

Move away from the top-down, arbitrary allocations of overhead cost towards a more accurate assignment of overhead costs to the appropriate departments.

This approach will require additional data collection to supplement the Medicare cost report statistics

*Example: Safety and Security Department: If 25% of security officers' time is spent patrolling the Emergency Department, this should be reflected in the assignment of this cost across departments vs. allocating Security on the basis of square footage.*

# SERVICE ITEM COSTING STRATEGIES: DEVELOP AND MAINTAIN COST STANDARDS

- **Collect data from the clinical and department managers**
  - **Cost standards should be kept up-to-date, by working with department managers to keep abreast of changes in technology, methodology and supplies used.**
  - **Automated interfaces should be developed wherever possible.**

*O.R. supply costs as well as drug costs can be updated on a monthly basis if these interfaces are in place*



# **SERVICE ITEM COSTING STRATEGIES: PAY ATTENTION TO OVERHEAD AND FIXED COSTS**

**Assign overhead and fixed costs more accurately to the patient and service line level**

- **Review methods of assigning overhead and fixed costs to service items:**

*If the allocation is based on charges then the big-ticket supplies and drugs are picking up a disproportionate amount of these costs.*

*Some organizations make a point of revising the allocation of overhead and fixed costs so that it is allocated only to procedures and not to service items that are chargeable supplies or purchased services.*

# PATIENT-SPECIFIC COSTING

- Charge codes have been the traditional “intermediate” product in a cost accounting system.
- The “final” product is the PATIENT, and accuracy of costs at the patient level is the end goal.
- Consider supplementing the cost accounting system with additional patient level data;

Operating Room - times by position, actual supplies used

Nursing - acuity data / nursing interventions

Transitional Care/Subacute Unit - patient classification data (SNAP)

Maternity - labor times (calculated from mom’s admission time and baby’s delivery time)

- Improving *patient-specific* costing efforts is the common thread among these strategies.



## **PATIENT COSTING STRATEGIES: PROGRAM-SPECIFIC COSTS**

- **Certain costs may relate to a particular program and should be directed to a specific set of patients or service line.**

### **Examples:**

- **Diabetes Education Department directed to diabetic patients**
- **Organ Acquisition costs directed to organ transplant cases**

***Even if a separate patient care department with its own billing codes has not been set up, there often are methods within the DSS to assign these costs to the appropriate patients.***

## DEFINING SERVICE LINES

- **DRG's are most often used to classify inpatients**
- **Clinical Subspecialties are a good starting point - see next page for Yale groupings of HCFA (e.g. Medicare) DRG's**
- **Outpatient: Medical Service or Location or Department**
- **Physician Specialty or other Physician grouping**

*(Caveat: does not enable comparative or market-share reporting)*

## Clinical Subspecialties\*

SUBSPECIALTY		CMS (V21.0) DRGs
CODE	NAME	
01	Cardiology	115-118; 121-145; 515-518; 525-527; 535-536
02	Dentistry	168-169; 185-187
03	Dermatology	271-273; 283-284
04	Endocrine	294-301
05	Gastroenterology	174-184; 188-190; 202; 204-208
06	General Medicine	416-4232; 447-455; 462-467
07	General Surgery	146-167; 170-171; 191-201; 257- 270; 276-282; 285-293; 344-345; 392-394; 400-402; 406-408; 415; 424; 439-446; 461; 480-483; 486- 487; 493-494; 504-513; 539-540
08	Gynecology	353-365; 368-369
09	Hematology	395-399
10	Neonatology	385-391
11	Nephrology	316-322; 325-327; 331-333
12	Neurology	009; 012-026; 031-035,524
13	Neurosurgery	001-003; 006-008; 027-030; 484; 528-534
14	Obstetrics	370-384

(continued on next page)

