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Implementing an automated collection follow up system in a not-for-profit Catholic hospital

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IMPLEMENTING AN AUTOMATED COLLECTION FOLLOW UP SYSTEM IN A NOT-FOR-PROFIT CATHOLIC HOSPITAL

by

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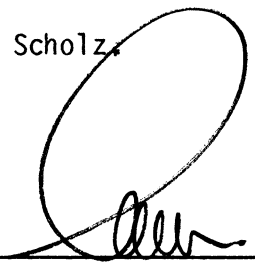
APPROVAL PAGE

This committee has approved the Applied Management Decision Project of Michael J. Scholz.



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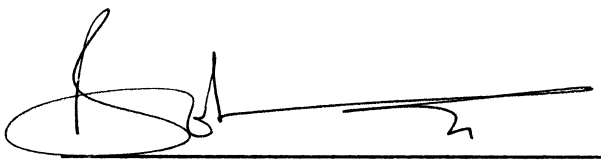

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ABSTRACT

The current asset patient accounts receivable is generally the second largest asset on the balance sheet of any hospital, trailing only the investment in property, plant, and equipment in terms of dollars. Accounts receivable is a near liquid asset, because when collected, it becomes cash. Patient accounts receivable in hospitals consist of several distinct components. Government programs, such as Medicare and Medicaid, typically do not cover all charges on a patient's hospital bill. Traditional indemnity plans through an employer can cover all or only a portion of the charges depending on the policy provisions of the insured. Managed care programs, consisting of Health Maintenance Organizations (HMO's) or Preferred Provider Options (PPO's), mandate specific rules as to where the beneficiary can or cannot go to seek health care. Each type of coverage is unique. This places a great deal of burden on the provider of care (hospital/physician) to follow the appropriate rules to obtain the proper payment. With health care costs rising, more emphasis is being shifted from full coverage plans to plans in which the patient/beneficiary must share in the cost of care. These typically are known in the industry as patient co-pays and deductibles. When a hospital is paid less than full charges, it has fiduciary responsibility to collect the remainder from the patient where applicable. Not-for-profit Catholic hospitals are often not thought of as businesses. This presents a problem for an effective collection process. Hospitals require cash and profits to remain in operation over the long term, just like any other going concern. Hospitals must collect

their patient accounts receivable in a professional, assertive way while maintaining a positive public image. The increased pressure to collect this growing portion of receivables forces department management to look at more efficient systems to complement the collection effort. The purpose of this Applied Management Decision Report is to analyze the computer software available which would allow a hospital to be successful in reducing its investment in accounts receivable. The hospital will have to invest in software in order to help achieve stated accounts receivable reduction goals.

This report analyzes three separate software alternatives that would allow the Patient Accounts Department to operate more effectively. Shared Medical Systems' Collector Work Station was the first alternative. This system has an interface with the existing hospital mainframe. The hospital then looked at the Accounts Receivable Tracking System by Productive Data Management which has a number of features that are beyond the immediate needs of St. Mary's Hospital. Finally, the hospital looked at the Dexel's Cash Flow Manager which is one of the most widely known software products available in this category. Each software alternative is examined and the vendor selected which will best achieve the collection goals of the department.

The Cash Flow Manager product by Dexel Corporation was chosen as the best solution for St. Mary's Hospital. Its software flexibility and proven track record met all of the needed requirements.

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ACKNOWLEDGEMENTS

I wish to dedicate this project to my loving family who endured and sacrificed much during this period. Many household projects went undone. My loving wife, Sue, pulled more than her fair share of responsibilities during this time. Jason, Rochelle, Michael, Patricia and baby Andrew all went without a certain portion of attention. A special thanks has to be given to my deceased father for he has instilled in me the drive to take advantage of the opportunities that he never had. A special thanks to the typist, Darlene Galaska, for her prompt and quality work. Thanks Sue and thanks Dad.

BACKGROUND INFORMATION

Hospital Internal Environment

St. Mary's Hospital is a not-for-profit 314 bed acute care facility, located on the East side of Milwaukee. St. Mary's is a Catholic hospital sponsored by the religious order of the Daughters of Charity, with headquarters located in St. Louis, Missouri. The Daughters of Charity, with over 44 hospitals, are the largest not-for-profit health care system in the United States. St. Mary's, as a member of the Daughters of Charity, follows the overall philosophy of the order and bases its business and spiritual principles on the Mission Statement. The Mission Statement of St. Mary's is listed in Appendix A. Upon examination of the Mission Statement, it can be determined that it is indeed appropriate for a hospital to operate in a sound and prudent way when it comes to managing the hospital's financial resources. Therefore, the hospital is structured much like a traditional for-profit business. The main difference is that St. Mary's, as a non-profit organization, does not have stockholders and does not have to pay corporate income taxes.

An organizational chart for St. Mary's is listed in Appendix B. The Patient Accounts Division of the Finance Department will be the major operational department analyzed, but the many interrelationships that exist among all departments in a hospital cannot be overemphasized. The financial goal that drives the Patient Accounts Department is the maintenance of an adequate cash flow for the hospital and its ability to achieve budgeted levels of days revenue outstanding. This is also known as days in accounts receivable. Days of revenue outstanding is a key ratio of the effectiveness of a hospital patient accounts receivable department. In Table 1 the ratio is defined and a sample calculation

Table 1

CALCULATION OF DAYS IN ACCOUNTS RECEIVABLE - GROSS METHOD

To calculate gross days in patient accounts receivable, the total revenue per month and the number of days in each month for the prior three months are totaled. The total three months' revenue is divided by the total number of days to arrive at an average daily revenue. The current gross receivables are then divided by the average daily revenue to determine current gross days in accounts receivable. Gross revenue includes all services billable to the patient. Cash collected prior to services rendered are not deducted from gross revenue but do reduce accounts receivable on the day the cash is posted.

Example:

Month	Days	Revenue
March	31	$12,515,000
April	30	11,483,000
May	31	12,587,000
	92	$36,585,000

Revenue per day = 's $36,585,000 / 92

Revenue per day = 's 397,663

Accounts Receivable 25,600,000

$$\frac{\text{Accounts Receivable}}{\text{Revenue per day}} = \frac{\$25,600,000}{397,663} = 64.4 \text{ Days}$$

given. The overall level of days in accounts receivable gives a strong indicator of the financial stability and cash flow of a hospital. Hospitals with a high level of days in accounts receivable are inefficiently performing their fiduciary role to minimize this investment on the balance sheet. Table 2 portrays the December 31, 1991 balance sheet and days revenue outstanding ratio for St. Mary's Hospital. St.

Mary's as of December 31, 1990 had days of revenue outstanding of 63 days. Comparative data obtained from trade journals for similar hospitals are 71 days also shown in Table 2.

Key Functions of the Patient Accounts Receivable Department

For a successful Patient Accounts Department to operate there must be cohesion among several functions. These functions must relate and integrate efficiently in order for the hospital to get the patient's claim paid. The functions of a patient accounts receivable system are as follows:

1. Admission and registration function
2. Billing and follow up of a patient account
3. Collection of the account

Admission and registration of the account entails gathering the appropriate clinical, demographic, and financial information necessary to bill the appropriate insurance company to collect the account in a timely manner. Often overlooked, it is the quality of data gathered at this stage that directly impacts on the timeliness of payment. Obtaining and verifying precise names, addresses, guarantor, and insurance information is key to the successful admission and registration function.

Billing and follow up of an account consists of gathering all patient charges entered onto a patient record in an accurate and timely fashion. Once the charges have been gathered and medical record processing completed, the patient account is ready to be submitted to the appropriate insurance company for payment. The most common media for submitting a bill is a standard billing document called a UB-82 Claim Form. This claim form standardizes coding and information gathering

Table 2

St. Mary's Hospital - Milwaukee
Balance Sheet ($000's)
December 31, 1990

ASSETS	December 31, 1990	June 30, 1990
Current Assets:		
Cash and Short Term Investments	$ 2,622	$ 3,807
Patient Receivables (Net)	20,501	18,851
Other Receivables	950	845
Inventories	598	562
Other Current Assets	7,107	2,840
Total Current Assets	31,778	26,905
Investments:		
Investments, Long Term	21,249	20,551
Funds Held by Trustee	568	547
Donor Restricted Assets	762	37
Land Held for Future Expansion	1,511	1,505
Investment in Subsidiary	3,600	3,600
Total Investments	27,690	26,240
Property, Plant and Equipment, Net	40,240	39,531
Intercompany Advances and Other Assets	2,099	2,063
Total Assets	$101,807	$94,739

Table 2

Continued

LIABILITIES AND FUND BALANCE	December 31, 1990	June 30, 1990
Current Liabilities:		
Current Maturity of Long Term Debt	$ 432	$ 357
Accounts Payable	7,326	8,179
Accrued Liabilities	6,871	5,364
Contracts Payable	125	0
Payable to Third Party Payors	7,311	6,746
Total Current Liabilities	22,065	20,646
Long Term Debt:		
Tax Exempt Bonds Payable	21,780	21,935
Notes Payable	2,145	2,224
Capital Lease Obligations	468	42
Total Long Term Debt	24,393	24,201
-Less Current Maturities	(432)	(357)
Net Long Term Debt	23,961	23,844
Deferred Revenues	71	70
Other Liabilities	2,675	2,910
Fund Balance:		
Unrestricted	52,273	47,232
Restricted	762	37
Total Fund Balance	53,035	47,269
TOTAL LIABILITIES AND FUND BALANCE	$101,807	$94,739
Net Days Revenue Outstanding:		
St. Mary's Hospital	63	61
Acute Care Urban Hospitals with Similar Bed Size	71	73

requirements of the government and commercial insurance companies. An example of a completed UB-82 Insurance Bill Form is listed in Appendix C. When all the data requirements are met, the claim form can be sent to the proper insurance company or government unit (for Medicare Title 18 or Medicaid Title 19 claims) for processing and payment. Once an account is billed obtaining payment is largely dependent on the quality of the data submitted and the paying practices of the insurance company. When an account has been billed and remains unpaid for approximately 45 days follow up action is required. This is currently a manual process which often involves telephoning the insurance company to find out the status of the claim. A claim can be pended for many reasons. Some of the most common are:

1. To review the appropriateness of charges
2. To gather further information from the insured to see if there is additional insurance coverage which may pay all or part of this claim.
3. Claim was never received
4. A review of the medical record may be warranted.
5. Incomplete information on the UB-82 Bill Form

All of the above reasons lead to a delay in cash flow. The claim often needs additional work to get payment processed. This additional work requires skilled staff to cut through the "red tape" and obtain payment. At any point in time, at St. Mary's Hospital, there are approximately 4,000 open commercial claims that need insurance follow-up. A system that can remember when a claim was billed and when it should be paid is necessary to automate this process. Table 3 shows the patient self-pay and the commercial insurance accounts receivable dollars from June, 1989

to December, 1990. Note that the amount of accounts receivable has increased by 30.1% over the 30 month period.

Table 3

Patient Self Pay and Commercial Insurance Accounts Receivable Dollars
For Period June, 1989 to December 31, 1990
($000,s)

	June 1989	June 1990	December 1990	% Change 1988-1990
Commercial Accounts Receivable	$7,783	$ 8,573	$ 9,499	22.0%
Patient Pay Accounts Receivable	1,221	1,827	2,212	81.0
Total Accounts Receivable	$9,004	$10,400	$11,711	30.1%

External Environment

Today, according to Larkin, changes in the health care environment are challenging a hospital's financial viability. (Larkin, 1989) These changes, from the federal perspective, include implementation of the prospective payment system and the loss of periodic interim payments for many hospitals. Furthermore, hospitals will be affected by the implementation of planned changes in outpatient reimbursement. Changes from the third party payor perspective are causing significant problems in hospital accounts receivable. For example, precertifications, higher deductibles, and more audits are causing receivables to rise. From the patient perspective, there are increasing numbers of patients experiencing difficulties with meeting these higher deductibles. Patients are seeking to spread these deductibles over many months, through installment payments.

Hospitals today, according to Larkin, face ever increasing pressures from many sources. These include: bad debts, charity care, delays in collections, decreases in cash flow, and increases in the investment of working capital required to support inflated accounts receivable levels. (Larkin, 1989)

PROBLEM ANALYSIS

Operating the Patient Accounts Department More Like a Business

According to Ewbanks, self-pay patients are among the fastest growing sources of hospital revenue. They are also one of the more risky sources, financial experts say. Increased dependence on self pay revenue is prompting many hospitals to take a closer look at patients' ability to pay before granting credit. According to Michael Staten, Associate Director of the Credit Research Center at Purdue University, "that might mean pulling a credit report on a patient." (Ewbanks, 1989) This is one aspect of running more like a business that hospital boards must face. Most businesses verify credit worthiness of new customers as part of establishing the business relationship before the first sale is made. Hospitals are rarely given that opportunity. Hospitals treat patients on an as-needed basis. Hospital bills are often unexpected and unplanned. Long acute illnesses can threaten the financial security of an under insured or uninsured patient. Weigh the fiscally unprepared debtor with the expectation that the bill must be paid in a timely manner and the underlying potential conflict that makes the job of the health care collector very difficult is evident.

Many consumers have not separated the religious sponsored hospital from that of the church, according to Bruce Nelson of the Milwaukee based consultants Zimmerman & Associates. Mr. Nelson states "pass the plate and pay if you want to is the attitude of many consumers." (Nelson and Zimmerman, 1989) To counter this perception, hospitals must utilize their psychological edge in obtaining payment commitments before service is rendered or at the time of pre-admission. Education of patients, to help them pay the bill before service is rendered, is one goal that the

patient financial services department needs to achieve. However, because many health care services are rendered on an emergency basis, the patient/consumer quickly becomes the debtor. Many patients expect the hospital to absorb their small piece. Hospitals have not been aggressive collectors in the past and now are having a tougher time convincing the consumer that their health care expenses must be paid along with the telephone and electric bills. Often it is the health care bill that goes to the bottom of the bill pile. With the advent of managed care, DRG's and competition, hospitals have to rethink their business philosophy. Investing in technology and human resource development training will make the hospitals able to run more like a business.

Present System Limitations

Patients with insurance, for whom the hospital has obtained assignment for payment of benefits, generally will be billed for the self-pay portion after the insurance has paid the hospital. With the present mainframe system, no automated letters are generated on this growing portion of the accounts receivable. Therefore, more clerical effort is required to get an account paid and the credit and collection department becomes less efficient. St. Mary's mainframe SMS Financial Management System has inherent roadblocks to efficient processing. The inpatient portion of the processing - called the accounts receivable file - was developed in the 1970's by SMS. Little software modification has been made to the processing of these accounts. Severe operational limitations have not been addressed by this vendor. The Emergency Room and Outpatient processing portion of the SMS System has been modified,

but inherent processing deficiencies remain. The limitations of the present Shared Medical Systems (SMS) billing system are as follows:

1. Inpatient accounts, after the insurance company pays, have to be manually revised to "move the money" from insurance to self pay. Statement mailers are only generated when a patient self pay portion is indicated.

2. System generated statement mailers are inefficient in a number of ways and do not motivate the patient to pay as well as collection notices do.

3. Timeliness of the statement mailers is unacceptable. The SMS data mailers used presently by St. Mary's Hospital are produced only on a weekly basis for discharged inpatients. This delay can cause the collection of the patient portion to be significantly delayed for a minimum of 12 days after the insurance company has paid. Table 4 illustrates the delay that can be caused by this system limitation.

4. Credit notes can't be entered on an account by departmental personnel until the patient is discharged. This means that all pre-admission and pre-discharge interviews conducted with a patient have to be manually written on face sheets and kept with the patient file. The system does not permit data entry until the patient bill is printed. This occurs approximately five days after the patient has gone home. The manual review and revising of the money between the insurance and the patient portion must be hand written on a coding sheet and sent to data entry.

5. There are no edits built into the data entry screens to determine whether the correct insurance plans for that patient had been entered. Because SMS is a batch processing system, the account updates

at day end processing. The following day, any rejection errors must be manually reentered. The example of patient John Davis listed in Table 4 can be fairly common and does not take into account potential delays in mailing or delays due to clerical absenteeism. The name of the game in accounts receivable is speed and accuracy. Given the fact that the patient has 14 days to pay, a total of 26 days pass before the patient portion of the account can be satisfied. The insurance company probably had the claim a minimum of 21 days before the hospital received their payment. After reviewing this typical scenario for Mr. Davis, it becomes apparent that the payment cycle must be shortened wherever possible. It is safe to say that most businesses that carry an account for this period of time would have a great investment in accounts receivable on their balance sheet. The manager's role is to turn accounts receivable into cash as quickly as possible. The above example shows that automated systems are necessary to get the account paid sooner. By increasing cash and reducing the investment in accounts receivable, the hospital will have funds available for payment of debt or financing additional medical equipment.

Whiteside states that during the post 1970 time period, high interest rates along with the beginning of the art of corporate cash management began to impress top financial managers that the director of the credit function is actually an administrator of a very large investment and deserved more recognition and support. (Whiteside, 1987) The role of the modern on-line accounts receivable systems as "profit generators" apparently is not widely recognized. One major benefit of using a receivables system designed to aid and support credit and collection staff, is to help them reduce the investment in receivables. When a

Table 4

Average Length of Time to Get a Bill Paid
with the Present SMS System

Patient: John Davis

Day 1.	Friday	Cash received from insurance company $400.00 indicating 20% co-payment from patient who now owes remaining $100.00.
Day 2.	Saturday	No processing done on this account.
Day 3.	Sunday	No processing done on this account.
Day 4.	Monday	Department personnel review the cash posting and code a revision statement to allow computer to bill the patient.
Day 5.	Tuesday	Patient portion is now identified on the account as $100.00.
Day 6-8.	Wednesday-Friday	No processing occurs as automated statements are processed only on a weekly basis.
Day 9.	Saturday	Statements are produced showing balance due from John Davis for $100.00
Day 10.	Sunday	No activity.
Day 11.	Monday	Statements produced the previous Saturday are mailed to the patient.
Day 12.	Tuesday	Patient receives statement for $100.00.

credit department is given the tools it needs for controlling credit exposures and collect ng past due accounts, it has the potential to reduce the investment in receivables by 5-10%. Whiteside states three observations about automated credit systems. They are:

1. A typical credit department all to often has been forced to work inefficiently with manual procedures. Automation produces more efficiency with the same staff.

