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## **WHITE PAPER**

### **Fair Market Value of Patient Medical Records**

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## What Constitutes an Intangible Asset?

The question has come up lately as to whether a patient medical chart is really a tradable intangible asset. There are multiple characteristics that give rise to the existence and value of an intangible asset. According to Dr. Shannon Pratt, “there should be a specific bundle of legal rights (and/or other natural properties) associated with the existence of the intangible asset. For an intangible asset to have quantifiable value it should possess certain additional attributes such as:

- It should generate some measureable amount of economic income to its owner. This economic benefit may be in the form of an income increment *or a cost decrement*.
- It should enhance the value of other assets with which it is associated; the other assets may include tangible personal property, real estate, or other intangible assets.”<sup>1</sup>

According to the book, *Valuing Intangible Assets* by Robert F. Reilly and Robert P. Schweihs, for an intangible asset to exist from a valuation or economic perspective, it should possess a number of the following characteristics:

1. “It should be subject to specific identification and recognizable description.
2. It should be subject to legal existence and protection.
3. It should be subject to the right of private ownership, and the private ownership should be legally transferable.
4. There should be some tangible evidence or manifestation of the existence of the intangible asset (e.g., a contract, a license, a registration document, a computer diskette, a listing of customers, a set of financial statements, etc.).
5. It should have been created or have come into existence at an identifiable time or as the result of an identifiable event.
6. It should be subject to being destroyed or to a termination of existence at an identifiable time or as the result of an identifiable event.”

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<sup>1</sup> *Valuing a Business; The Analysis and Appraisal of Closely Held Companies*, Fifth Edition; Shannon Pratt, 2008.

A patient medical record possess many of the aforementioned characteristics and is widely considered by the valuation community to be a *patient-related intangible asset*. The clinical information and data recorded in a patient medical file belongs to the patient and not the physician or healthcare enterprise. Therefore, the clinical patient data cannot be sold by a physician or healthcare entity. However, the custodial rights to the assemblage of patient clinical data and information constitute a distinct, separate and identifiable intangible asset that can be transferred. Having custody and easy access to a patient's medical file is a valuable convenience and can be considered an intangible asset. Therefore, such right is subject to financial appraisal.

#### Does a buyer of a medical practice really need the patient charts?

This question has also been posed rather frequently. Many industry professionals believe that an owner/operator of a medical practice doesn't really need a patient's medical history documentation to accept them as a new patient. However, I have had many discussions with healthcare attorneys that believe there is significant risk in treating patients without knowing their medical history. Most large health system that are purchasing medical practices would likely be unwilling to take on such a liability and risk. Furthermore, there is a real and legitimate burden and inconvenience when a medical practice does not have physical custody of the patient files.

#### How does an appraiser value a medical record?

The **Income Approach** and **Market Approach** are not suitable methods of valuing a patient medical record. The **Income Approach** is ruled out because the medical records do not produce a measurable economic benefit or income stream. The **Market Approach** is not applicable because there is no known market for trading medical records.

The most common and appropriate method of appraising the economic benefit (i.e. fair market value) of the custodial rights to patient medical charts is derived from quantifying the *avoidance of the costs of assembling, maintaining and storing the patient medical charts*<sup>2</sup>. This valuation approach is also commonly referred to as the **Cost/Asset Approach** to value. These such costs represent the financial expenses that would be incurred by a potential purchaser who would choose to build rather than buy the custodial rights to the patient medical records. Stated differently, these are the costs a hypothetical buyer would incur to re-create each patient medical file.

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<sup>2</sup> *Healthcare Valuation* - Volume 2; Robert James Cimasi; 2014; page 845.

**Application of the Cost/Asset Approach - Paper Medical Record**

This valuation methodology can be performed by estimating the upper limit and lower limit of the expected value to the buyer and seller. The FMV of the custodial rights will fall somewhere between the upper value and lower value based on the specific facts and circumstances of the transaction.

*Upper Limit* - The upper limit, or ceiling, can best be determined by referring to the maximum allowable charge per state statute that a healthcare provider can charge another provider, patient or insurance auditor for the duplication of a patient medical file. For example, according to Kansas State Law a healthcare provider or medical records company shall provide copies of patient medical records and charge not more than the amounts set forth in the Kansas State Code<sup>3</sup>, which include \$18.97 per file for supplies and labor plus \$0.63 per page for the first 250 pages. For example, 1,700 patient files with an average number of 50 pages per file would be computed as follows:

Medical File Copy Maximum Charge Rate		
Number of patient files	1,700	
Standard state allowable fee per file	<u>\$ 18.97</u>	
Sub-Total		\$ 32,249
Average pages per file	50	
State allowable fee per page	<u>\$ 0.63</u>	
	\$ 31.50	
Total Files	1,700	<u>\$ 53,550</u>
Total duplication fee for 1700 files <i>w/ 50 average pages per file</i>		<u><u>\$ 85,799</u></u>
<b>Average cost per file</b>		<b>\$50.47</b>

This calculation serves as only a ceiling or upper limit which is the maximum amount a seller (i.e. owner of custody rights to patient files) could charge someone who requests a copy of a patient medical file. As will be described below, the likely FMV falls far below this level.