15	Oncology	010-011; 064; 082; 172-173; 203; 274-275; 346-347; 366-367; 403-405; 409-414; 473; 492
16	Ophthalmology	036-048
17	Orthopedics	209-213; 216-220; 223-230; 232-241; 243; 248-255; 471; 485; 491; 496-503; 519-520; 537-538
18	Otolaryngology	049-063; 065-074
19	Psychiatry	425-432; 433; 521-523
20	Pulmonary	078-081; 085-093; 096-102; 475
21	Rheumatology	242; 244-247; 256
22	Thoracic surgery	075-077; 083-084; 094-095; 103-109; 495
23	Urology	302-315; 323-324; 328-330; 334-343; 348-352
24	Vascular surgery	110-111; 113-114; 119-120; 478-479
25	HIV Infections (Princ. Diagnosis Only)	488-490
26	Transplant (pending)	103; 302; 480; 495; 512; 513

- \* Research Document, "Assignment of Diagnosis Related Groups Using ICD-9-CM Codes to Clinical Specialties." Yale School of Organization and Management, Health Systems Management Group (HSMG), Robert B. Fetter, Principal Investigator.

# PROFIT AND LOSS: SUMMARY

*by Service Line*

	<u>Gross Revenue</u>	<u>Less Deductions</u>	<u>Net Revenue</u>	<u>Direct Fixed Costs</u>	<u>Direct Variable Costs</u>	<u>Support Fixed Costs</u>	<u>Support Variable Costs</u>	<u>Overhead Costs</u>	<u>Total Costs</u>	<u>Profit/Loss</u>	<u>Contribution Margin</u>
Cardiology	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
Orthopedics	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
Oncology	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx

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**PRODUCT LINE FINANCIAL STATEMENT**

	<b>Cardiac</b>	<b>Medical</b>	<b>Mental Health</b>	<b>Neuro</b>	<b>Obstetrics</b>	<b>Oncology</b>	<b>Orthopedics</b>	<b>Surg Other</b>
<b>GROSS REVENUE</b>								
<b>PATIENT SERVICE CHARGES:</b>								
INPATIENT CHARITY	0	0	0	0	0	0	0	0
INPATIENT COMMERCIAL	0	126,904	0	0	20,851	0	0	85,188
INPATIENT HMO	91,568	469,776	0	29,755	47,152	20,366	43,440	153,920
INPATIENT INDIGENT	87,907	1,189,217	66,925	80,657	21,060	39,431	120,315	539,670
INPATIENT MEDICAID	571,240	5,191,219	225,687	184,093	2,410,179	171,266	423,176	2,198,141
INPATIENT MEDICARE	2,780,710	14,627,091	123,600	1,286,036	25,686	1,408,177	1,949,276	5,652,592
INPATIENT PPO	356,987	1,666,529	16,894	136,138	271,805	181,919	320,412	1,546,716
INPATIENT PRIVATE	11,176	544,860	55,387	46,285	87,699	15,202	49,113	292,293
INPATIENT WORK COMP	0	172,747	0	0	0	0	187,328	13,848
<b>TOTAL PATIENT REVENUE</b>	<b>3,899,588</b>	<b>23,988,343</b>	<b>488,493</b>	<b>1,762,964</b>	<b>2,884,433</b>	<b>1,836,362</b>	<b>3,093,060</b>	<b>10,482,369</b>
<b>NET REVENUE</b>								
INPATIENT CHARITY	0	0	0	0	0	0	0	0
INPATIENT COMMERCIAL	0	59,876	0	0	17,566	0	0	73,334
INPATIENT HMO	12,113	240,209	0	6,816	23,030	16,039	18,003	27,359
INPATIENT INDIGENT	26,910	433,990	26,492	28,845	5,337	11,618	43,665	197,453
INPATIENT MEDICAID	211,718	2,029,908	104,728	71,659	1,049,467	78,055	183,303	940,100
INPATIENT MEDICARE	677,081	3,098,265	21,826	374,995	2,072	357,791	438,109	1,365,252
INPATIENT PPO	273,237	809,773	7,212	92,106	85,023	169,217	117,403	844,823
INPATIENT PRIVATE	0	21,490	11,173	8,287	0	0	15,991	39,728
INPATIENT WORK COMP	0	64,242	0	0	0	0	38,221	2,284
<b>NET PATIENT REVENUE</b>	<b>1,201,059</b>	<b>6,757,754</b>	<b>171,432</b>	<b>582,709</b>	<b>1,182,493</b>	<b>632,720</b>	<b>854,695</b>	<b>3,490,333</b>
DSH PAYMENTS	5,405	49,115	2,135	1,742	22,803	1,620	4,004	20,797
SETTLEMENTS - PRIOR YEAR	68,473	360,184	3,044	31,668	632	34,676	48,000	139,192
<b>TOTAL NET PATIENT REVENUE</b>	<b>1,274,937</b>	<b>7,167,054</b>	<b>176,611</b>	<b>616,119</b>	<b>1,205,929</b>	<b>669,016</b>	<b>906,699</b>	<b>3,650,322</b>
OTHER REVENUE	13,240	74,429	1,834	6,398	12,523	6,948	9,416	37,908
<b>TOTAL REVENUE</b>	<b>1,288,177</b>	<b>7,241,483</b>	<b>178,445</b>	<b>622,517</b>	<b>1,218,453</b>	<b>675,964</b>	<b>916,115</b>	<b>3,688,231</b>
<b>OPERATING EXPENSES</b>								
DIRECT EXPENSES	688,506	4,045,225	90,195	329,794	1,136,842	320,218	577,499	1,885,828
<b>CONTRIBUTION MARGIN( DEFICIT)</b>	<b>599,671</b>	<b>3,196,258</b>	<b>88,250</b>	<b>292,723</b>	<b>81,610</b>	<b>355,746</b>	<b>338,616</b>	<b>1,802,402</b>
OVERHEAD EXPENSES	308,330	1,856,062	40,858	154,206	481,061	147,092	264,065	832,116
<b>NET INCOME (LOSS)</b>	<b>291,341</b>	<b>1,340,196</b>	<b>47,393</b>	<b>138,517</b>	<b>(399,451)</b>	<b>208,654</b>	<b>74,551</b>	<b>970,286</b>