2. The professionals in the credit department are eager and dedicated to doing their job right. Automation helps achieve that.
3. If they are finally given the right working tools, available from today's preprogrammed receivables management system, you will be amazed at the profit-making results. (Whiteside, 1987)

Mr. Whiteside has 22 years experience in the accounts receivable corporate arena. For-profit businesses have been utilizing automation for a much longer period of time than hospitals. Hospitals, as mentioned previously, have only recently needed to be concerned with profitability. Hospitals were on "easy street" in terms of accountability because rates could be raised whenever costs went up. Prior to the factors of competition and fixed reimbursement mechanisms, hospitals paid little attention to management of the largest current asset on the balance sheet.

Role of the Patient Accounts Manager

The patient accounts manager has the most important role in coordinating the activities of the department. According to Herkimer, the patient accounts manager has the key accountability to mobilize and manipulate its human and material resources effectively, so that the department reaches its established goals and objectives. (Herkimer, 1983) The patient account manager must create an environment that enhances working conditions and improves productivity. The primary goal is to maintain the working capital required to finance the hospital's accounts receivable at a realistic minimum. The effective management of patient accounts receivable is the single most important factor in the financial success of the hospital. Six objectives have been identified by Herkimer as essential in carrying out the department's mission:

1. To elevate and improve the status, quality, and quantity of business services to the hospital patients

2. To be cost effective, without sacrificing quality

3. To assist and counsel patients in managing and meeting their financial obligations to the hospital

4. To minimize the hospital's losses due to bad debts and uncollectible accounts

5. To work with the other hospital departments and the medical staff in order to create an effective two way communication system which will enhance and expedite reimbursement to the hospital.

6. To accomplish these objectives in an environment that is efficient and pleasant for patients, medical staff, and hospital employees.

Seider & Cleverly state that industry experience suggests that patient receivables constitute the most critical area of importance in cash management. In general, accounts receivable usually represents 60 to 70% of a hospitals investment in current assets. (Seider and Cleverly, 1990)

AUTOMATING THE PROCESS OF RECEIVABLES

Within the arena of custom software, applications that directly affect the patient accounts department include application software that automates the collection and insurance follow up process. Because of the ability to determine which patient accounts get first priority, productivity is increased. An automated system doubles the number of accounts that a collector can service. In Hospitals Magazine, Larkin reported on one example in which the system increased productivity by pre-screening accounts. According to Ken Scott, Corporate Receivables Manager for Harris Methodist Health System, Harris designed its own automated receivables follow up system to replace the manual system it was using. "My collectors won't even see an account that is doing what it is supposted to be doing" Scott states. (Larkin, 1989)

With an automated system the accounts are preprogrammed to appear according to specified criteria. By programming the accounts for presentation to the staff, the account representative does not need to spend time prioritizing which account needs attention next. Automated systems allow management personnel to assign work and monitor progress on an individual basis. Through profile decisions, this process can be customized to meet the staffing demands of each individual work situation. Priorities can also be changed to meet the demands of management.

The following intervals usually exist in the hospital accounts receivable collection cycle: admission to discharge, discharge to bill completion, bill completion to receipt by payor, receipt by payor to mailing of payment, mailing of payment to receipt by hospital, and receipt by hospital to deposit in bank. In order to speed up the cycle

that is mentioned above, the patient accounts manager must look toward automation whenever possible. Choosing a system that combines the functionality with the existing human resources available is most important. Choosing a system, according to Athey & Zmud, requires looking at the five stages of a systems life cycle. The five stages of the systems life cycle are: systems analysis, systems design, systems acquisition's systems implementation, and systems maintenance.

The purpose of systems analysis is to analyze a business activity, to assess the feasibility of a proposed information system, and to determine how it should function. Systems design is the selection of various hardware and software components, as well as development of operating procedures needed to link these components to meet the users' needs. During the systems acquisition phase, hardware and software are purchased. Systems implementation requires testing, training and developing a conversion strategy. Systems maintenance is the ongoing efforts taken to ensure that the system continues to meet the needs of the business over a period of time. Figure 1 taken from Athey and Zmud, shows the percentage relationships that the five stages of a system are comprised of. (Athey and Zmud, 1988)

Cost-Benefit Analysis of an Automated System

Justifying the purchase, according to Farrar, can be a difficult task. (Farrar, 1988) With system costs between $200,000-$300,000 management must understand the benefits of such a system before approving its purchase. Most vendors provide a self-help worksheet that walks the receivable manager through such a process. An example of Dexel Corporation's cost benefit worksheet is listed as Appendix D.

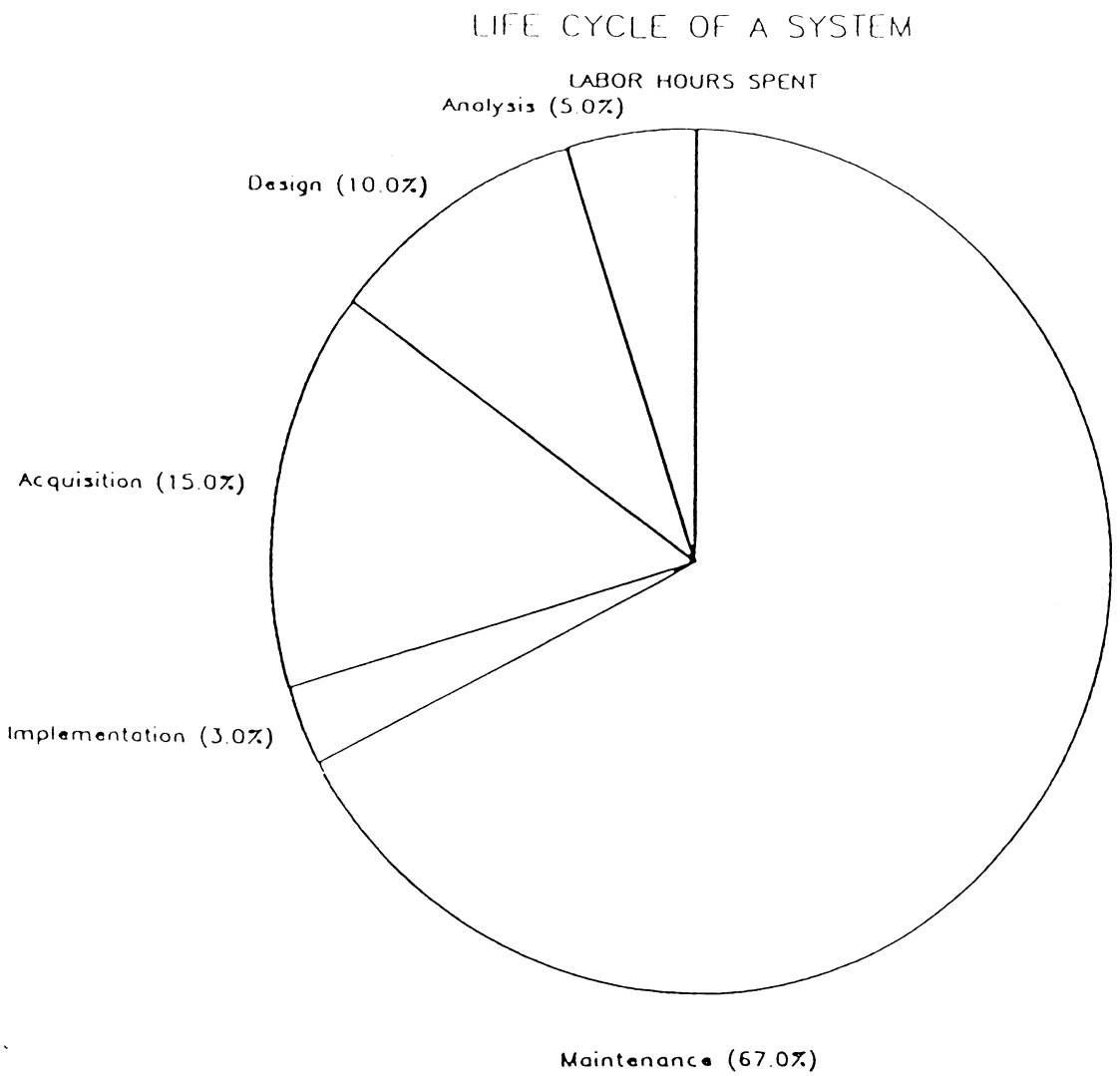

Figure 1

Five Stages of System

Life Cycle

FROM Introduction to Computers and Information Systems

by T. Athey and R. Zmud, p 300.

Scott, Foresmand and Company, 1988.

According to Farrar, productivity improvement is the key. (Farrar, 1988) Significant cost savings maybe realized by purchasing an already developed system as opposed to developing one in-house. Hospitals must determine whether it is more cost effective to develop an in-house system or purchase one that already exists in the marketplace.

In order to determine whether it is cost justified to purchase an already developed system versus designing a system with in-house expertise a number of factors must be considered.

1. Information systems staff expertise currently available.
2. The skill mix level of the existing staff.
3. The corporate philosophy of designing an in-house system.
4. Financial resources available to the proposed project.
5. Time-frame required to install the project.

St. Mary's Hospital's Information System Department consists of systems support analysts and two managers. The systems support analysis are not trained programmers. Their main focus is to problem solve and fine tune existing application software for the various clinical and financial applications. Budget constraints imposed by the Daughters of Charity preclude the hospital from investing heavily in application programmers. The Shared Medical System programs are purchased as is by the Daughters of Charity Hospitals. Any modifications are handled through a formal request for custom programming submitted to the vendor. At St. Mary's, as well as the other Daughters of Charity Hospitals, there is a heavy emphasis on the purchase of fully integrated and ready to use applications. The many applications used must interact with each other. If the systems were designed internally, this would require more resources than are presently available. It is important to note that the

health care reimbursement, clinical, financial and operational needs are very complex. Programmers and information systems staff would have to have a thorough working knowledge of the entire health care delivery process and knowledge of features unique to St. Mary's.

The present information systems staff currently has a two year backlog for installing already approved systems in the Materials Management and Surgery Departments. It would be extremely difficult to ask for additional and costly technical staff in the present fiscal environment. The Patient Accounts Department, with the approval of the chief financial officer, has determined that it is in the best interest of the hospital to install a packaged collection system that already has proven itself in other hospitals.

Farrar cites nine reasons listed most often by clients as to why they installed an automated collection system. They are:

1. Real time capability to process and analyze customer accounts
2. Ability to reduce costly errors
3. Greater managerial control of receivables - reporting and analysis
4. Ability to reduce clerical intensive tasks
5. Greater management control of policies
6. Decreased bad debt write-offs
7. Decreased days of revenue outstanding
8. Ability to make credit management more pro-active, as opposed to reactive, which increases profitability of credit sales. Hospitals typically have to prepare a bill so that virtually all transactions are credit sales.
9. Ability to anticipate future systems growth. (Farrar, 1988)

According to Farrar, in-house systems can cost three to five times more than pre-written software because of development and support costs. The vendor of a pre-written system has already made the large scale investment in research and development. The vendor seeks to recover those costs by spreading them out over the number of applications sold. According to the article by Farrar, Ken Zigmund of Eaton Corporation

found that packaged software could indeed be modified to the specific complex needs at Eaton. Zigmund states that it has "given me the ability to manage a very large and expanding portfolio of receivables with no increase in corporate credit staff. In fact, we have reduced our dependency on temporary help during our peak volume from two weeks per month to one week per month." (Farrar, 1988) Eaton also notes an increase in the staff's productivity. For example, the customer inquiry service staff can get on-line information about the customer account. As noted previously, the SMS System does not allow credit notes until an inpatient account is discharged and a final bill prepared.

In Farrar's article, Zigmund also notes another advantage of purchasing a packaged system:

> One of the big drawbacks of a system developed in-house, is the fact that you are developing it in your own little world. You cannot get the benefit of the universe, what is available and the different ways of doing things. You must rely on your concept, which will fit based on what requirements you have established. Yet, three years later, once the system is installed, you find that the world has changed and you are three years behind. Packages eliminate that lag because vendors are continually updating their systems as the world changes. (Farrar, 1988)

At Textron, James O'Reilly, Credit Manager states, "that every time your doing something, you have to take a look at it and ask, is there a way I can make this easier? Automate everything that is done manually. You might think that you are all done, but you can keep turning around and finding something else to automate." (Farrar, 1988) As Tom Peters states in this book Thriving on Chaos "try, try, try, ... fail, fail, fail, but if you do not try new things you will be left technologically inferior to the competition." (Peters, 1987)

Any major purchase at St. Mary's Hospital over $50,000 must go through the major expenditure review process. This process is both a

justification explaining the operational impacts upon the hospital as well as the economic justification for the outlay of funds. Table 5 is a quantitative analysis of the factors that affect the software purchase decision. The stated purpose of an automated collection system is to systematically work higher account balances and collect accounts sooner. The patients and the commercial insurance companies will be notified of their liability sooner and with increased frequency, thus increasing cash flow. The likelihood of collecting an account declines over time. It is extremely important that the life cycle of self pay accounts be shortened.

The calculated payback of an automated collection system, utilizing the data given in Table 5, is .56 of a year. This more than meets the criteria established by the hospital's finance committee of three years or less. The calculated savings for the reduction in the commercial insurance category are achieveable and all estimates are realistic. An outlay of $250,000 would cost the hospital $18,750 in lost interest income in one year, but this is more than offset by the overall achieved savings. It can also be noted that productivity improvements may also be achieved, which would further justify the purchase of an automated system. These productivity improvements were not considered as part of the assumptions in Table 5.

Table 5

Cost - Benefit Analysis of Purchasing an Automated Collection Software Package

Section I. Reduction of bad debt write-off's by presenting accounts to collectors earlier in the process.

1. Total Patient Receivables	$11,711,000
2. Annual Patient Pay Revenue	35,000,000
3. Annual Bad Debt Expense	2,000,000
4. Bad Debt Ratio (3)/(2)	5.7%
5. Estimated Reduction in Bad Debt (Industry Average)	1.5%
Section I. Realized Savings (5) times (3) (.015* 2,000,000)	$ 30,000

Section II. Improved cash flow by working more accounts earlier in the collection process.

An improvement in days revenue outstanding for commercial insurance of three days:

Commercial Accounts Receivable	$ 6,500,000
Average Daily Revenue for Commercial Payors	127,500
Days Outstanding for Commercial Accounts	51.0
Improvement of Three Days	$ 382,500

Section III. Interest earned on Section I and Section II realized savings.	$ 412,500
Average interest rate 7.5%	0.075
Section III savings	$ 30,938
Total Savings	$ 443,438
Average Cost of an Automated System	$ 250,000
Payback Period	0.56

EVALUATION

Several vendors offer on-site or local demonstrations of their particular product. The Dexel Cash Flow Manager software is regularly demonstrated at the IBM Office in downtown Milwaukee several times per year. St. Mary's Hospital receivables management personnel were also given an opportunity to view the SMS Collector Workstation product on site at St. Mary's. SMS is a national leader in healthcare information systems and had recently entered the marketplace with their product. Because St. Mary's currently uses SMS Independence software, there was no cost to hospital staff to have SMS demonstrate their product and obtain a price quote. Having the vendor on site enables various staff members to ask questions. The staff will be the final end user on any system chosen and need to buy into the product from the very beginning.

Through all of the above mentioned opportunities to learn about the various automated collection and follow up systems on the market today, three primary vendors were chosen for analysis. The factors considered in choosing the top three vendor candidates were: (a) system functionality, (b) ability to interface with present SMS patient accounting mainframe system, (c) cost, (d) industry wide acceptance, and (e) vendor support network. Three vendors were chosen for examination and scrutiny: Dexel's Cash Flow Manager, SMS' Collector Workstation, and Productive Data Management's Accounts Receivable Tracking System (ARTS).

Dexel Cash Flow Manager

The Dexel Cash Flow Manager software package was brought to the attention of hospital management in several ways. The product was featured in the

professional journal Health Care Financial Management. Dexel held several open houses and product demonstrations at the IBM training center in Milwaukee. St. Vincent's Hospital, a sister hospital in Birmingham, Alabama, signed a contract with Dexel and circulated system features to other members of the Daughters of Charity. The wide availability of data concerning the Dexel Cash Flow Manager greatly assisted department management in educating senior management of the technology that existed in the marketplace. Dexel is a business partner of International Business Machines (IBM). As explained by Dexel marketing literature, this relationship features system support and favorable discounts to those IBM based clients. IBM selects only the best vendors in the various software specialties and assists them in marketing. These software packages are completely compatible with IBM hardware and can give the client "one stop shopping" for their particular industry or application.

System Features. The Dexel Cash Flow Manager is considered to be the oldest and largest software application for automated accounts receivable systems for hospitals. Dexel was able to establish a niche by focusing on the system weaknesses of the large mainframe based vendors, such as SMS. As the number of open and delinquent patient accounts in hospitals continued to grow, Dexel recognized an opportunity to specialize in software that would increase the number of open accounts that an accounts receivable department could process in a working day. The system functions by presenting accounts to a collector via a computer terminal. Through profiles, the client can prioritize exactly which accounts get worked first.

Traditional mainframe based systems, such as the hospital's present SMS system, rely heavily on patient data mailer statements. Appendix E gives an example of a completed data mailer. Collection experts rate data mailers behind the telephone call and the collection letter as effective collection tools. SMS offers collection letters, however a separate update must be installed to utilize them. Dexel offers automatic as well as semi-custom letters to be generated on demand by collection personnel. Presently, collection personnel at St. Mary's rely on a clerk to key in letters by utilizing a word processing package. Although better than data mailers, these collection letters have to be created by entering up to a dozen data elements to complete the letter. With Dexel, all the components are in the data base and all the collector has to do is select the letter that needs to be sent by utilizing function keys. The letter is automatically printed on a letter quality printer. There is no need for a secretary or a clerk to type the letter. Dexel automates the number of accounts that a collector can review and process during a day. The key to automation is to increase the number of accounts that can be reviewed and decrease the time it takes to get an account paid.