# CONTRIBUTION MARGIN BY SERVICE LINE

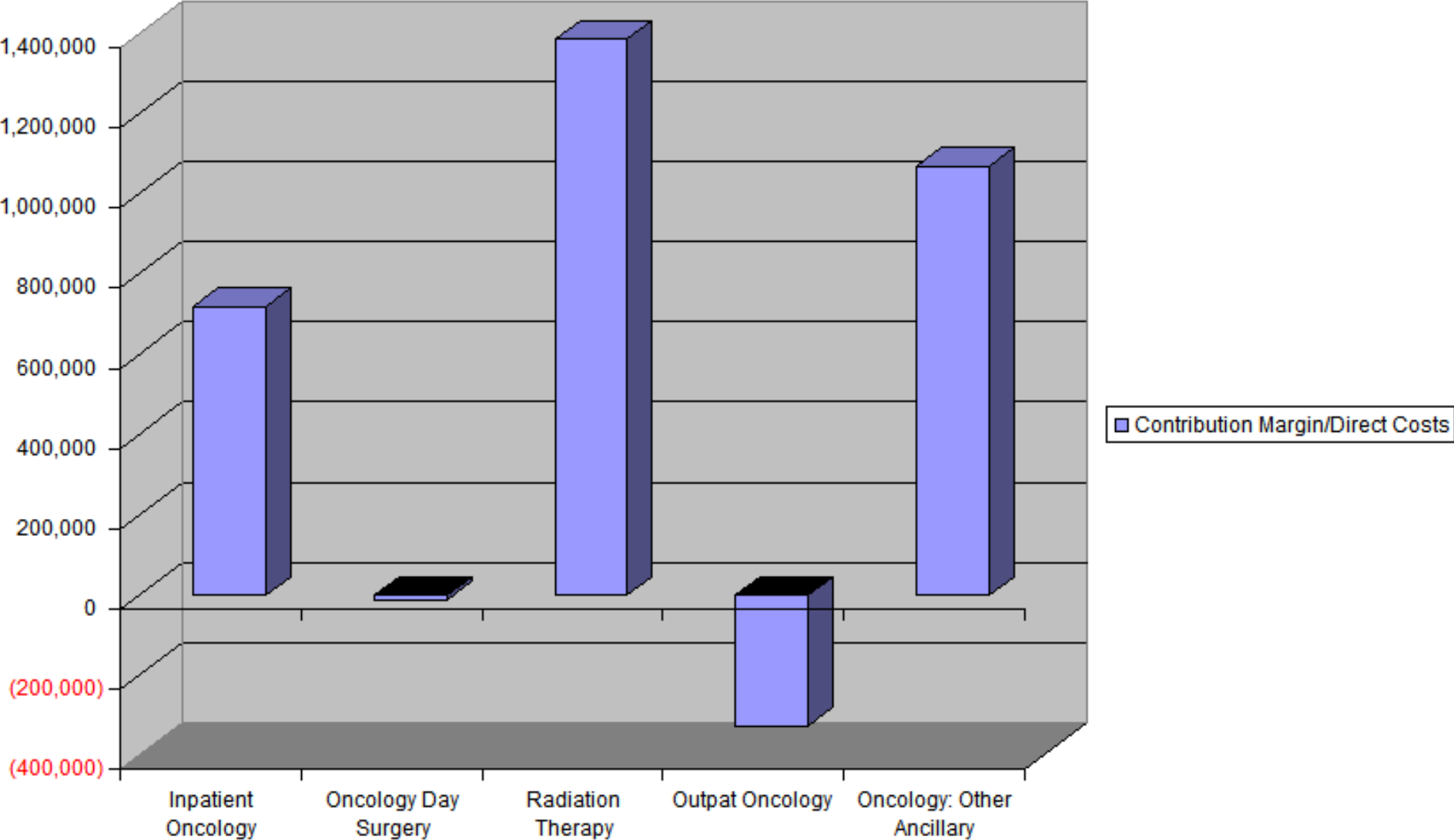
<i>Cardiology</i>	<b>FY2005 <u>Jan-Dec</u></b>
<u>Revenue</u>	
Inpatient	XXXXXX
Outpatient	XXXXXX
Total Net Patient Service Revenue	XXXXXX
<u>Direct Expenses:</u>	
Inpatient:	
Salary and Wages	XXXXXX
Fringe Benefits	XXXXXX
Supplies and Expenses	XXXXXX
Purchased Services	XXXXXX
Professional Fees	XXXXXX
Subtotal Inpatient Expenses	XXXXXX
Outpatient:	
Salary and Wages	XXXXXX
Fringe Benefits	XXXXXX
Supplies and Expenses	XXXXXX
Purchased Services	XXXXXX
Professional Fees	XXXXXX
Subtotal Outpatient Expenses	XXXXXX
Total Direct Expenses	XXXXXX
Total Direct Contribution Margin	XXXXXX
Key Statistics:	
Inpatient Cases	XXXXXX
Inpatient Net Revenue/Case	XXXXXX
Inpatient Direct Expense/Case	XXXXXX
Inpatient Contribution Margin/Case	XXXXXX
Outpatient Volume	XXXXXX
Outpatient Net Revenue/Case	XXXXXX
Outpatient Direct Expense/Volume	XXXXXX
Outpatient Contribution Margin/Case	XXXXXX