Specific features of the Dexel Cash Flow Manager Product are:

1. The Dexel Cash Flow Management System permits the patient accounting office to issue a series of user defined notices prior to direct personal contact by patient representatives.

2. Updated information obtained by patient representatives, i.e., new address or telephone number, automatically transfers back to the mainframe data base.

3. Promises to pay by patients are not forgotten. Through the use of an electronic tickler file, any broken promise is immediately called to the attention of a collection representative for immediate follow up.

4. With the exception of the letters generated, the entire system is paperless. All data is presented to the collector on-line within the individual patient record.

5. Accounts that need immediate follow up with commercial insurance companies are automatically presented to an accounts receivable representative.

6. Payment terms are automatically assigned for those patients that cannot pay their balance in full. The patient representative must be flexible because health care expenditures often come as a surprise to the patient. With insurance companies as well as government programs paying less than the full cost, the hospital has to be reasonable in motivating the patient to pay. Good public relations must be weighted against the desire to get the account paid in a timely manner.

7. Companionated accounts inquiry allows the hospital to combine several different patient account numbers into one main account in an automatic manner. A hospital is required to bill separately for each diagnosis. As a result, the SMS patient accounting system assigns separate patient numbers each time a patient receives a service. Without companionation, the collection representative would have to search the files to look for similar open accounts for the same patient. Dexel links these accounts based on several key demographic matches, such as, patient's date of birth or social security number. Through companionation, all accounts are placed under a "base" account so only one patient representative is required to recover the outstanding balance.

Smaller balances can be combined to determine where it may be cost effective to proceed with collection efforts.

8. The Dexel System provides management with a very useful set of productivity tools. Goals may be set for each collection representative based on the number of telephone calls, contacts, promises to pay, amounts of promise activity, and cash collections. The system produces graphic presentations on-line for management to coach individual performance.

9. Complete control of specific accounts is afforded to management for assignment to each patient account representative. Accounts presented to each representative may be determined by payor code, telephone numbers, account balance, and broken promises. The set up of account assignment can be manipulated to handle shifts in staffing due to illness, vacation or staff vacancies.

System Costs. Appendix D references the Cash Flow Manager materials obtained from Dexel. The Cash Flow Manager processing flow chart gives a good overview of the information flow of the software. The Dexel Cash Flow Manager utilizes exception processing to present to collectors only those accounts that meet the predetermined criteria. A detailed description of the various data elements is presented in Appendix D. It is these master files in conjunction with profiles that determine the processing cycle. The manager of the credit and collection department sets up the work que by programming the specific Cash Flow Manager profiles. In this way as work loads and priorities change the manager has the ability to assign the presentation of the accounts to where the need is the greatest.

The Dexel product includes all the necessary software and hardware to functionally operate the system. The Cash Flow Manager product runs on an IBM AS-400 Series mini-computer and can utilize the hospitals present CRT's. The proposal submitted by Dexel allowed for 200 programming hours to interface from the present SMS financial accounts receivable system to the Cash Flow Manager. This interface would be similar to the one that Dexel had to link to which the other Daughters of Charity Hospitals already on board. The software maintenance required would be a separate ongoing cost of the system. St. Mary's Hospital already was in the market for an AS-400 system so the Information Systems Department just needed to size the storage requirements to fit the needs of Patients Accounts. The formal proposal from Dexel including all necessary hardware, software, and interfaces was quoted at $325,000.00 with a negotiated Daughters of Charity discount.

Shared Medical Systems' Collector Workstation Software

Shared Medical Systems (SMS) is presently the supplier of the hospital's mainframe clinical and financial reporting system. SMS provides the Patient Accounts Department of St. Mary's Hospital with a packaged billing and accounts receivable system. In Spring of 1990, SMS announced its entry into the automated collection arena by announcing a new package called Collector Workstation as part of patient accounts release 21.0. Release 21.0 symbolized SMS' 21 years as the oldest and largest provider of mainframe data systems to hospitals. St. Mary's Hospital, along with its sponsoring religious organization the Daughters of Charity, had signed a contract with SMS in 1977. SMS regards the Daughters of Charity as its largest single customer according to Hospital

Information Systems management. As such, the relationship of the Daughters of Charity and SMS is considered to be a working business partnership. In the recent past SMS has fallen substantially behind in presenting new products to the marketplace. Major changes in Federal reimbursement from cost based to a diagnostic related group (DRG) based billing system had consumed a large majority of its system programming research and development resources. Niche vendors with interfaces to SMS' mainframe processing system were able to beat SMS to the marketplace in areas such as pharmacy processing, inventory processing and receivables automation. Many of these niche vendors offered products that were on-line systems utilizing inexpensive microcomputers or smaller IBM 36 systems. During this period SMS steadfastly stood with its batch-oriented processing system. Computer literate users were requiring SMS to adapt to what other software vendors were offering. When SMS' products were finally placed in the marketplace, specifically the inventory processing and pharmacy applications, departmental management deemed them inadequate and hastily put together. There is the inherent thought of information systems personnel that if all data can be processed adequately with one vendor while meeting the vast majority of the end user's requirements that the primary vendor should get the contract.

A major concern of the Information Systems Department is the reluctance to have to support a multitude of systems, each having unique interfacing and operational issues. The Patient Accounts Department perspective would be to utilize the technology that best supported the operations of that specific department's needs.

Because of SMS' long relationship with St. Mary's and the Daughters of Charity, it was decided to take a serious look at the Collector Workstation product. However, recent products of SMS have made management skeptical due to the lack of creativity and innovation.

System Features: SMS was asked to set up an in-house demonstration at the hospital. Members of the hospital Patient Accounts Department management as well as staff collectors were present. The SMS presentation was the second demonstration the staff had been invited to. A healthy comparison between Dexel and SMS was inevitable. By having the same personnel attend both presentations the ability existed to evaluate the merits of each system. SMS' handouts are attached as Appendix F at the end of this report.

The SMS Collector Workstation product provided the following system features:

1. An on-line accounts processing cash posting system that interfaced to the main batch system at a designated day end processing time.

2. The ability to interface by establishing payor profiles maintained by hospital personnel.

3. The ability to present accounts to collectors based on specific predesigned criteria.

4. Pricing of hardware and software requirements substantially less than the Dexel product.

Some of the immediate concerns of the staff were addressed during the question and answer session following the presentation. During this phase of the presentation both management and system analysts were present. They were able to sense first hand the reaction that users had

to the Collector Workstation product. Two key points were brought up immediately in terms of perceived shortfalls of the system. They were:

1. No ability existed to create transactions which would update the mainframe demographic records directly from the Collector Workstation product. This was felt to be a major system limitation as compared to Dexel. SMS personnel tried to explain that the transactions could still be processed in the traditional batch mode but the users felt that signing off of Collector Workstation and having to re-sign on to the mainframe was extremely inefficient and time consuming. This gave the group the impression that this product was developed hastily with no regard for the end user's requirements.

2. No client base had been established to which St. Mary's could make a site visit. This gave the users an impression that the software was too new to be seriously considered at this time. The hospital could not afford to gamble with an unproven product. The Daughters of Charity were not going to mandate any hospital to chose one particular system over another based on any previous contract relationship with SMS.

System Costs. Appendix F gives a functional overview of the SMS Collector Workstation Product. The system features are detailed. Collector Workstation is a product released in patient account release 21.0. What this means to St. Mary's Hospital is that the release must be purchased separately before all the benefits of Collector Workstation can be realized. System profile decisions enable the user to define the collector work priority. Because St. Mary's currently utilizes the SMS Patient Accounting Software, Appendix F also goes into some depth as to the steps the hospital would have to take to install the product.

The interfacing of the SMS Collector Workstation product would not need to be addressed as SMS had fully integrated its operating system to functionally link both systems. The Collector Workstation product was sold as part of a patient accounts packages called INVISION. With INVISION the hospital received certain profile operated tables which included the specific programming of Collector Workstation. The hospital would be able to begin implementation with its present hardware configuration. As mentioned previously, SMS had no existing clients on board with Collector Workstation. The costs quoted by SMS to implement the system fully was $125,000.00. This included the license, the operating software as well as the first years software maintenance.

Productive Data Management's Accounts Receivable Tracking System

System Features. A new product introduced to St. Mary's patient account management was from a firm called Productive Data Management From Los Angeles, California. The product is Called "ARTS" for Accounts Receivable Tracking System. The Productive Data Management Accounts Receivable Tracking System is designed to work as an integral part of a total hospital patient accounting system. ARTS begins to track a patient account at the time of admission to ensure that the correct data is being obtained, in order to met the billing requirements dictated by the third party payors. The product represents four distinct modules that work in unison to give added functionality to a patient accounting department. Features of Productive Data Management's Accounts Receivable Tracking System are:

1. At admission - ARTS reduces the risk of non-covered days and unapproved patient stays with on-line contract terms and conditions.

Separate and complete guarantor data for all accounts reduces the risk of potential bad debts. This module allows the hospital to codify specific terms of contracts that are unique to a specific admission. As rules and admission requirements become more complex, a computer system is required to alert the Patient Accounts Department. This is necessary in an environment where more than 5-10 HMO contracts have to be managed.

2. Pre-discharge - ARTS allows on-line work listing of all required clinical and financial information for timely follow-up. Daily exception reports are produced for management to monitor a patient's progress. All credit notes and insurance authorizations can be documented and provided to the appropriate third party at time of billing. In a managed care environment, authorizations for treatment often need daily updating. The HMO typically has specific guidelines based on diagnosis. For example, a maternity stay may be approved for two days stay. If no additional authorization is obtained and the patient is clinically required to stay an extra day, the hospital is at risk for that extra day. The terms of the contract may even preclude the hospital from billing the patient for any denied stay. In a competitive environment in which there are numerous contacts with different terms and conditions, the hospital is mandated to follow the rules or assume the financial losses. The ARTS system attempts to codify these requirements and alerts the users when specific payor rules need to be followed. Specific profiles of the HMO requirements would need to be built and keep updated.

3. Claims submission - on-line work listing of missing data required for billing helps to eliminate billing backlogs. Costly rebilling and denials can be avoided. An analysis of problem areas will

allow management to identify specific individuals for additional training. This feature is tailored to an environment where multiple HMO contracts exist.

4. Collection - on-line assignment of all accounts, claims and guarantors, with customized tracer, letter and statement generation, equip the follow-up staff with all the tools necessary to implement the hospital collection procedures. Productivity reports by collector also enhance management activities.

The ARTS system is designed to co-reside with St. Mary's present IBM based SMS System. The ARTS System has all the features that the SMS System and the Dexel System have in terms of the ability to generate collection letters. Appendix G includes the functional overview of this software product.

System Cost. The price quoted over the telephone by Cherie Payne the Marketing Manager for Productive Data Management would be over $375,000.00 not including specific hardware requirements. The firm does not generally offer on site demonstrations. According to Ms. Payne typically "the client comes to a demonstration site here in California." During the telephone interview it was determined that the majority of their clients were located in California. The typical Productive Data Management client was a major university hospital with over 500 beds and over 25 HMO contracts. St. Mary's Hospital has only three major contracts that account for the majority of HMO activity.

Appendix G is a functional overview of the Art's System. Art's is based on various modules which interact with each other to operate the entire system. A detailed listing of the systems functions is listed in Appendix G.

SOFTWARE DECISION

The need to automate the receivables follow-up area was analyzed. The trend that more of the cost of health care is being shifted from the insurance companies to the patient results in more collection activity having to be undertaken by St. Mary's Hospital. An analysis of the hospital's present Shared Medical System (SMS) mainframe based receivables system showed a lack of flexibility to adapt to this new environment. Hospital management was at a crossroads in terms of planning for the future cash flow needs of the organization. Cost reduction pressures were being pitted against rising work volumes. With more accounts to collect and national signs of a recession, management needed to seek out the necessary tools to increase cash collections and to collect those patient accounts in a more cost effective way.

Management surveyed the environment and analyzed past payor trends in an attempt to quantify the problem. Present system limitations required that something be done. Through trade associations, peer networks, other affiliated hospitals, vendor literature and trade journals it became known that the problem was industry wide and St. Mary's was not alone. Three vendors were chosen to submit requests for a proposal. Following prescribed hospital purchasing policies, a request for capital funds was prepared for upper management's approval. Vendors were asked to address the key operational and interface issues that differentiated them from their competition. References were obtained and a formal evaluation process was implemented. Based upon specific criteria of past performance, operational adaptability and an acceptable formal cost-benefit analysis, Dexel's Cash Flow Management System was chosen.

The SMS System despite already having the interface with the present system was considered to be untested in the marketplace. It also had some basic operational flaws which lent it to not be very flexible. The Productive Data Management Systems' Accounts Receivable Tracking System was deemed to be too sophisticated for St. Mary's at the present time. In addition to having more functionality then the hospital presently required from an accounts receivable follow-up system the ARTS product was cost prohibitive. Upper management approved the choice of Dexel and a contract to install an automated credit and collection follow-up system was initiated at St. Mary's Hospital.

The decision criteria utilized in the software selection were as follows:

1. Cost - benefit analysis as shown in Table 5.

2. External environmental factors that indicate a trend towards more patient self-pay receivables.

3. Internal management pressures to maintain or reduce operating expenses while increasing cash flow.

4. Corporate goals to reduce the investment in accounts receivable.

5. An investment in technology that will serve to increase productivity with existing staff and alleviate the present system shortcomings.

By surveying both the external and the internal environment, St. Mary's is taking a proactive approach in reducing its investment in accounts receivalbe. The network established with other Daughters of Charity Hospitals served as a valuable resource to evaluate existing alternatives to what is an industry-wide problem.

Cash flow is the life blood of any company. In today's healthcare environment, where Medicare, Medicaid and managed care contract reimbursement rates are not covering the increasing operating costs, the hospital has few alternatives to maximize the botton line. Hospitals exist to meet the present and future needs of the communities that they serve. Searching for alternatives to increase cash flow is a sound fiscal strategy that will help to achieve that goal.

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APPENDIX A
MISSION STATEMENT OF ST. MARY'S HOSPITAL

A Statement of Philosophy For

THE HEALTH CARE APOSTOLATE

EAST CENTRAL PROVINCE

DAUGHTERS OF CHARITY OF SAINT VINCENT de PAUL

PREAMBLE

The Daughters of Charity, founded in 1633 by St. Vincent de Paul and St. Louise de Marillac, have a centuries-old tradition of involvement in the healing ministry of the Catholic Church in homes, dispensaries, hospitals, on battlefields and in today's complex health centers.

The fundamental purpose of the Daughters of Charity is to honor our Lord Jesus Christ as the source and model of all charity, serving him corporally and spiritually in the person of the poor.

In keeping with the example and teaching of the founders, the Daughters of Charity extend the healing ministry of Christ wherever they serve in a spirit of humility, simplicity and charity.

The motivating force of the Daughters of Charity is expressed in their motto: "The Charity of Jesus Crucified Presses Us."

PHILOSOPHY

We believe that each person is created by God in His own image and likeness. We further believe that each person as a unity of body, mind, and spirit has been endowed with unique human dignity, rights, and responsibilities.

We believe that the dignity and rights of each person must be protected and promoted with the utmost care, from the moment of conception throughout life and death.

We believe that in caring for the whole person, the meaning of suffering may be recognized in light of the suffering and death of Christ.

We believe that healing is ultimately the work of God and that our involvement in health care is a participation in the healing ministry of Christ, a mission that we share with all those who assist us in this work.

We believe that the health care ministry provides a means of witnessing to the work of Christ as healer; the teachings of the Catholic Church concerning mercy and justice; and the founders' spirit of humble, simple, and loving service.

MISSION STATEMENT

In affirming our philosophy, we believe our purposes are:

To witness to the good news of Jesus Christ by extending His healing ministry to those we serve.

To promote Christian community among ourselves in the spirit of equality and ecumenism.

To preserve and protect the rights and dignity of each person we serve. In doing so, we abide by the teachings of the Catholic Church.

To develop and maintain dynamic organizations which strive for excellence while fostering an environment which reflects concern for the total person.