**ONCOLOGY PROFIT/LOSS  
FY2006 Preliminary**

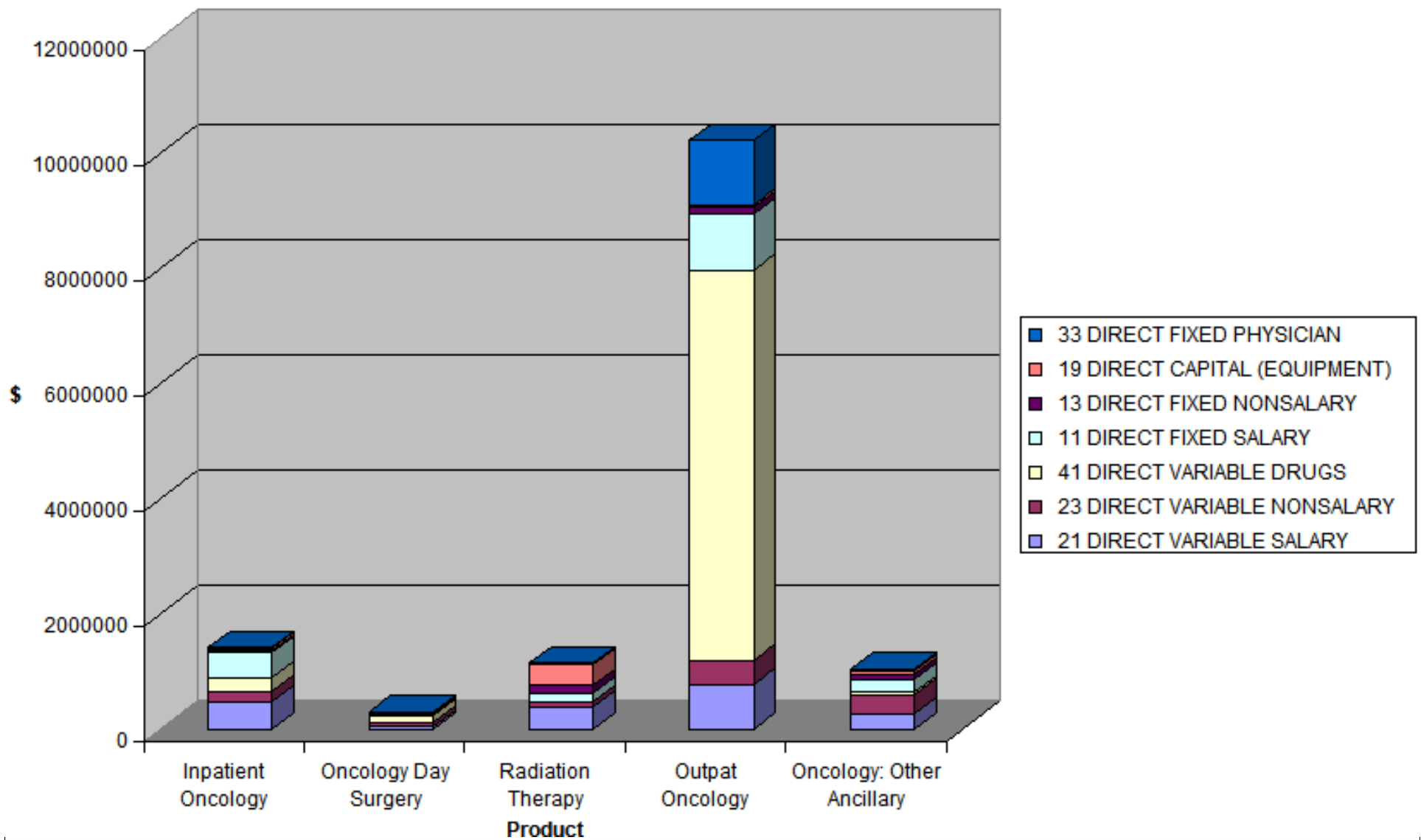
	<b>Inpatient Oncology</b>	<b>Oncology Day Surgery</b>	<b>Radiation Therapy</b>	<b>Outpat Oncology</b>	<b>Oncology: Other Ancillary</b>	<b>Total Oncology</b>
Cases	303	252	1,619	6,236	11,337	19,747
Charges	4,518,906	1,058,087	5,388,007	27,201,547	9,862,224	48,028,771
Projected Payments	2,127,933	281,573	2,526,396	9,907,173	2,099,756	16,942,831
Variable Expenses						
21 DIRECT VARIABLE SALARY	469,716	39,784	382,731	780,695	259,167	1,932,093
23 DIRECT VARIABLE NONSALARY	191,007	82,603	89,894	408,945	337,233	1,109,682
41 DIRECT VARIABLE DRUGS	<u>228,309</u>	<u>114,293</u>	<u>1,933</u>	<u>6,779,770</u>	<u>41,781</u>	<u>7,166,086</u>
Total Variable Expenses	889,032	236,680	474,558	7,969,410	638,181	10,207,861
Fixed Expenses						
11 DIRECT FIXED SALARY	434,100	36,193	146,717	975,313	224,835	1,817,158
13 DIRECT FIXED NONSALARY	34,646	6,785	133,774	115,736	96,831	387,772
19 DIRECT CAPITAL (EQUIPMENT)	44,873	6,067	357,373	41,840	58,727	508,880
33 DIRECT FIXED PHYSICIAN	<u>6,960</u>	<u>7,510</u>	<u>29,482</u>	<u>1,129,516</u>	<u>13,261</u>	<u>1,186,729</u>
Total Fixed Expenses	520,579	56,555	667,346	2,262,405	393,654	3,900,539
Total Direct Expenses	1,409,611	293,235	1,141,904	10,231,815	1,031,835	14,108,400
Contribution Margin/Direct Costs Per Case	718,322 2,371	(11,662) (46)	1,384,492 855	(324,642) (52)	1,067,921 94	2,834,431
Indirect Expenses (& Statistic Used)						
1001 CAPITAL-BLDG & FIXED (Sq Ft)	101,671	9,823	177,551	188,625	69,184	546,854
1003 EMPLOYEE BENEFITS (FTE's)	144,298	13,600	76,679	362,896	96,698	694,171
1004 FICA/PENSION (Salary \$)	98,444	9,721	59,454	259,814	72,277	499,710
1006 MANAGEMENT COST CTR (Mgmt Sal \$)	21,757	2,687	30,681	139,347	21,939	216,411
1007 ADMIN & GENERAL (Expenses)	139,900	25,926	111,085	928,520	109,694	1,315,125
1009 PATIENT ACCOUNTING (Gross Rev)	40,983	7,403	43,707	194,035	102,804	388,932
1016 MAINTENANCE & REPAIRS (Sq Ft)	115,440	10,844	200,958	212,262	79,044	618,548
1026 MEDICAL RECORDS (Time Study)	25,671	7,863	48	761,877	6,868	802,327
Other Indirect	<u>436,128</u>	<u>39,130</u>	<u>207,200</u>	<u>966,138</u>	<u>196,977</u>	<u>1,845,573</u>
Total Indirect Expenses	1,124,292	126,997	907,363	4,013,514	755,485	6,927,651
Total Expenses	2,533,903	420,232	2,049,267	14,245,329	1,787,320	21,036,051
Profit (Loss) Per Case	(405,970) (1,340)	(138,659) (550)	477,129 295	(4,338,156) (696)	312,436 28	(4,093,220)