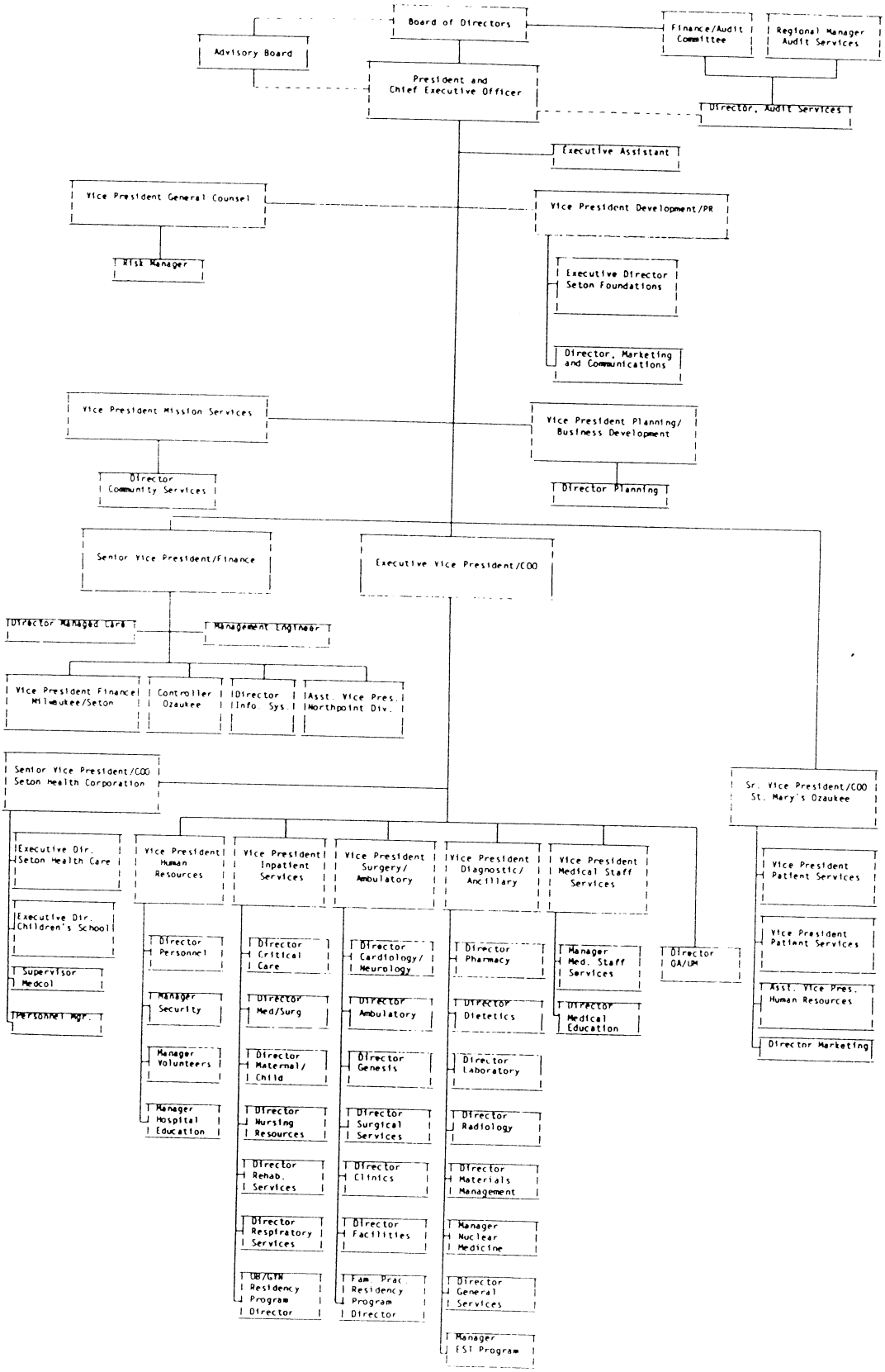
To assist individuals in achieving their highest potential through educational endeavors and other programs promoting mental, physical, and spiritual development.

To promote programs and services which support the family unit.

To implement the philosophy and mission of the Daughters of Charity East Central Province

APPENDIX B
ORGANIZATIONAL CHARTS FOR St. MARY'S HOSPITAL

ST. MARY'S HOSPITALS/SETON HEALTH CORPORATION
MANAGEMENT ORGANIZATION

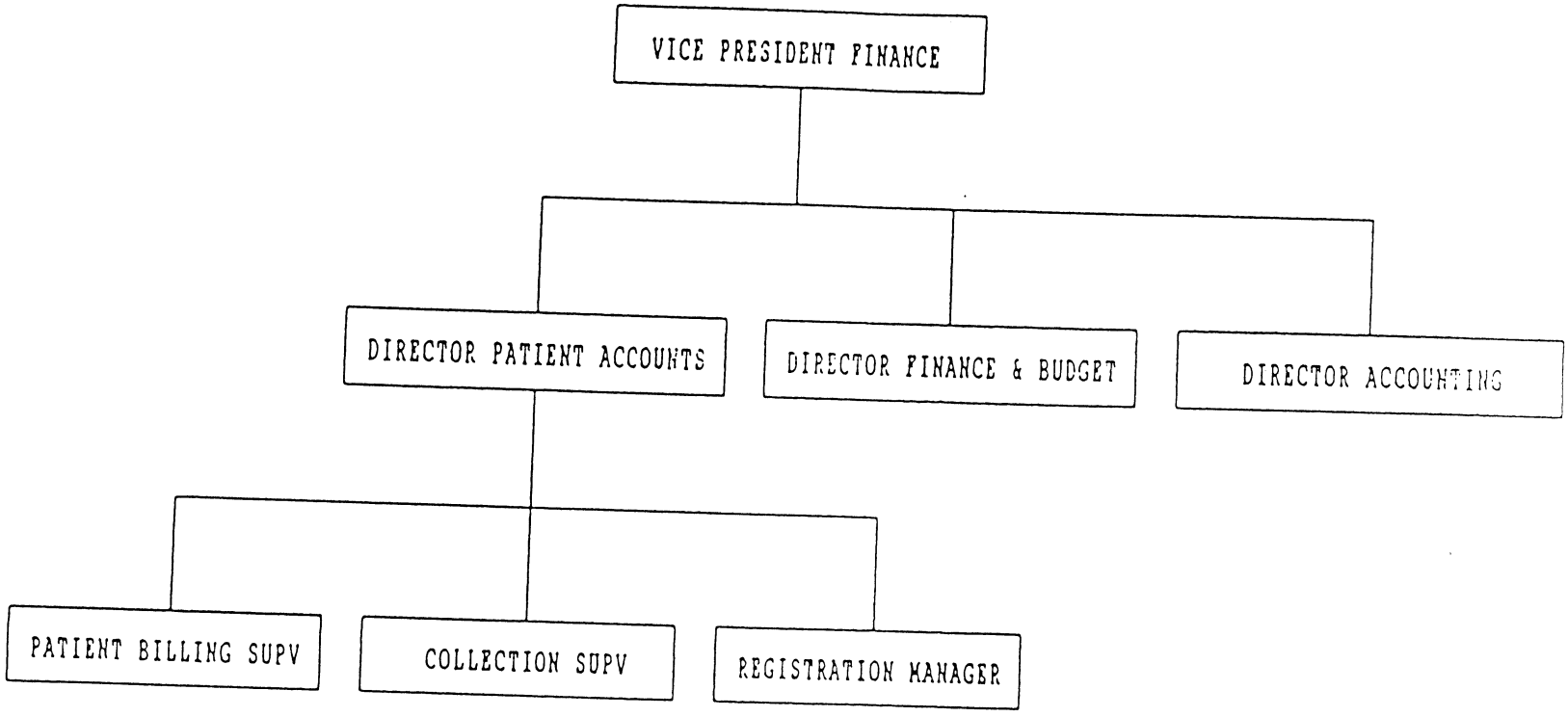


Denotes Close Working Relationship

Approved Sister Renee Rose

Approval Date April 23, 1990
Reprinted January 8, 1991

ST MARY'S HOSPITAL
ORGANIZATIONAL CHART
FINANCE DIVISION



APPENDIX C
SAMPLE UB-82 INSURANCE BILL FORM

ST. MARY'S HOSPITAL
2323 NORTH LAKE DR
MILWAUKEE WI 53211
414 225 8[illegible]

5 FED. TAX NO. / 6 HCFA PROV NO.	7 FEDERAL TAX NO.	8 MEDICARE NO.	9 MEDICAID NO.	
[illegible]	39-0806[illegible]	52-[illegible]	[illegible]	71 3[illegible]

10 PATIENT'S LAST NAME / FIRST NAME / INITIAL / 11 PATIENT'S ADDRESS / CITY / STATE / ZIP

[redacted]

[illegible] WI 53215

12 BIRTH DATE	13 SEX	14 MS	15 ADMISSION DATE	16 HR	17 TYPE	18 SRC	19 D.H.	20 STAT	22 STATEMENT COVERS PERIOD FROM	THROUGH
101616	M	[illegible]	092590	1[illegible]	3				092590	100190

OCCURRENCE CODE / DATE — OCCURRENCE SPAN FROM / THROUGH

CONDITION CODES — BLOOD RECORD (PINTS) — VALUE CODES / AMT

[redacted]

MILWAUKEE, WI 53215

126589

50 DESCRIPTION		51 REV. CODE	52 S UNITS	53 TOTAL CHARGES
PHARMACY		250	1	1760
LABORATORY OR (LAB)	80003	300	1	7200
LABORATORY OR (LAB)	80005	300	1	19300
LABORATORY OR (LAB)	80012	300	1	6400
LABORATORY OR (LAB)	81000	300	1	3200
LABORATORY OR (LAB)	81002	300	1	800
LABORATORY OR (LAB)	84060	300	1	3800
LABORATORY OR (LAB)	85025	300	1	1500
DX X-RAY	71020	320	1	5900
OR SERVICES		360	67	47900
OR SERVICES	52500	360	2	2700
ANESTHESIA		370	60	14965
CARDIOLOGY	93000	480	1	5100
EKG/ECG	93000	730	1	5900
TOTAL CHARGES		001		126425

57 PAYER	58 REL INFO	59 ASG BEN		60 DEDUCTIBLE	61 CO-INSURANCE	62 EST. RESPONSIBILITY	63 PRIOR PAYMENTS	64 EST. AMOUNT DUE
A MED-MEDICARE	Y	[illegible]	Y					

DUE FROM PATIENT

66 INSURED'S NAME	66 SEX	67 P.REL	68 CERT. SSN-HIC.-ID NO.	69 GROUP NAME	70 INSURANCE GROUP NO.
A NAVARRO JUAN	M	01	726053164A	RETIRED	

71 EO	72 ESC	73 EMPLOYER NAME	74 EMPLOYEE ID	75 EMPLOYER LOCATION
A	5	N RETIRED		

78 PRINCIPAL AND OTHER DIAGNOSES DESCRIPTIONS

HYPERPLASIA OF PROSTATE — 77 PRIN. CODE 600

82 P.C. 83 PRINCIPAL AND OTHER PROCEDURES DESCRIPTIONS

9

84 PRINCIPAL PROCEDURE CO / DATE — OTHER PROCEDURE CO / DATE

86 CO — 88 APP. FROM — 89 APP. THROUGH — 90 CRC — 91 TREATMENT AUTH — 92 ATTENDING PHYSICIAN ID — 93 OTHER PHYSICIAN ID

15030 PANCAZI

94 REMARKS

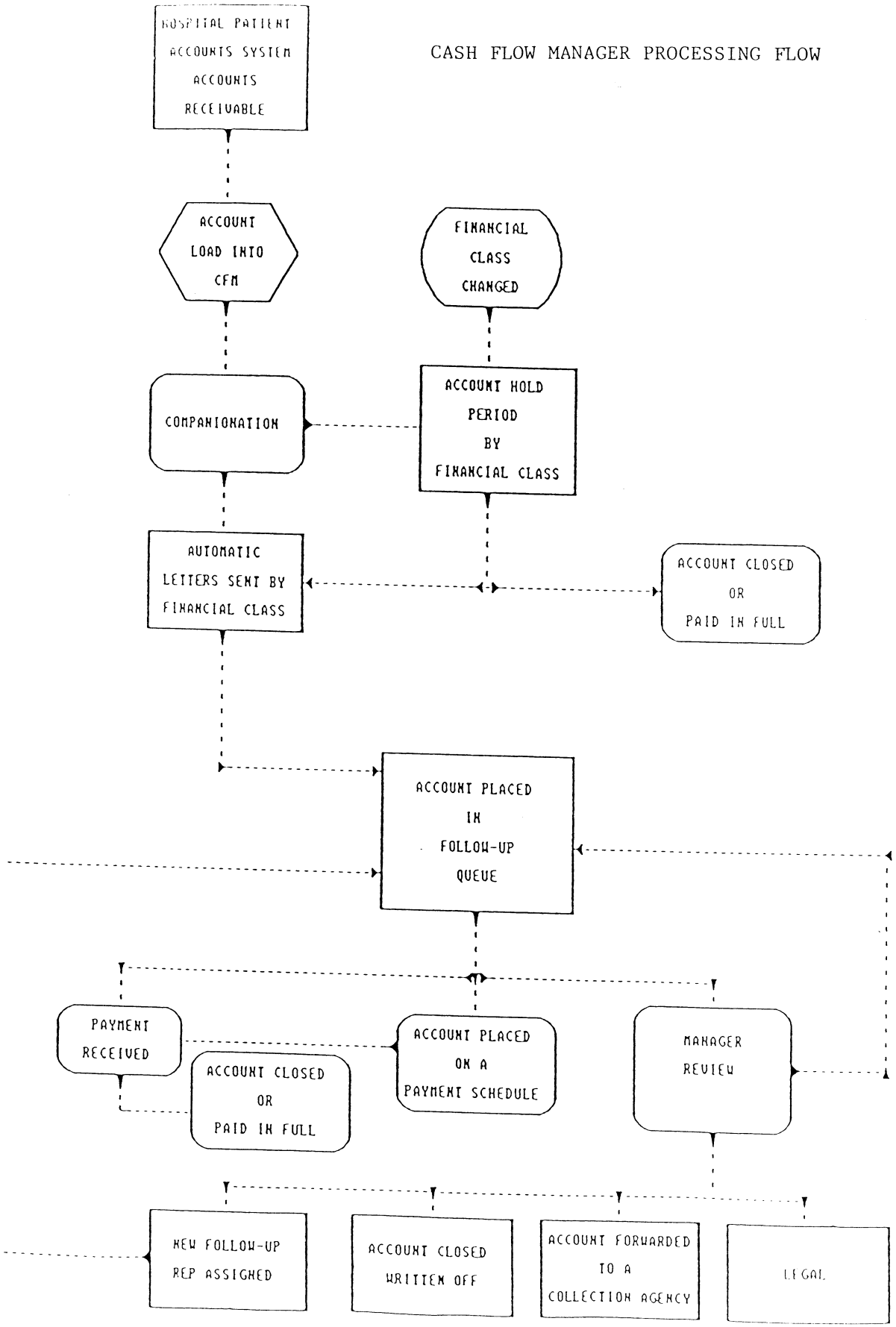
VERIFIED NC STAY DATES FROM / THROUGH — AMT REIMBURSED — APPROV BY — DATE APPRO

UB-82 HCFA-1450 PAYER COPY

PROVIDER REPRESENTATIVE X

APPENDIX D
DEXEL CORPORATION COST BENEFIT WORKSHEET AND FUNCITONAL OVERVIEW

CASH FLOW MANAGER PROCESSING FLOW



ITEM #2: DETAILED DESCRIPTION

DEXEL CASH FLOW MANAGER
EXECUTIVE SUMMARY

The Dexel Cash Flow Manager (CFM) is the only system on the market today which can provide the Chief Financial Officer, Business Office Manager or Patient Accounting Manager a completely integrated patient account base which provides self-pay, commercial, bad debt follow-up, account representative analysis, payment scheduling, and automatic acknowledgement of patient payments, totally within this hospital. The Dexel system automates all patient accounting billing follow-up functions. It is the logical enhancement to your current hospital accounts receivable system to control and maximize your recovery efforts, reduce days in receivables and bad debt, and improve cash flow.

1. PATIENT ACCOUNT ENTRY

The entry of patient accounts into the Dexel CFM system is typically accomplished by electronic transfer from your existing hospital information system, eliminating the tedious and time consuming task of manual entry. A custom-designed interface will allow entry of your patient information into the Dexel software.

Payments that should be applied may also be transferred to CFM on a daily basis to keep your recovery operation current with latest accounts receivable information. Updated information obtained by the patient representatives, i.e., new address or phone number, may likewise trasfer back to your hospital data processing system and update any appropriate information.

2. PRE-RECOVERY NOTICES

The Dexel CFM system will permit your office to issue a series of user defined notices prior to direct contact by your patient representatives. This function can be designed and used in a variety of methods which permits the greatest possible impact on your recovery effort.

Recovery without unnecessary phone calls while maintaining good public relations is possible with the control your office has available through CFM. Notices need not be mailed to valued patients (or administrators) because the notice cycle could not be controlled. Once payment is received, the notice series is halted immediately.

3. PATIENT ACCOUNT MASTER

The patient master contains all the vital information your patient representatives need to perform their recovery function. All demographic data, account numbers, account balances, promise amounts and dates, treating physician and more are all displayed simultaneously. Admission, discharge, billing and claim dates are all displayed. The patient representative simply pushes a button to view on a display screen the next account assigned by the manager. Trips to the file cabinet, fumbling through files for written information, lost sheets of paper or lost files, are no longer impediments to your recovery effort. Notations taken during or after a conversation with a patient can be recorded in the memo area in the display. Those remarks are then automatically time and date stamped with the patient representative's I.D. code. Billing summary information is displayed on an optional fourth screen. If the hospital decides to bring billing data to CFM, your patient representatives have complete account information.

4. INSURANCE INFORMATION

The greatest portion of your outstanding receivables is tied up in commercial accounts. Having this information readily available to your patient representatives will greatly reduce days revenue outstanding and improve cash flow.

The Dexel system provides for four insurance carriers, policy coverage, policy numbers, phone numbers, admission date, bill date, and a contact for the primary carrier. All memo information and payment information is displayed as well.

With CFM, your office will realize the greatest improvement in cash flow from the ability to stay on top of the insurance companies and concentrate your recovery effort in the area that's easiest to collect. The tracking capabilities allow quick resolution of problem accounts with missing information or paperwork eliminating the familiar "to do" stacks of files.

Your office may identify those carriers who do not pay in a timely manner, record outstanding aged accounts receivables by class and identify procedural bottlenecks that decrease productivity and increase the need for follow up.

5. PAYMENT SCHEDULING

The opportunity to recover an overdue balance often depends on the flexibility the patient representatives have to arrange payment terms. CFM payment scheduling functions will provide your representatives the capability of quickly assigning a payment schedule to each selected account.

The schedule amount and promised date are displayed. If payments are received on time, then those accounts will not appear during the work cycle. If payment is missed, then the account will be brought forward as a broken promise account to be worked immediately.

Scheduling payments will help improve recovery with those patients unable to pay the full balance. It will eliminate unnecessary follow-up on accounts that have already been handled and provide a more efficient allocation of manpower to work on accounts that have a higher priority.

6. PATIENT ACCOUNT INQUIRY

Quickly responding to a patient who may call your patient representative is made easy through CFM inquiry. Any account can be accessed by up to 13 different criteria. Patient account number, patient name and financial class are included as search options. Phonetic search is also a unique option that helps find hard-to-spell names in the inquiry mode.