**Oncology Contribution Margin**



### Direct Expense Breakout



**Detail by Payor: Outpatient Oncology  
FY2006 Preliminary**

	MEDICARE	MEDICAID	MANAGED CARE PAYORS	BLUE CROSS HMO	ALL OTHERS	TOTAL Outpat Oncology
CASES	3,350	274	433	584	1,595	6,236
VISITS	6,080	764	857	1,274	3,298	12,273
CHARGES	12,303,365	2,025,231	2,198,988	3,386,417	7,287,546	27,201,547
EXPECTED PAYMENTS	3,674,540	274,518	954,135	1,569,201	3,890,758	10,363,152
ACTUAL PAYMENTS	3,024,622	162,573	700,737	1,550,844	3,373,614	8,812,390
PROJECTED PAYMENTS *	3,512,860	262,439	912,153	1,500,156	3,719,564	9,907,173
ACCOUNT BALANCES	2,188,206	346,674	251,523	42,638	572,866	3,401,907
DIRECT FIXED COSTS	1,042,125	164,753	161,267	274,623	619,637	2,262,405
DIRECT VARIABLE COSTS	3,502,620	621,103	661,147	1,036,014	2,148,529	7,969,413
TOTAL DIRECT COSTS	4,544,746	785,855	822,413	1,310,638	2,768,165	10,231,818
INDIRECT COSTS	1,839,155	295,079	300,414	491,895	1,086,977	4,013,520
TOTAL COSTS	6,383,901	1,080,935	1,122,827	1,802,533	3,855,142	14,245,337
CONTRIBUTION MARGIN	(1,031,886)	(523,416)	89,740	189,519	951,399	(324,644)
PER CASE	(308)	(1,910)	207	325	596	(52)
PER VISIT	(170)	(685)	105	149	288	(26)
GAIN/LOSS PROJECTED PMTS LESS COSTS	(2,871,041)	(818,496)	(210,674)	(302,376)	(135,577)	(4,338,164)
PER CASE	(857)	(2,987)	(487)	(518)	(85)	(696)
PER VISIT	(472)	(1,071)	(246)	(237)	(41)	(353)

## CONTRIBUTION MARGIN: OUTPATIENT ONCOLOGY