7. PATIENT MASTER LISTING

Patient Master listing allows for the scrolling of accounts in their summary form. Only overview information is contained (patient name, patient address, account balance, patient account numbers, home and work numbers, etc.). From this listing, each account may be displayed in its more detailed form.

8. COMPANIONATED ACCOUNTS INQUIRY

A persistent problem common to nearly all business offices is a patient or a patient's family utilizing different services offered by a healthcare facility. A patient may end up having numerous balances that amount to astronomical sums of money. Until now, linking or companionating these accounts in a manual filing environment was a difficult and time-consuming task.

The Dexel system accomplishes this chore on a daily basis automatically. These companionated accounts may all be placed under a "base" account so only one representative need spend the time to recover an outstanding balance.

Small balance accounts that are usually sent directly to any outside agency may be companionated into a larger overall balance that may be recovered in-house.

Accounts that are companionated are denoted on the patient account master (with the balance due on the individual account and the companionated balance indicated). Patient representatives may see the "list" of companionated accounts from the patient account master screen with one keystroke.

9. ACCOUNT REPRESENTATIVE GOAL SETTING

The Dexel System provides management with a very useful set of productivity tools. Goals may be set for each individual representative based on the number of phone calls, contacts, promises to pay, amounts of promise activity, and most importantly, the actual amount recovered. Graphic presentations are available on-line for each representative so that he/she may follow his/her own performance. These same measurements are available for the patient accounts manager, for individual or group statistics.

Activity for each representative may also be measured in terms of total number of accounts turned over, amounts collected, accounts viewed with no activity (vs. same accounts worked with some activity, etc). A variety of other performance measurements are available. "Guess Work" about performance is eliminated by the system. You then have the opportunity to acknowledge areas of strength, and make changes where there is potential for improvement.

10. ACCOUNT WORK SET UP

Complete control of which specific account types, and specific accounts within an account type, is afforded the patient account manager for assignment to each patient account representative. Accounts presented to each representative may be determined by financial class, account balance, good phone numbers, broken promises, etc. The SET UP may be changed and freely manipulated regularly to fine-tune your recovery effort.

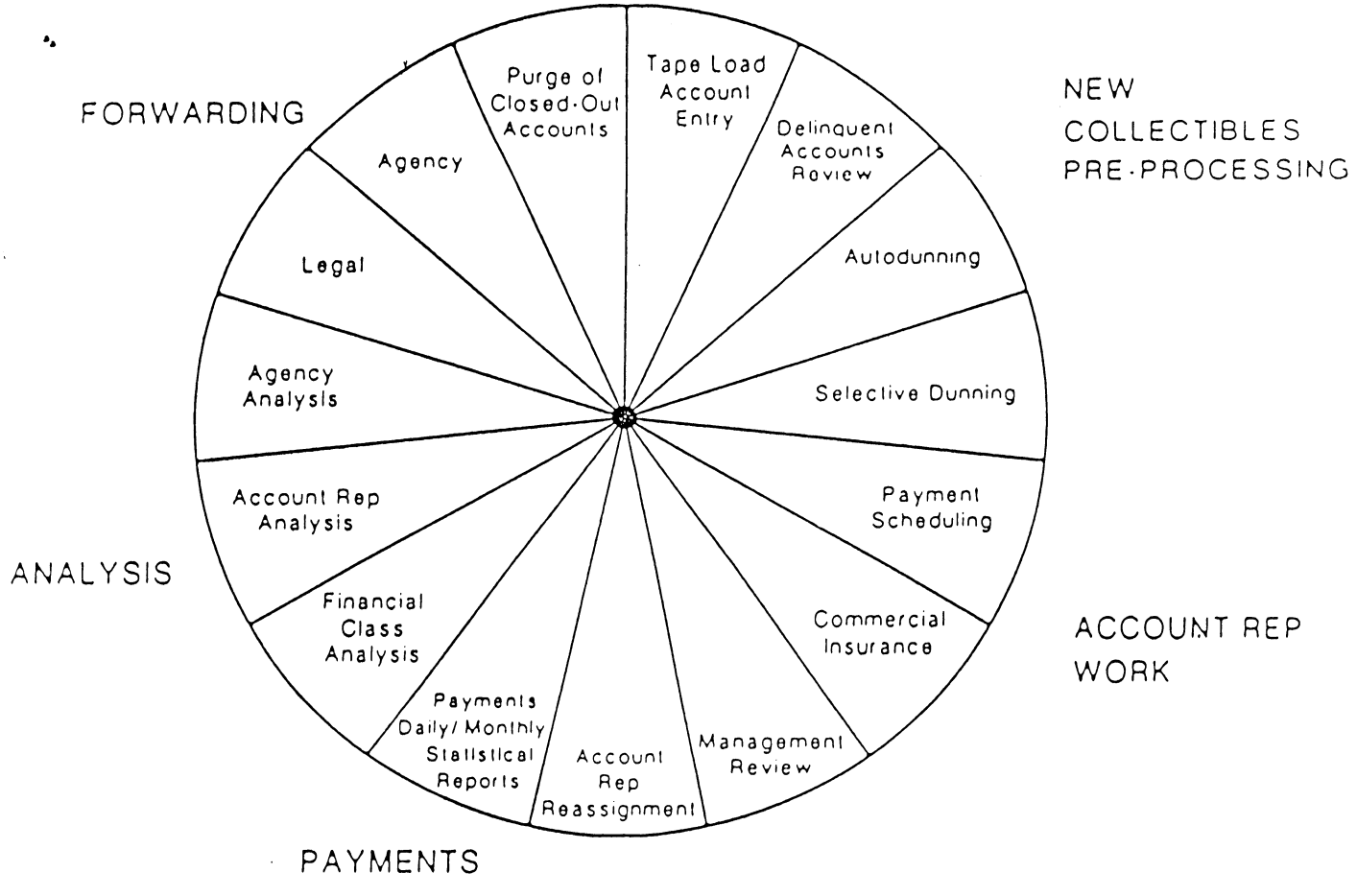
Adjustments may be made for experienced representatives, giving them each a greater number of accounts to work. Vacation time, sick days, and other recovery disruption can be kept to a minimum by distributing the work load among the remainder of the staff. The work-ahead feature of CFM allows account representatives who finish their calls early to have access to an additional group of accounts for additional collection calls.

The Dexel system will not allow accounts to be lost or misplaced in a paper shuffle. Your efforts are more positive and productive. The number of days in your outstanding receivables will be significantly reduced. Office morale will improve as your cash flow increases!

CFM Benefits

- Direct Benefits
  - Reduce Receivable Days
  - Reduce Bad Debt Writeoff
  - Reduce Outside Expense/Fees
  - Improve Cash Flow
  - Increase Revenue
  - Augment Services to Doctors
  - Establish Good P.R. with Billing Follow-Up
- Create Diversification Opportunity
- Maximize Productivity
- Maintain Competitive Advantage

CFM Work Flow



APPENDIX E
SAMPLE SMS PATIENT DATA MAILER

STATEMENT OF ACCOUNT

If Address Or Insurance Information Shown Below Is Incorrect Please Enter Changes On Back And Check This Box ☐

ST. MARY'S HOSPITAL-MILWAUKEE
2323 NORTH LAKE DR
MILWAUKEE, WI 53211

FWD.CADD.CORR.REQUESTED

Amount Paid ▶	
$ 203.48	04/30/91
Pay This Amount	Payment Due By
80790562	N
Refer to Above Pt No on All Inq	O R

For Information Regarding this Statement Telephone ▶ 414-225-8210

03/20/91

YOUR ACCOUNT IS NOW SERIOUSLY PAST DUE. IF YOU HAVE ALREADY SENT YOUR CHECK, PLEASE DISREGARD THIS NOTICE.

Patient Name [redacted]

03/16/51 414-372-0632

▼ Send Payment To ▼

ST. MARY'S HOSPITAL-MILWAUKEE
BUSINESS OFFICE
DRAWER #408
MILWAUKEE, WI 53278-0408

▼ Guarantor ▼

80790562
[redacted]
MILWAUKEE,WI 53210

TO INSURE PROPER CREDIT TO YOUR ACCOUNT DETACH ALONG DOTTED LINE AND RETURN TOP PORTION WITH YOUR PAYMENT

S02 CTH01-CPT S/P .00

Patient Name JOHNSON ,TYRONE B Last Stmt 04/06/91 Prev Bal $ 203.48

TRANSACTION DATES | DESCRIPTION | CHARGES $

PLEASE PAY IN FULL OR CALL 225-8211

Hospital: ST MARY'S HOSPITAL
Patient No: 80790562 M70 Stmt Date 04/20/91

03/20/91 Adm Date — Discharge Date

$ 203.48 Account Balance − $ .00 Est. Insurance Due = $ 203.48 Pay This Amount

Insurance is Estimated For Billing Any Balance Unpaid Will Be Billed To The Patient

Payments And Charges Received After The Date Of This Statement Will Be Reflected On The Next Statement.

APPENDIX F
FUNCTIONAL OVERVIEW OF SMS' COLLECTOR WORKSTATION PRODUCT

FEATURES AND BENEFITS

- Selection of Accounts and/or Units with VOF processing.
- Creation of "Worklists" via prioritization of qualified Accounts and/or Units.
- Recurring weekly processing in which the above takes place, plus the ability to execute the same "off-cycle" to accommodate unforseen situations.
- Standard Reports communicating the result of the Qualification and Prioritization processes in detail and summary.
- An additional standard report showing qualification duplicates, which can be used to prevent "debtor harassment".
- Assignment of Worklists to Business Office staff based on specialty.
- Online processing of Worklists.
- Future Follow-Up and Transfer processing.
- Demand Follow-Up Functioning.
- Fast-path branching to OAM Inquiry and Data Entry Functions.
- Statistical Inquiries and Reporting.

Receivables Management Workstation

FEATURE	BENEFIT
Automatic generation of target files and worklist.	The hospital's collection policies can be systematically employed through the generation of automatic target files and worklists based upon hospital-defined profile parameters. This increases consistency, reduces manual effort, and increases effectiveness of collection efforts.
Online Worklist	Reduces the amount and costs of paper reports; efficiently presents the next account to be contacted for follow-up, thereby reducing time between calls and increasing the number of debtors contacted per collector.
	BENEFIT
Online future follow-up	Allows an account to be requeued automatically for future follow-up due to no answer or incomplete contact. This eliminates the need for collectors to maintain manual reminders or tickler files, reduces the chance for accounts to slip by uncontacted, increases overall efficiency, and makes promised call-backs more timely and consistent.
Online demand follow-up	Provides for the electronic transfer of accounts between collectors and/or supervisors on demand, increasing efficiency, ensuring the proper person is making the contact, reducing manual efforts, and increasing hospital public relations.

FEATURE	BENEFIT
Branching to OAM functions	A fast-path branch to OAM functions allows collectors to view all pertinent account data online and to make appropriate entries, including collection notes and comments. Collectors do not have to leave their screens during viewing the initial worklist online, making account inquiry, posting comments, and scheduling the next contact date, thereby moving closer to the truly paperless business office.
Collector productivity reporting	Online real-time and paper historical productivity reports give supervisors the ability to monitor collectors' activities, better control the collection efforts, provide statistical reporting to management, and document staff performance.
Auto-dialer	Through use of a third-party auto-dialer or a terminal with auto-dial capability, collectors can have the system automatically dial the appropriate phone number (patient, guarantor, or insurance), reducing the manual effort needed to make a collection call, eliminating wrong numbers, increasing efficiency, and speeding the collection call, thereby increasing the number of debtors contacted by each collector.

RECEIVABLES MANAGEMENT WORKSTATION

REPORTS

QUALIFICATION DETAIL REPORT

QUALIFICATION SUMMARY REPORT

QUALIFICATION ERROR REPORT

QUALIFICATION INTERRUPT REPORT

DUPLICATE QUALIFICATION REPORT

COLLECTOR ACTIVITY REPORT

WORKLIST EVALUATION REPORT

STATISTICS UPDATE ERROR REPORT

AUDIT REPORT

INSTALLATION OF COLLECTOR WORKSTATION

- Once the software is applied, installation can commence and is comprised of a few key tasks.
- Initially, it is important to select the date of the first CWS Weekly Day. All tasks will then be relative to it.
- Working backward from that date, plan enough time to analyze your needs, policies, etc.
- These policies will be translated into VOF coding in this timeframe.
- OAS Profiles will also be loaded here. There are 4 that need to be considered: two which contain data about business office staff, the "Worklist Definition", and the "Activity Code Definition".
- SMS Hospital Profile fields relating to CWS will also be loaded. There are 3 that need to be reviewed and maintained.
- Once this setup has been performed, the profile field which enables the Workstation can be turned on. This will occur a day or two prior to your first CWS Weekly Day.

APPENDIX G
FUNCTIONAL OVERVIEW OF PRODUCTIVE DATA MANAGEMENT'S ACCOUNTS RECEIVABLE TRACKING SYSTEM

ACCOUNTS RECEIVABLE TRACKING SYSTEM
(ARTS)

ARTS MODULE "A"

This ARTS Module includes more than 62 functions to support all of the ARTS "front-end" features and the initiation of ARTS Claims Management.

"Front-End" Features and Functionality

This module encompasses functions which improve and enhance the identification, validation, and quality of patient, guarantor and account (third party) information which is obtained during the routine registration and/or admission data gathering process via the existing ADT system.

This module invokes the Claims Management features of ARTS to ensure that maximum efforts are consistently in place prior the generation of third party specific claims for billing purposes.

Third Party Identification

* Third Party "Help" screens to identify at the plan level appropriate match by:

  Employer name

  Unlimited patient, guarantor and account third party history

  Access all details by full or part of third party ID or description by alpha search

* Full control of third party database; copy - to account and mother to baby, delete, deactivate, reactivate functions.

* Online third party verification of benefits and documentation of non-covered charges and/or services.

ACCOUNTS RECEIVABLE TRACKING SYSTEM
(ARTS)

ARTS MODULE "A"

* Online worklists and management reports to identify unverified third parties by patient name and/or third party payers.

* Customized third party screens that are payor specific in detail; Medicare, Medicaid, Workman's Compensation, Champus, and Commercial or Contract Insurance.

* Special Condition Screens to alert operator of required action to be taken specific to a third party payor, plan, or contractual agreement.

* Separate Subscriber database (other than patient or guarantor) includes demographic and employer information

Patient Tracking

* Exception based employee worklists for "missing elements" specific to a third party/plan which require resolve prior to claim generation

* Multiple department/employee assignment criteria

* Selection criteria facility defined; i.e., patient type, medical service, pre-admission, etc.

* Automatic online documentation of all activity performed and outstanding elements

* Automatic customized letter/correspondence generation based on activity performed

* Management reports reveal dollar impact of missing data by data element, employee, department, physician, etc.

ACCOUNTS RECEIVABLE TRACKING SYSTEM
(ARTS)

ARTS MODULE "A"

* Non-payer specific elements worklisted in same manner for control in routine admissions process, "admitting checklist" items.

Other Features

* Unlimited free-form note entry for patient, guarantor, account.
* Customized in-house letter generation
* Full range of Management Reports to evaluate employee productivity and performance

Claims Management Features and Functionality

This feature of ARTS provides a complete audit trail of all activities throughout the total claims cycle: pre-billing, post-billing, pending payment, denied, held, resubmissions and final payment. The ARTS system internally tracks the claim at the third party and account level and therefore can provide powerful management reports to reveal problem areas to invoke timely resolution. Each claim is a separate tracking record associated with the patients account and therefore allows for flexible employee assignment in an online method to promote maximum staff utilization.

* Tracking and reporting of billing "backlogs" by third party/plan
* Exception based worklisting of delinquent unbilled claims
* Online view of all claims and corresponding current status by account

ACCOUNTS RECEIVABLE TRACKING SYSTEM
(ARTS)

ARTS MODULE "A"

* Online view of third party details at the time of verification to ensure appropriate submission requirements

* Online view of all documentation for the patient, guarantor, account, third party

* Online view of pertinent claim details, i.e., file date, dates of service, third party address, dollar amount, payments and adjustments

* Complete audit trail online and via hard copy reports of claim activity by third party and plan level, payment and adjustment history and aging from production, file date, payment.

ACCOUNTS RECEIVABLE TRACKING SYSTEM (ARTS)

ARTS MODULE "B"

This ARTS Module contains over 70 functions to fully support online follow-up and collection activities of the total accounts receivable. These features encompass the systematic tracking and exception-based employee assignment and worklisting of third party claims, guarantor responsible amounts and account balances.

Third Party Follow-Up

ARTS "tracks" for the specific third party by claim the follow-up activities which are required to promote timely payment based on a facility-defined criteria of standard operating procedures.

Guarantor Follow-Up

ARTS "tracks" for the guarantor/responsible party all estimated or actual balances due and assigns in an online method to employee "worklists" based on the facility-defined criteria of standard collection procedures.

Account Balance Follow-Up

ARTS "tracks" the total account balance and assigns to the appropriate employee via online worklists for follow-up based on the facility defined criteria of standard operating procedures.

All Follow-Up features of ARTS include:

* User friendly Profile Tables for ease of required modifications, utilization decisions
* Multiple provider based employee assignment regardless of staff location
* Online reassignment of claims, guarantors, or accounts to other employees for temporary assignment
* Support of "grouped" accounts by guarantor for family billing/follow-up methods

ACCOUNTS RECEIVABLE TRACKING SYSTEM
(ARTS)

ARTS MODULE "B"

* Online installment arrangement/promissory note agreement details

* Online guarantor credit "rating" application on file

* Activity code based follow-up to promote compliance with facility defined procedures

* Unlimited free-form note entry

* Complete employee and system generated audit trail of all activity by claim, guarantor and account

* Extensive and flexible assignment criteria for all types of specialized follow-up activities

* Ability for supervisor to view online all employee worklists

* Online view of all tracking records, status and last activity by employee

* Online bad debt assignment with security to preclude inappropriate account assignment

Automatic Letter / Statement Generation

* Letterhead quality letters with employee name, extension and signature line available

* Profile Table allows users to define content and design of all letters

* Activity Code associated customized letters to support all follow-up without the necessity of employee intervention

* Multiple letter generation for copy purposes to patient, employer, third party, etc.

ACCOUNTS RECEIVABLE TRACKING SYSTEM
(ARTS)

ARTS MODULE "B"

* System generated third party "tracers" based on latest claim status

* System generated letter with details of payment arrangement and reminder/thank you notices

* Support of inhouse correspondence/letters for interdepartmental use

* Letter Series which generates all follow-up statement generation based on specific facility criteria; i.e., date cycle, minimum payment, dunning notices (age), etc.

Management Reports

* Profile Tables allow facility defined standard and ad hoc reporting formats of all ARTS database elements

* Third Party and claim analysis to project future contracting of HMO/PPO agreements

* Identification of billing backlogs, slow pay third parties, problem areas

* Historical analysis to assist in routine cash flow projections

* Analysis of employee productivity and effectiveness

* Monitoring tool for changes in operating and policy decisions

* Collection agency assignment by type of account, balance and number of accounts by agency

* Collection agency recovery percentages and aging by agency

ACCOUNTS RECEIVABLE TRACKING SYSTEM
(ARTS)

ARTS MODULE "C"

This Module of ARTS contains over 40 functions to support the online posting functions of payments and adjustments to the accounts receivable. This module is an enhancement to the Follow-Up Features of ARTS (Module "B"). This module ensures accurate and rapid posting, balancing and transmittal of payments and adjustments.

* Profile Tables allow more extensive transaction codes and descriptions above the accounting system chart of accounts
* Multiple account flows for mass entry posting (i.e., remittance advice)
* Online view during posting process of claims detail ensures appropriate posting of third party payments
* Supports pre-billing adjustments and pre or post payment write-offs by billing/follow-up staff
* Posting details include check number, receipt number (for OTC), notes entry for payer identification
* Posting detail includes third party identification for analysis reports
* Easy access to non-transmitted batch detail for correction/modifications
* Multiple security levels by posting functions ensures compliance in cash handling policy and procedures
* Complete audit trail at third party, guarantor, account level of payment/adjustment activity
* Flows to support posting of payment and adjustment within same account and batch

ACCOUNTS RECEIVABLE TRACKING SYSTEM
(ARTS)

ARTS MODULE "C"

* Online view of all batches and current balance, transactions, transmit status

* Complete audit trail by employee of all activity in posting, reconciliation, transmittal process

* Hardcopy reports to support all audit controls and provide back up documentation

ACCOUNTS RECEIVABLE TRACKING SYSTEM (ARTS)

PRICING SUMMARY

Product	Initial License	Annual License Renewal/ Maintenance Agreement
ARTS MODULE "A" Front-End Features	$ 80,000	16% of Initial Fee
ARTS MODULE "B" Collection/Follow-Up Features	125,000	16% of Initial Fee
ARTS MODULE "C" * Payments and Adjustments Features	50,000	16% of Initial Fee

* This Module is an optional enhancement to Module "B".

Time is Money.

"ARTS has surpassed our highest expectations in functionality. The ability to consistently control, monitor, and significantly improve our overall performance has been achieved with this powerful tool."

Mr. Don Wright
Director
Central Business Office
Sutter Hospitals
Sacramento, California

At Admission

ARTS reduces the risk of non-covered days and unapproved stays with online contract terms and conditions. Separate and complete guarantor data for all accounts reduces the risk of preventative bad debt.

Pre-Discharge

Departmental online worklisting of all required clinical and financial information is captured for timely follow-up. Daily exception reports provide management with the tools needed for success.

At Claim Submission

Online worklisting of missing data required for billing prevents billing backlogs. Online view and editing of claims reduces the risk of costly resubmissions and denied claims. Analysis reports reveal problem areas for effective resolution.

At Collection

Online assignment of all accounts, claims, and guarantors with customized tracer, letter and statement generation equip the follow-up staff with all the tools necessary to implement the hospital collection procedures. Productivity reports document success.

Extend the life of your current systems and your institution and call for more information today. **It's about time. And money.**

Accounts Receivable Tracking System

PDM PRODUCTIVE DATA MANAGEMENT

5801 E. Slauson Avenue • Suite 250 • Los Angeles, CA 90040
Telephone (213) 725-2904

It's About Time.

For years hospitals have relied on computers to manage the everyday needs of its departments. Today, the needs of the hospital financial user far exceeds the capabilities of these systems.

That is why ARTS is solving the cash flow problems at major medical centers across the nation – by providing the ADDED functionality needed in today's hospital information systems.

Time is Money.

At Admission.

ARTS reduces the risk of non-covered days and unapproved stays with online contract terms and conditions. Separate and complete guarantor data for all accounts reduces the risk of preventative bad debt.

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At Collection.

Online assignment of all accounts, claims, and guarantors with customized tracer, letter and statement generation equip the follow-up staff with all the tools necessary to implement the hospital collection procedures. Productivity reports document success.

Time Well Spent.

The ARTS system was designed to co-reside with all existing hospital systems which utilize IBM mainframe computer hardware. ARTS does not replace your current system and therefore a costly conversion is avoided. Extend the life of your current system **and** your institution and call for more information today. **It's about time. And money.**

Accounts Receivable Tracking System

PDM PRODUCTIVE DATA MANAGEMENT

5801 E. Slauson Avenue • Suite 250 • Los Angeles, CA 90040 • Telephone (213) 725-2904

ARTS - ACCOUNTS RECEIVABLE TRACKING SYSTEM

FUNCTIONAL OVERVIEW

PRODUCTIVE DATA MANAGEMENT
5801 EAST SLAUSON AVENUE, SUITE 250
LOS ANGELES, CALIFORNIA 90040
(213) 725-2904

PRODUCTIVE DATA MANAGEMENT

ARTS - ACCOUNTS RECEIVABLE TRACKING SYSTEM
FUNCTIONAL OVERVIEW

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PRODUCTIVE DATA MANAGEMENT

ARTS - ACCOUNTS RECEIVABLE TRACKING SYSTEM

I. INTRODUCTION

The Productive Data Management (PDM) Accounts Receivable Tracking System (ARTS) is designed to work as an integral part of a total hospital patient accounting system. The unique design capabilities of ARTS allow the system to fully interface and therefore co-reside with all existing systems.

ARTS provides a highly efficient on-line capability for business offices to reduce bad debt, improve cash flow, better control accounts receivable aging and significantly increase staff productivity. "Front-end" ARTS functionality supplements the admission system and provides on-line and reporting mechanisms to ensure the obtainment of all required billing data for timely generation of "clean" bills and claims. "Back-end" ARTS provides for complete collection, follow-up, cash posting and claims management functionality.

Business Benefits

Because ARTS co-resides with all existing systems, installation can be accomplished in a relatively short period of time. ARTS may be installed with all or some of the institutions existing systems, or concurrently with new acquired patient accounting systems. Either installation approach requires no change in ARTS functionality. ARTS does not require a conversion of required tables (i.e., Charge Description Masters, General Ledger, Revenue and Bill code parameters, etc.) and ARTS in itself is a table driven system.

The system was specifically designed to provide for user ease of operation and subsequently a rapid training schedule is achieved. Therefore, immediate positive results in business office productivity and cash flow are achieved. A high level of system maneuverability is accomplished in ARTS via the innovative creation of the Command Handler. This flexibility creates a truly non menu driven system for increased maximization and optimal results of all ARTS functionality by the user.

Institutional payback begins as soon as ARTS is placed in production. The institution can expect the product to pay for itself in less that twelve months. There are several reasons for this rapid payback:

1) Reduction in Bad Debt

Unlike other systems ARTS permits the collection and tracking of guarantor obligations to occur at any time starting with the pre-admit process. ARTS also enables immediate tracking and verification of key patient and guarantor financial data. In existing systems this data is erroneous or not obtained at all.

To illustrate the anticipated annual savings for an entity, using the tracking capabilities of ARTS it is conservatively estimated that a 1% reduction in bad debts will occur. This results in a direct annual savings of several hundred thousand dollars plus interest.

2) Reduction in Days Receivable

The automatic collection components of ARTS, (such as the automatic "broken promise" or event scheduler, the automatic update and tracking features during claims processing, and the elimination of delays during payments and adjustments) results in an ability to collect obligations several days in advance of existing environments. Also because ARTS processes at the "claims" level, it maintains an accurate aged receivable by third party which eliminates confusion and permits third party monitoring and follow-up in advance of receipt of payments. In addition, the features described in the bad debt discussion (#1 above) also results in a more timely collection of accounts receivable.

It is estimated that ARTS will reduce days receivable by several days. This represents a continuous ability to collect daily revenue many days sooner than in the past. By multiplying the total entity daily revenue by the number of A/R days eliminated and applying an annual interest rate, a continuous savings of several hundred thousand dollars will be derived.

II SUMMARY OF MAJOR FEATURES

PRE-BILLING AND MISSING ELEMENTS TRACKING

* Patient Tracking
  -Worklisting of patients for required data elements
  -Pre-admission screening
  -Admission notification
  -Utilization review requirements
  -Eligibility indicators

* Real time assignment of account for follow-up
  -Personnel profiles for account responsibility
  -On-line reassignment based on account activity
  -Multiple provider definition regardless of staff location

* Note entry of activity at patient, account, guarantor or third party levels
  -Retain system generated or manually entered activities
  -Activity history retention defined by institution
  -Eliminate need for file folder retrieval and dependence

* Tracking and reporting of incomplete data
  -Institution defines data elements requiring completion
  -Supports institutional contracts and discounted business
  -Tracks 'missing elements' for worklisting
  -Results in complete information for claim forms
  -Adequate information captured for follow-up
  -Assignment of account to responsible department for missing data element follow-up (i.e., Medical Records, Utilization Review, Business Office)

* Third Party Plan management
  -On-line display of all Third Parties and coverage previously identified for patient
  -Employer name pathway with plan definition display
  -On-line coverage verification and non-covered charges or services identified
  -Automatic "copy" of third parties to new account or mother to baby accounts
  -On-line view and access of contractual terms and conditions

PRODUCTIVE DATA MANAGEMENT

ARTS - ACCOUNTS RECEIVABLE TRACKING SYSTEM

* Current account information
  -On-line access of all system and operator invoked account activities to insure appropriate action
  -Accounts displayed with entity name and occurrence, episode and service definition by patient name listing

* Automatic letter generation
  -In-house patient correspondence of admission requirements
  -Requires no operator action - system generated via activity

ON-LINE CLAIMS EDITOR

* On-line claims editor
  -On-line entry and edit of all required coding structures, (i.e., DRG, ICD-9, Procedures)
  -Tracking and reporting of missing claim details
  -Restrains claim/bill generation awaiting required data
  -On-line charge and adjustment entry of revenue codes (CDML)
  -Tape to tape claim submission capability
  -Automatic adjustment of revenue based on discounted business agreements

* Instant billing system
  -Point of service and charge itemized bill generation
  -Automatic receipt generated at time of payment posting
  -Demand bill and claim capability

ACCOUNTS RECEIVABLE COLLECTION AND FOLLOW-UP

* Real time assignment of accounts for follow-up
  -Multiple provider definition regardless of staff location
  -On-line reassignment based on account activity
  -Personnel profiles define account responsibilities
  -On-line re-delegation of work based on staff availability

PRODUCTIVE DATA MANAGEMENT

ARTS - ACCOUNTS RECEIVABLE TRACKING SYSTEM

* Comprehensive claim management
  -On-line add/update by third party claim of submission and follow-up details
  -Display of all claims by account and current age/status
  -Claim detail display in payment and adjustment flows for accurate on-line posting

* Follow-up by third party
  -Worklisting for follow-up based on institutionally defined timeframes
  -Ability to perform concurrent follow-up by various staff due to third party worklist assignment (by claim)

* Follow-up by guarantor
  -Support for 'family' collection efforts
  -Ability to follow-up in singular effort to guarantor for all entity accounts on-line and document accordingly

* Automatic letter generation
  -Pre-formatted letters with account specific demographic and balance information interfaced
  -Letter series module replaces scheduled billings to patient or guarantor with customized quality correspondence of all entity accounts
  -Requires no operator action - activity performed generates

* Support for installment payment agreements
  -Financial arrangements tracked and delinquency reported
  -Worklisted to employee only if payment missed
  -System generated reminder (billing) and thank you (payment received) notices sent without operator intervention
  -On-line guarantor credit history and rating

* Bad Debt assignment
  -Edits to preclude inappropriate account assignment
  -Management approval process prior to receivable adjustment

* Note entry of activity at patient, account, guarantor or third party (claim) levels
  -Retains system generated or manually entered activities
  -Eliminate need for file folder retrieval and dependence

PRODUCTIVE DATA MANAGEMENT

ARTS - ACCOUNTS RECEIVABLE TRACKING SYSTEM

* Current account information
  -On-line access of all system generated and operator invoked account activities to insure appropriate action
  -Accounts displayed with entity name and occurrence, episode and service definition by patient or guarantor name or account number

PAYMENTS AND ADJUSTMENTS, ACCOUNT MANAGEMENT

* On-line payment/adjustment entry
  -Display of account information necessary for correct posting
  -Timely reflection precludes inappropriate collection turnover
  -Multiple functions available to coincide with institutional audit and posting requirements
  -Multiple account flows for mass entry posting (i.e., remittance advice)

* Collection Agency account assignment and reporting
  -Identify turnovers (numbers and amounts) by agency
  -Reporting on recovery amounts and aging by agency

* Account management reporting
  -Profile Tables allow institutionally defined standard and hoc reporting formats of data base elements
  -Third Party and claim analysis
  -Billing backlogs
  -Cash flow projections

* Personnel productivity management reporting
  -Analysis of employee activity and effectiveness
  -Gross task productivity statistics
  -Evaluation tool for monitoring employee performance
  -On-line re-delegation of assignment criteria for temporary or permanent staffing changes

PRODUCTIVE DATA MANAGEMENT

ARTS - ACCOUNTS RECEIVABLE TRACKING SYSTEM

ALL PAYOR LOGS

* All Payor Logs
  -Claims reconciliation between anticipated (contract or verified) payment and actual
  -Contractual allowance discount calculations by revenue and charge code/description

ARCHIVING/PURGING

* Archiving/purging
  -Institutionally defined parameters

The following Sections provide a detailed non-technical description of the ARTS product.

III PRE-BILLING AND MISSING ELEMENT TRACKING MODULES

There are four (4) major components of ARTS which support hospital business office activities prior to the time that patient bill is generated:

1) Third Party Information Data Base
2) Tracking of incomplete or missing data elements for Patients, Third Parties and Guarantors
3) Worklisting of incomplete or missing data elements for Patients, Third Parties and Guarantors
4) On-line Notes

III-1 THIRD PARTY INFORMATION DATA BASES

The identification of insurance coverage or third party liability for the cost of services rendered is generally an integral part of the admission or registration process for a patient. ARTS can work with currently installed A-D-T and/or Registration systems to enhance the detail of information available on-line. ARTS can either provide an alternate method of third party information capture or will simply accept information interfaced from those systems.

ARTS has the feature of retaining a historical base of identified insurance carrier for a previously admitted patient. When the ARTS user begins the third party identification function, the third party coverage(s) previously established for the patient are displayed. The terminal operator may then select any of the displayed carriers and copy them into the current patient account. If no previous history is available, the carrier name, policy and group numbers may be entered. If the historical information displayed for a patient is incorrect or incomplete, the terminal operator has the ability to add carriers, deactivate a carrier not currently applicable, or delete a carrier form display if it is no longer appropriate for that patient.

The ability to identify Third Parties, the characteristics of coverage and the identification of elements for tracking depend on four Profile Tables in ARTS.

The first table is the Third Party Master which identifies the basic demographics of a carrier. Information such as the Carrier Name, Address, Telephone Number and Contact Person are included in this master to provide a comprehensive listing of third parties appropriate to the institution. The second master necessary is the Third Party Plan Master. Third Party Plans are established by the institution that will act as 'shells' for entering detailed insurance coverage information. This concept does not require that a specific plan be set up in ARTS for every carrier and every coverage type for that carrier. A limited number of Plan Masters provide the basic components of coverage for an extensive number of specific policy details. The Plan Masters define the following types of coverage information fields:

Description	Reimbursement Percentage
Deductible amount	Maximum days coverage
Policy limits	Non-covered services
Service limits	Flat Rate indicator

Once the terminal operator has captured the basic carrier information (i.e. copied it down from the historical database of key entered it for new information), the appropriate Plan Master coverage 'shell' is selected. The Plan Master details may now be changes, at the account level, on-line, based on the policy verification. These changes become a part of the account Third Party record without changing the characteristics of the Plan Master. This customized coverage 'shell' is linked with the carrier information to create the total insurance data for that third party for that account.

Two additional Profile Tables which expand the Third Party and Plan Tables are the Employer Master and Employer Third Party Tables. These tables provide on-line pathways within the admission and registration flows to enable selection and copy of a third party and plan by employer name. These tables provide an expansion of third party delineation by employer for multiple third parties and plans to be associated with an employer.

In addition to the four Tables described, the Terms and Conditions Table completes the functionality required to address all Third Party details to provide the system calculation of discounts and contractual allowances for all payers. This module provides on-line maintenance of discounted business with Third Parties and automatically adjusts accounts receivable per the terms in this Table. This Table allows the operator at admission or registration to identify a contract patient and edits the financial class and third party indicator to ensure proper code assignment.

III-2 COMPLETION DATA ELEMENTS TRACKING

A major system feature of ARTS is the ability to track critical information necessary for the correct billing and follow-up of an account. The generation of a 'clean' bill or claim form and the capture of complete patient/guarantor demographic information, provides the institution the tools necessary for effective account management.

Some Patient Account systems provide the ability to stop generation of a bill or claim form if guarantor information, diagnosis information or insurance verification information is not available on a gross level. ARTS extends this capability by allowing the Patient Financial Services areas to define that specific data elements are necessary prior to the generation of a bill or claim form.

In addition, ARTS will help the institution control the capture of patient and guarantor elements necessary for follow-up of patient/guarantor liabilities.

ARTS classifies the types of data elements as either:

1. Third Party Completion Data
2. Patient/Guarantor Completion Data
3. Admission Criteria Completion Data

ARTS may be assisted in the capture of all data defined as 'necessary for completion' on the interface capability available within the institution's A-D-T, Patient Account and/or Abstracting systems. ARTS does provide mechanisms for input of these elements directly to ARTS if interface is deemed unworkable.

A description of the two types of completion data element tracking follows.

THIRD PARTY COMPLETION DATA

The production of a 'clean' claim form with all necessary information filled in is of primary importance in Third Party claims management. The time required to manually re-work or regenerate an inadequate claim form is directly reflected in the A/R days Outstanding. ARTS addresses this problem through the Third Party Completion Data function. ARTS provides reporting and worklist capability of accounts with defined data elements missing or incomplete.

The ARTS completion Data Elements and Third Party Master Tables (Third Party, Third Party Plan, Employer Plan and Terms and Conditions) allow the institution to define those data elements which are critical to claim form completion and follow-up. For example, using UB-82 as the claim form, the institution could define that for commercial insurance carriers the following elements would be required:

Type of Admission
Relationship to subscriber
Insurance Group Name
Insurance Group Number
Diagnosis

These elements could be expanded for Medicare coverage to also require:

Admit Source
Hospital Insurance Effective Date

Elements for admitting and in-house compliances for occurrences such as:

Pre-Admission Screening
Admission Notification
Utilization Review Requirements
Eligibility Indicators

The institution could choose to define only elements that have historically been a problem to collect for Completion Data tracking, or could include all elements routinely considered 'necessary'. Once elements are defined at the Third Party level as 'necessary' information, whenever that Third Party is identified for an account, ARTS will check for completion of those elements. Completion Data Elements tracking is accomplished by the Terminal Operator selecting an account, via alpha search of the patient name, whereby ARTS displays all the elements not completed or requiring follow-up for that patient. Worklisting for incomplete or missing elements allows the Terminal Operator to display entered information and decide by a (Y)=Yes/(N)=No indicator whether the information is appropriately completed. This capability provides a review mechanism for data entered and helps insure that inadequate data in these fields can be edited by the Terminal Operator and, if necessary, updated in the same function once an element is marked "Y" indicating it is complete, the element is deleted from the Completion Data Elements tracking for that account and will not appear on subsequent worklists for that account. Once all the Completion Data Elements have been successfully completed for an account, that account is deleted from Completion Data tracking worklists.

When coverage for a patient is identified as a PPO or contracting carrier with the institution, ARTS will provide the option of presenting the Terminal Operator with a screen defining the criteria subscriber's must meet, or information that must be provided to insure reimbursement. These criteria may have been selected by the institution to be included in the Terms and Conditions and Completion Data Elements Tables for subsequent tracking capability of ARTS.

In order to provide notification that supplemental forms or attachments are required and should be combined with the bill and/or claim form before filing, tracking in the form of a 'checklist' screen or screens may be selected. This capability allows the identification of institutionally defined items that are required and provides an on-line

'checklist' for Admissions noting those requirements. Thus, billers could be assured that second opinion documentation, authorization forms or special claim forms are available to be attached to the claim form before mailing.

Completion Data worklisting of Third Party data elements would continue to occur until notification is received in ARTS that a bill or claim form has been produced by the billing system or, optionally, be deleted from worklisting upon receipt of a Third Party payment.

PATIENT AND GUARANTOR COMPLETION DATA

ARTS allows the institution to define those data elements relating to the patient or guarantor that it considers necessary for good account follow-up and management. Because the elements classified as required varies by institution, the Completion Data Table of the ARTS Profile provides the flexibility of the institution defining its unique set of elements.

The types of elements an institution might consider necessary are:

Patient Social Security Number
Patient Drivers License Number
Patient Employer Name and Address
Guarantor Social Security Number
Guarantor Drivers License Number

With the establishment of a new account, whether through interface from other systems or through direct data input to ARTS, tracking records for the completion data elements will be created. ARTS will check for completion of those elements. Completion Data Elements tracking of patient or guarantor data is accomplished by the Terminal Operator selecting an account, via alpha search of the patient name, whereby ARTS displays all the elements not completed or requiring follow-up for that patient. Worklistings for completion data elements allows the Terminal Operator to display entered information and decide by a (Y)=Yes/(N)=No indicator whether the information is appropriately completed. This capability provides a review mechanism for data entered and helps insure that inadequate data in these fields can be

edited by the Terminal Operator and, if necessary, updated in the same function. Once and element is marked "Y" indicating it is complete, the element is deleted from the Completion Data tracking for that account and will not appear on subsequent worklists for that account. Once all the Completion Data Elements have been successfully completed for an account, that account is deleted from Completion Data tracking worklists.

The institution could define that only elements that have historically been a problem to collect are tracked, or could include all elements judged 'necessary'. Missing elements worklisting of patient/guarantor data would continue to occur until notification is received in ARTS that a bill or claim form has been produced by the billing system.

III-3 WORKLISTING OF MISSING DATA ELEMENTS

Employee worklist assignment is created in the pre-bill print mode based upon ARTS receiving data that validates if the patient's stay is contract related and third party identification has been properly entered. This process requires that all patient classifications to have a third party assignment code. In order to maintain clean and manageable worklists, selection of accounts holding for missing data elements by department responsibility is available. The Activity and Assignment Tables of the ARTS Profiles define the criteria and activities for worklisting accounts to the responsible user and the timeframes in which the follow-up of the outstanding missing data elements should be accomplished.

The following depicts how the Missing Data Elements, Assignment, Activity and Third Party Tables impact the worklisting process:

Patient Account Profile

1)	Patient Name	Mary Adams
2)	Patient Status	Discharged
3)	Total Charges	$2500.00
4)	Terms	Per Diem: $500.00 per day
5)	Conditions	Pre-Auth. # 1908923455
6)	Plan Code	1001
7)	Third Party ID	4900
8)	Third Party Description	Blue Cross Prudent Buyer
9)	Employer	PDM
10)	Billing Requirements	Summary at Net
11)	Adjustment	$1000.00
12)	Missing Data Elements	Department Responsible

Discharge Summary	# 101 Medical Records
Final Diagnosis	# 101 Medical Records

Based upon this profile, the account will appear on the completion data elements report for management monitoring involving Business Office, Medical Records and Administration. The quality control clerk will not be able to control the follow-up on the account due to the holding reason being the sole responsibility of Medical Records.

III-4 PRE-BILLING ON-LINE NOTES

The Accounts Receivable Tracking System is designed to provide a full history of all institutionally relevant activity that occurs for an account which is relevant to the patient, guarantor, or third party. Therefore, ARTS provides three separate mechanisms for notes to become a part of that history, which is then available to all authorized financial service area users.

The principal method of documentation throughout ARTS is the use of activity codes which are facility defined within the Activity Code Table. These pre-defined descriptions allow the user to enter in a logical code which automatically and without further operator effort, fully document the activity performed, generate customized letters and reassign for future follow-up based on the procedural follow-up and assignment criteria established within the Activity and Assignment Tables.

The second method of notes entry allow personnel to enter on-line notes via the notes entry function. This capability will provide an alternative to handwritten notes being entered in the patient financial folder. In addition to wider access to the details of account follow-up, the notes entry capability will provide a note legible communication. Notes would enhance the ability of separate departments within the patient financial service area to know the exact status of an account and the appropriate activity each should be taking without waiting for transfer of the folder. This shared knowledge should reduce the number of internal phone calls necessary to determine the current status of an account.

An additional method is where the institution can define, in the Activity Table, that notes will be automatically entered for system generated activity occurring within the Patient Accounting systems, and/or ARTS. The Patient Accounting system would provide, via the interface transaction to ARTS, the mnemonic for that interface activity. ARTS will check whether or not to post the description for that activity. For every activity the institution defines in the Activity Table, it may decide whether or not that action is significant to an account and should, therefore, be a part of the notes history for an account. This description posting option is available regardless of where the activity is generated, Patient Accounting or ARTS.

Notes entry may also be via free form entry, in order to supplement the basic activity mnemonic and its description. Especially in cases where exact documentation of follow-up activity taken is important, this capability might be used over the simpler mnemonics entry. The sequencing of notes and activities is defined by the institution in the ARTS General Parameters Table.

An example of how these methods of notes history entries might be posted for a single account follow. If the billing system generated a claim form for Blue Cross, a Patient Accounting interface transaction would pass to ARTS and a system note would be generated stating 'INSUR CLAIM PRODUCED'. (This type of verbiage would be defined by the institution and is included here for explanation purposes only.) When the biller mailed the claim form and entered a mailing or file date, ARTS would enter an activity note stating 'INSUR CLAIM MAILED'. If follow-up activity was required due to no payment, personnel could document that type of activity through notes entry and perhaps enter the activity code "'TELINS" for TELEPHONED INSURANCE'.

The use of mnemonics that are meaningful to the institution personnel can shorten the data entry keystrokes necessary to enter notes as well as document the level of follow-up activity that has occurred within an account. Mnemonics are shortened descriptions and may identify follow-up activities, system transactions or data.

PDM PRODUCTIVE DATA MANAGEMENT

ARTS - ACCOUNTS RECEIVABLE TRACKING SYSTEM

IV ON-LINE CLAIMS EDITOR

In addition to the "front end" functions which allow tracking and worklisting of missing data elements to ensure quality claim generation, the ability to edit all claim data elements prior to form generation is provided. The claim form edit and audit capabilities as defined by third party, State, Federal or other requirements are maintained within the Claim Content and Definition Table. The on-line claims editor provides the appropriate restraint of claim generation and submission due to incomplete specific data elements. These data elements include all diagnostic coding structures and the ability to define summary or detail charges and net or gross revenue by claim. In addition, the biller may add or adjust charges from the claim on-line based on review criteria for immediate correction and submission which results in rapid payment receipt.

V ACCOUNTS RECEIVABLE COLLECTION AND FOLLOW-UP

ARTS enhances the Accounts Receivable follow-up process by providing specialized functions to enable:

1) Third Party Worklisting and Follow-Up
2) Guarantor Worklisting and Follow-Up
3) Customized Automated Letters
4) On-Line Note Follow-Up

Below is a description of each specialized function.

V-1 THIRD PARTY WORKLISTING AND FOLLOW-UP

ARTS provides the ability to track all claims for an account based on the third party, or parties, identified for each claim. Copying down the insurance carrier from the historical base or key entering that information, creates the ARTS tracking records as appropriate to manage the insurance verification for each carrier identified. ARTS will also pass necessary insurance interface information to the Patient Accounting system as defined by the institution.

The first tracking record activity may be for Unverified Insurance tracking. The institution can define in the Third Party Master, by patient type, whether or not verification of a specific third party is required.

If verification is defined as required, a Terminal Operator can follow-up on all unverified Third Parties for an account via two unique worklist methodologies.

The financial user can work from the Unverified Insurance worklist. Selection of an account from this worklist will display all unverified insurance for this account and allow the user to begin identification of new third parties, update information or enter the policy details as verified by the carrier. ARTS will continue to track for verification until the Terminal Operator indicates that verification is complete for each third party.

Alternatively, the user can opt to perform verification of all accounts for a specific Third Party by inputting the Third Party identifier code. ARTS will display a listing of all accounts meeting the select criteria. Theoretically, this would allow an insurance verifier the ability to verify all outstanding accounts for a selected third party with one phone call.

If no formal verification is required, ARTS will create the verified insurance interface record to the Patient Accounting system immediately and has no need for an unverified insurance tracking record.

For example, if for Third Party 5100, Patient Type I has the unverified insurance indicator set to "Y", unverified insurance tracking records will be worklisted until verification is completed, the verified insurance interface record to the Patient Accounting system will be created. If the unverified insurance indicator is set to N(=N) for Outpatients (Patient Type=O), for Third Party 5100, as soon as this carrier is identified for the account, ARTS will consider the insurance verification requirements complete although technically unverified and create the Patient Accounting interface record.

Once verification is complete for an account, the interface record to the Patient Accounting system should allow for production of the claim form based on the institution's final or cycle bill production criteria.

ARTS begins this method of Third Party follow-up tracking based on the institutions billing system producing a claim form or an ARTS generated claim via the Claims Editor function. Decisions in the ARTS Profile Activity and Interface Tables determine whether tracking records for all insurance generating claim forms are created. This capability insures that tracking records are created even where verification was entered directly into the patient accounting system, was automatic or otherwise not known to ARTS prior to production of the claim form. The Interface Table defines at which activity defined in the Activity Table ARTS should begin its follow-up process.

Once the billing system or ARTS has produced a claim for a third party, ARTS can track that claim and worklist the claims for accounts still requiring a file or mail date. This feature is available even when 'unassigned' claim forms are generated even though no further tracking of that claim is required. This capability is necessary to maintain accurate productivity statistics for claim forms mailed. Accounts Receivable liabilities are maintained correctly as 'unassigned' claims

may be interfaced to ARTS with a zero dollar amount causing them to delete from Third Party follow-up worklisting with no liability due from the third party.

Accounts can be deferred from appearing on the Unfiled/Unmailed worklist based on the days specified in the ARTS Profile.

When the mailing or file date has been entered the tracking record will provide the ability to worklist accounts for additional third party follow-up activities. If no file date is required, the default date for activity aging is the Patient Accounting system bill date interfaced to ARTS.

The Activity and Assignment Tables of the ARTS Profile define the criteria and define the activities for worklisting claims for accounts to the responsible user and the timeframes in which the follow-up of the insurance claims outstanding should be accomplished.

A typical policy and procedure might define that:

Insurance biller Betty Smith is responsible for billing accounts and for the insurance company follow-up of accounts having commercial insurance coverage with patient initials ranging between EA and HZ. If no insurance payment has been received by 30 days after file date, and the account balance is greater than $100.00, telephone follow-up of the claim is required. If no insurance payment is received within 10 days after telephone contact, follow-up letter INSLTR10 is sent out.

Based on the above policy being defined in the Assignment Table and the Activity Table, if today a claim form is produced for patient John Franks, ARTS would first hold the claim until the standard days parameter for this activity in the Activity Table were met or exceeded. Once those days elapsed, ARTS would worklist this account to biller Betty Smith until a file date was input. Upon mailing the claim form, Betty Smith inputs the file date. ARTS moves to the next activity and awaits payment. If no third party payment is received within 30 days of file date, ARTS checks that the account to Betty Smith for telephone follow-up. The account would remain at this activity and continue to appear on Betty Smith's worklist until the maximum days for the activity are achieved or an activity mnemonics is entered indicating that telephone follow-up was accomplished. 10 days later, if no payment activity or insufficient payment had been reported, ARTS escalates to the next activity which is to generate letter 'INSLTR10'

in the next batch process. Production of the letter would advance this account to the next activity defined, or begin worklisting based on the criteria defined for the activity.

ARTS activity may also be overridden by an authorized user providing the escalation or de-escalation of activity falls within the normal ranges specified by the institution. Each activity has defined in the Activity Table of the ARTS Profile, the standard days as well as the maximum days range for each activity. Whenever a terminal operator exceeds the range specified, ARTS will issue an error message. An audit report of these error transactions can be produced for management analysis.

V-2 GUARANTOR/ ACCOUNT FOLLOW-UP

ARTS provides the flexibility of follow-up activity based on access via the guarantor for the account in addition to Third Party Tracking. At the point the institution chooses to define the account/guarantor liability to ARTS, tracking records are created to assist the Patient Financial Service area personnel in their objectives of collecting monies due. If no third party is identified for the account, this tracking can begin as early as estimated charges due prior to service or admission are entered. If a third party is established, account or guarantor liability can be tracked from deductibles owed or non-covered percentages due (provided the total guarantor liability for those monies is entered into A.R.T.S) or can await payment of all third party claims before tracking the account or guarantor liability.

Based on criteria in the Activity and Assignment Tables of the ARTS Profiles, the institution can define its policies for follow-up and collection of guarantor liabilities and allow ARTS to worklist accounts to insure that each activity takes place according to policy.

The Activity Table will define what activity is appropriate based on the last activity recorded, whether generated in A-D-T, Patient Accounting or ARTS. The time frames allowable for an activity to take place are defined in the Activity Table also. The Assignment Table will worklist an account for action by the responsible employee based any number of criteria defined for each user. The escalation of account activity and responsibility will occur based on parameters defined in these Tables. This escalation process could include transfer from clerk to supervisor, from Billing to Collections, or from

Accounts Receivable to Bad Debt. The intermediate steps for phone follow-up, letter generation, or notification of assignment to a collection agency could all be controlled through ARTS activity based on institutional decisions in the Profiles. Whenever the institution requires user intervention or decision making of an account, no next activity is defined and the account is worklisted to the appropriate user for action.

This capability allows the institution to set policies and timeframes for a selected action to take placed, yet allows the Terminal Operator to determine whether or not the next normally defined activity should be accomplished. This capability will allow an institution to define all the criteria under which an account might be handled within ARTS up to a specific point. For example, for accounts under $200.00 ARTS could control all follow-up activity up to letter notification that the account will be turned over to a collection agency. If the institution chose to have accounts meeting the criteria worklisted rather than automatically generating the 10 day notification letter, ARTS would allow the Terminal Operator to make the decision whether or not to send the letter on an account or guarantor specific basis. This selective process could prevent letters from being generated for sensitive accounts that had not fallen under review criteria prior to this point.

ARTS provides additional capability for Guarantor/Responsible Party follow-up. Based on an ARTS Profile option, ARTS will allow the institution to group accounts based on Guarantor ID. The Guarantor ID will be institutionally defined. All accounts having the same Guarantor ID will be grouped for collection activity. A user will be presented with a worklist display that shows the guarantor total liability and allow access to the individual patient accounts that make up that liability.

In the area of contract accounts, whereas the institution has established an installment payment plan with the guarantor for one or more of the outstanding accounts, ARTS can provide additional capability for the effective management of these agreements. ARTS will allow establishment of contract accounts for guarantor liability of all accounts based on Guarantor ID or for single account liability.

The expected frequency of payment can de defined in ARTS as:

Weekly	Monthly	Single
Bi-Weekly	Bi-Monthly	

While these frequencies are generally self-explanatory, 'Single' may be used whenever a guarantor has made provision for a single lump sum payment by a specific future date.

Due dates should be entered for the payment frequency and ARTS will worklist contract accounts to the appropriate personnel for action based on the due date plus any 'courtesy' days granted before a account is considered delinquent. Courtesy days allowed are defined in the ARTS Profile Activity Table and generally reflect mail delivery or internal handling times.

V-3 LETTER GENERATION

ARTS provides the ability to print pre-formatted letters, tracers, or claim inquiry correspondence to third party carriers, patients and guarantors. Letter formats are defined in the Letter Definition Table of the ARTS Profile. The exact structure of the letter must be defined. ARTS will allow user selected data elements to abe inserted into the structure of the letters.

In addition to activity generated specific letter generation, the ability to create a letter series to augment or replace routine and scheduled statement or bill activity is provided. The letter series can also be utilized to accommodate small balance account activity which do not require staff intervention, but need quality letter submission to communicate specialized messages or policies.

A sample letter structure would be defined as being sixty lines in length, 65 characters in width and require ARTS to insert the following data elements and contain the following pre-defined verbiage:

Date

Patient Name
Patient Discharge Date

Guarantor Name
Guarantor Address
Guarantor City, State, Zip
Account Balance

PDM Test Medical Center has recently sent you a bill for the above amount. To this date, we have not received your payment in full, nor have you made satisfactory payment arrangements. All outstanding insurance claims have been paid. It is most important that full payment be made at once, in order that we may avoid the need to utilize outside collection efforts.

If you are in disagreement as to your liability for the amount, would like to make special payment arrangements or if you have any questions, please call our offices between 9:00 a.m. and 3:00 p.m. Monday - Friday at 000-555-5555.

Sincerely yours,

Account Representative
Ext. 234

This type of letter may be automatically produced as a result of:

1. a specific action or defined ARTS activity taken with an account

   - or -

2. after a specified number of days without the expected activity.

An ARTS user may also determine that a letter should be generated based on an activity performed by that user in working the account. The requested letter codes will be designated by the user for letter generation by ARTS on-line within the business office or during the batch process.

V-4 ON-LINE NOTES FOLLOW-UP

If the account required legal action during the collections process, a financial user could choose to enter free form notes containing the details of conversations in order to fulfill documentation requirements. Thus, the complete notes history for this account would have incorporated the three mechanisms available for posting.

In order to provide maximum use of the notes capability ARTS can be used to post notes for internal or external use. Internal notes are normally displayed or reported for institutional personnel. External notes may be posted internally but also be interfaced to the Patient Account system for printing on statements. This capability to support such message printing transactions.

VI PAYMENTS AND ADJUSTMENTS, ACCOUNT MANAGEMENT

VI-1 PAYMENTS AND ADJUSTMENTS

The ability to post or memo post payments and adjustments to accounts is supported in ARTS. In order to provide payment posting that meets the needs of the institution, ARTS provides the ability to post payments by account, by guarantor/responsible party grouping, or by claim within an account. The ARTS Profile and the multiple functions and pathways in ARTS provides options whereby the institution can tailor its cash posting to its institutional policies. An example of this type of option, is the ability to allow ARTS to spread the payment to the oldest balance or the option to apply a payment only to a specified facility's outstanding balance.

In order to provide a mechanism for timely follow-up of accounts for guarantor liability, ARTS will allow a posted payment to be flagged as the last expected payment from a specific third party for account. This flag can create the transaction data for the patient accounting system to remove the account form the third party receivables. The account balance liability would revert to the guarantor or other third parties with claims outstanding.

The on-line entry of memo posted payments will reflect only a MEMO status until confirmation is received by ARTS that the transaction has been accepted and posted in the patient accounting system.

The ability to memo post contractual allowances, account adjustments and write-offs will be an interactive part of the payment memo posting. As with payments, the on-line entry of adjustments will reflect only a MEMO status until confirmation is received by ARTS that the transaction has been accepted and posted in the patient account system.

If ARTS does not receive confirmation of either payments of adjustments posting to the Patient Account system the memo entry will be removed from the Notes. The days delay until cancellation of the memo posting will be defined in the ARTS Profile.

Payments and adjustments can be researched, identified and entered in the same flow due to the ability of the Command Handler and Personnel Tables to support multiple function access by the posting operator.

Mass payment entry, such as remittance advices can be entered in the same manner as received without additional screen flips or re-batching to also include the adjustment related to the payment.

ARTS can also function in a stand alone basis and post all payments and adjustments in the same fashion as described above except that the payment or adjustment will immediately affect the account balance without verification from the patient accounting system.

ARTS is structured to retain payment and adjustment activity for the life of an account, based on the archive and purge criteria established by the institution.

VI-2 COLLECTION AGENCY ASSIGNMENT

ARTS provides the ability to determine when to assign an account, or group of accounts for a guarantor, from the active Accounts Receivable to Bad Debts. ARTS can also identify the collection agency to be assigned. Based on institutional decision within the ARTS Profile, ARTS will build the transactions to transfer accounts to Bad Debt through the batch process Interface to Patient Accounting and allow on-line transfers that will post to the account during interface processing. Included in the function will be the on-line ability to 'signal' ARTS (and the Patient Accounting system) to hold an account from transferring based on user intervention.

As accounts or guarantor groupings are passed to the Patient Accounting Bad Debt sub-system, ARTS will maintain data elements that allow for reporting on collection agencies. ARTS will provide a report of all accounts assigned to an agency, the dollars assigned and the totals by agency.

ARTS will retain data regarding accounts assigned to collection agencies based on purge and archive criteria defined by the institution.

VI-3 ACCOUNT MANAGEMENT REPORTING

ARTS provides reporting that can assist in good account management. The worklisting of accounts will eliminate the need for most printed reports; however, some audit and management reporting is appropriate and necessary.

The Report Profile system contains all of the tables used in the system for generation of reports. Profile maintenance is performed on-line via an authorized user operator using the ARTS provided pathways.

All ARTS reports are institutionally defined in numerous select criteria within the Report Profile Tables. These indicators include report description, sort and extract parameters, summary or detail print options, type and range of data to be retrieved and date parameters for routine, retrospective and special analysis reporting.

In addition, the ARTS Reports provide the institution with a comprehensive reporting structure for the monitoring, analysis and evaluation of ARTS assigned users. This history includes all aspects of the ARTS functionality to monitor the quality and timeliness of work performed as well as the effectiveness of the policies and procedures which the institution has selected to incorporate within ARTS.

The ARTS Profile Table system includes the following general use report structures:

Account Activity Audit Table
Age Trial Balance Table
Payment/Adjustment Batch Control Table
Batch Letters Table
Collection Agency Table
Data Completion Table
Guarantor Follow-up Activity Worklist Table
Guarantor Duplicate Table
Guarantor Follow-up Activity Supervisor Worklist Table
Guarantor Age Trial Balance Table
Interface Log Table
Patient Duplicate Table
Productivity Statistics Table
Report Aging Category Table
Third Party Follow-up Activity Worklist Table
Third Party Follow-up Activity Supervisor Worklist Table
Third Party Age Trial Balance Table

PRODUCTIVE DATA MANAGEMENT

ARTS - ACCOUNTS RECEIVABLE TRACKING SYSTEM

VII ALL PAYOR LOGS

The ability to perform charge, revenue, payments and adjustments reconciliation logging mechanisms for claims, third parties or diagnostic coding structures, ARTS provides this data retrieval via the Log Content and Definition Table and Log Column Definition Table. These tables provide limitless access and reporting of all data base elements within ARTS.

An example of log utilization would be:

- All Payor Logs, including concurrent financial review reporting for in-house patients, variance analysis (payor mix, volumes), management reports, physician analysis reports, and prospective vs. actual reimbursement monitoring.

- Medicare Logs, including correct calculation of Medicare reimbursement, concurrent financial review reporting of in-house patients, length of stay analysis, outlier identification and reporting, management reporting, and prospective vs. actual reimbursement monitoring.

VIII ARTS PROFILE

The Accounts Receivable Tracking System - ARTS is designed around an on-line Profile which is developed under and maintained by the PDM Table Manager software product. The ARTS Profile provides for extensive customization, by the institution, of output descriptions on screens, pathway flows, printout production and processing options. This extensive customization of the system, under Profile control, negates the need for the institution to undertake massive customization of this product of this product to meet the unique institutional requirements. The ARS Profile is maintained by the institution in an on-line, interactive fashion.

ARTS provides for the grouping of like Profile parameters together for ease of entry and maintenance. The grouping is usually based on the ARTS function of process being controlled by the parameters. For example, all personnel characteristics are grouped together in one table, all parameters which control archiving/purging are grouped together.

The tables in the Profile not previously defined include:

General Parameters - contains provider identification information such as name, address, and phone number. Provides for the definition of multiple entities. General system options and controls are defined.

Activity - contains the activities to be used in ARTS and the criteria under which each activity is governed. The decision criteria for the next activity and the length of time to remain at this activity is defined.

Archive/Purge - defines the elements of ARTS processing to be archived and/or purged. Controlled by the number of days after account reaches zero balance through payments, adjustments of write-off. Also, this table will control the purging criteria for third parties associated with patients and or accounts.

Assignment - defines the elements that will generate the assignment to Patient Financial Service personnel of accounts, cases, guarantors, third parties, etc.

Collection Agency - includes the name, address and phone number for collection agencies used by the institution in addition to assignment guidelines and statistical data.

Employer Master - includes the name, address and phone number and third party and third party plan by employer.

Employer Third Party - defines by employer the singular or multiple third parties and third party plans associated. Flags contract third parties and employer specific discounted business.

Financial Class - lists the eligible financial classes for the institution and acts as a validation table for their use. Financial Classes may be up to 4 alpha-numeric characters.

Function - contains an entry for each function (i.e. job flow) that ARTS can execute. Each entry has an institutionally defined minimum security level for access to that function.

Hospital Service - lists the eligible hospital service codes for the institution.

Identification Line - contains entries in which the institution defines the second line of information for ARTS screens based on screen date, i.e. whether third party, guarantor or account data.

Interface - this table provides the detailed information necessary in order to interface ARTS with the following patient information areas:

- A-D-T/Registration
- Accounts Receivable
  Cash Posting/Adjustments
- Billing
- Bad Debt

If Outpatient processing of the necessary files is handled separately, that interface is also developed by the institution within the interface table.

Letter Definition - specifies the criteria under which letters are generated, the format and verbiage of each letter including definition of the patient demographic elements to be inserted.

Claims Content and Definition - defines by claim type all required data elements required for claim submission by third party. Claims are edited against the table to restrict the generation of incomplete or erroneous claim coding.

Completion Data Elements - Contains the institutionally defined critical data elements to be captured in an account for the Patient, Guarantor and/or Third Party. This table provides the mechanism for the tracking of these data elements until capture is achieved. May be used in conjunction with the Third Party Plan Master characteristics to delay production in the billing system of bills and claim forms until completion of the required missing elements, provided that capability exists for the billing system.

Terms and Conditions - defines by third party all admission criteria, hospitalization requirements, review mandates, discounts to revenue, etc. for contracted third party reimbursement.

Patient Status - lists the patient status codes appropriate to the institution and acts as a validation table for their use. ARTS pre-defined codes are:

P	=	Pre-admit
A	=	Admitted
C	=	Cancelled
D	=	Discharge
R	=	Registered

This institution may define the patient status codes already in use and point them to the ARTS code.

Patient Type - list the eligible standard patient types for the institution and acts as a validation table for their use. Examples of possible entries are:

I	=	Inpatient
C	=	Clinic
E	=	Emergency
O	=	Outpatient
H	=	Home Health
S	=	Short Stay Surgery

Transaction Codes - acts a validation table for revenue, payment and adjustment codes entered through ARTS as correct for interface to the Patient Accounting System.

Report Definition - lists system options available for generation and customization of pre-formatted system reports.

Third Party Master - contains the specific Third Parties common to the institution and contains demographic information for each carrier as well as ARTS specific default criteria. Lists the completion elements that the institution defines by Third Party for Completion Data Tracking.

General Ledger - defines all general ledger coding structures specific to the institution.

UB82 Codes defines and validates all UB82 code utilization for claims generation.

Third Party Plan Master - a set of 'shells' defining the most commonly used third party coverage characteristics. These 'shells' should act as a template for verification personnel in capturing the details of policy coverage relating to a specific incident of care. The account will contain policy details specific to that account while allowing the Master Plan used to remain standard.

As ARTS functions are expanded, profile tables may be added to support those functions and help maintain institutional user control over implementation of ARTS option.

IX SECURITY

PCS-ADS utilizes a two digit numeric code for all security level checks. The higher the number,the greater access to ARTS functions are provided. Security levels for a particular user are specified in the user profile data base of PCS/ADS. ARTS also has an internal security level for the financial service areas. During ARTS installation, the customer may se a minimum security level for each function in ARTS via the Profile Function Table. For example, the institution has defined a minimum security of 30 for the Payment Posting function. A correspondence clerk with a security level of 10, signs on to ARTS and selects the functions Payment Posting. ARTS will check the Profile Function Table and not allow the correspondence clerk access to the function.

The standard security level for PCS-ADS are very general in their qualification and are used in ARTS as follows:

SECURITY LEVEL	DESCRIPTION
00-09	Administrative Support Information or Inquiry only
10-19	Limited Update capabilities
20-29	Limited Interdepartmental Update capabilities
30-39	Verification and Limited Interdepartmental Update capabilities
40-49	First Line Supervisory staff with Update capabilities
50-59	Second Line Supervisory staff
60-69	Third Line Supervisory staff
70-79	Fourth-Fifth Line Supervisory staff
80-89	Fifth-Sixth Line Supervisory staff
90-99	Reserved

X ARCHIVE AND PURGE

ARTS provides for the archiving of ARTS data to an off-line media for storage and subsequent batch retrieval. The ARTS Archive Subsystem is comprised of two components: 1) the actual archiving of data to magnetic tape in a bach mode, and 2) the on-line purging of the ARTS data.

ARCHIVE

ARTS archives ARTS data to magnetic tape based on several options that the institution defines. The institution define show long a patient's ARTS data will be maintained on-line after discharge. This is accomplished by setting ARTS Profile parameters. The ARTS Archive Subsystem uses these parameters to determine a patient's eligibility for archiving. The institution also defines, in an ARTS Profile table, the data elements to be archived along with their length and definition of any special processing to be performed.

The institution initiates the archive function periodically in batch mode. It is recommended that archiving be done either weekly or every other week. Once initiated, the ARTS ARchive Subsystem scans the ARTS data bases searching for zero balance accounts who meet the time criteria specified. Once a patient is identified for archiving, the ARTS Archive Subsystem writes the data elements specified for archiving to magnetic tape.

The ARTS archive tape consists of two distinct sections:

1. A layout of the archive data record(s). THis layout includes the ARTS data elements names, their lengths and their relative position in the archive record. This is similar to an Assembler DSECT and may be used by batch retrieval programs to extract data from the archive tape.

2. The archived data, in 'flat' record format.

During the archive process, ARTS may access other data bases to get information as necessary (***). An example of this is that each Terminal Operator identification field is used to read the PCS-ADS User Profile Data Base to obtain the Terminal Operator's name and title for archiving.

Multiple archive tapes may be merged together, as long as the record format is not different from one tape to the next. The arts Archive component does not update the ARTS Data Bases.

PURGE

The second component of the ARTS Archive Subsystem is the function that actually purges the ARTS data from the ARTS Data Bases. This function is performed on-line via an ARTS program. The ARTS Purge program is executed based on an institutionally defined schedule and does the following:

1. The institution defines, via ARTS Profile parameters, the length of time an account is kept on-line after zero balance is reached. The zero balance may be created by credits, payments, adjustments, write-off to Bad Debt or any other institutionally approved write-off. It is necessary that this length o f time e greater than the Archive length of time for synchronization. The ARTS Purge program uses these parameters to search the ARTS data bases looking for accounts that are eligible for purge. Once identified, ARTS purges that account from the on-line data bases.

2. The purge functions assumes that the first component of the ARTS Archive Subsystem (i.e., the archive to magnetic tape) has been run successfully and in a timely basis.

XI TECHNICAL ENVIRONMENT AND DESIGN GUIDELINES

The Account Receivable Tracking System operates in a standard (non-modified) CICS, IMS and PCS-ADS environment using 327x-type terminals and 328x-type printers. The Accounts Receivable Tracking System utilizes PCS-ADS standard software components such as the Screen Manager, the Generalized Editor, the PDM Data Administration Facility as well as the PDM Table Manager. Both DOS and MVS operating systems are supported. The Accounts Receivable Tracking System utilizes on-line, real time processes as well as batch processes to insure maximum system efficiency for any particular area of system functioning.

The system was developed using the following design guidelines:

1. ARTS uses all of the productivity features of the PCS-ADS software. WHile the system as delivered to an institution contains pathways and screens for all of the functions, the institution may easily modify the appearance of, access to, and flow of functions by simply modifying screens, DCL's and ARTS Profile parameters.

2. The Accounts Receivable Tracking System is designed around a Profile which is developed under, and maintained by, the PDM Table Manager product. The ARTS Profile provides for extensive customization, by the institution, of screens, pathways, printouts and processing options. The ARTS Profile is maintained by the institution in an on-line, interactive fashion via ARTS pathways.

3. The Accounts Receivable Tracking Systems is designed to interface to other appropriate systems installed within the institution in order to avoid duplication of effort by patient financial service personnel. Potentially appropriate systems for which interface structures are designed, include patient admission/registration, accounts receivable including cash posting, billing and bad debt.

4. The Accounts Receivable Tracking System was developed utilizing pre-established standards, guidelines, naming conventions and terminology consistent with industry standard practice.