*Lower Limit* - The floor value or lower limit is best represented by an estimate of the empirical direct and indirect materials, labor and capital expenses required to re-create the patient medical records. These costs include the cost to request the files from the storage company and the staff time and expenses to physically scan each page of each file.

<sup>3</sup> "Fees for Providing Copies of Medical Records," Kansas Code 65-497(b)

This particular methodology of valuing medical records depends highly on the assumptions utilized by the valuation analyst. Below is a set of assumptions that are normally used in this scenario:

1. The hypothetical seller of the medical practice will store the medical files with a third-party file storage company if custody of the patient files does not transfer to the hospital/buyer.
2. The buyer will choose to have the medical files scanned and converted to a PDF file format rather than imaged onto paper.
3. The requestor of a patient file will incur the file reproduction and retrieval costs.
4. The requestor of a patient file will choose the more economical option to duplicate a file since it is a homogeneous service (i.e. file duplication).

The requestor of a medical file customarily bears the cost from the storage company (e.g. Iron Mountain, Cintas, RecordNations, Underground Vaults & Storage) to obtain and duplicate the file. There are two ways a requestor of a medical record can obtain a patient's medical file:

1. Request the file from the third-party storage firm and pay the standard image-on-demand fee, or
2. Request the hardcopy file from document storage and have the in-house medical records clerk scan the chart.

### ***Image on Demand***

The first option requires paying the third-party document/data storage company to duplicate the needed files. We researched two well-known national document storage services; Cintas and Iron Mountain. Iron Mountain and Cintas charge a fee of \$20 and \$22, respectively, to scan a patient file to a PDF format. Therefore, the requestor of a medical file must pay this fee each time a patient file is needed. In addition, there is the time and inconvenience in ordering the patient files each day/week.

### ***In-House Imaging/Scanning***

The second option is to request the hardcopy patient file from the current custodian (storage firm) and have the internal medical records clerk scan the file. The requestor must pay the document management firm a file retrieval fee of \$5 per patient file to pull the hardcopy file.

Based on the analysis in the table below, it is more economical to simply request the hardcopy file and have the internal staff scan each patient file. Therefore, we assume the hypothetical buyer who demands medical records would choose option #2 above, because it is a more economical solution.

The table below outlines all the specifics costs and inputs for a physician practice to re-create a patient medical file.

Medical File Re-Creation Cost Analysis			
			Cost to Re-Create File
<u>Annual Compensation for Medical Records Clerk</u>			
<sup>1</sup> Records Clerk - National Median	\$	44,921	
<sup>1</sup> Medical Records Clerk - Wichita, KS - Average	\$	43,606	
<sup>2</sup> Medical Records Clerk - National	\$	28,600	
Average Compensation	\$	39,042	
Annual Hours		2,080	
<b>Average Hourly Rate for Medical Records Clerk</b>			<b>\$ 18.77 A</b>
Average Number of Pages per File <sup>3</sup>			50 B
Estimated Number of Pages Scanned per Hour <sup>4</sup>			1350 C
Estimated Number of Patient Charts Scanned per Hour			27.0 D - C/B
Average Hourly Rate/Cost to Scan One (1) Patient Chart	\$	0.70	A/D
Number of Active Patient Files (per management)		1,700	
Average Staff Cost to Scan One File	\$	0.70	
Estimated Cost to Scan All Medical Records	\$	1,182	
Plus: Retrieval Fee of \$5 per File <sup>5</sup>	\$	8,500	
Total Estimated FMV of 1,700 Patient Files (rounded)	\$	10,000	
FMV per File	\$	5.88	
<u>Footnotes:</u>			
<sup>1</sup> Obtained from Salary.com; includes base salary, bonuses and benefits			
<sup>2</sup> Obtained from indeed.com; includes base salary, bonuses and benefits			
<sup>3</sup> Based on random sampling of 35 patient files and page counting performed my Hospital management			
<sup>4</sup> Based on 30 pages per minute scanning output and 15 minutes per hour for file handling (45 minutes X 30 pages per minute = 1350)			
<sup>5</sup> Inferred market rate based on discussions with several document/file storage firms			

### Alternative Solutions

Yet, another alternative is for the medical practice to request the needed patient files from the storage company and have them copied or imaged to PDF format at FedEx Kinkos. The cost associated with this file re-creation solution are as follows:

Copying and Imaging Costs - FedEx Kinkos			
		Total Cost to Copy	Total Cost To Scan
Quoted Rate to Copy/Scan <sup>1</sup>		\$ 0.12 per page	\$ 0.25 per page
Number Files	1700		
Average Number of Pages	50		
Total Number of Pages		85,000	85,000
		\$ 10,200	\$ 21,250
Number of Files		1,700	1,700
Average Cost to Scan/Copy File		\$ 6.00	\$ 12.50
<u>Plus:</u>			
File Retrieval Fee <sup>2</sup>		\$ 5.00	\$ 5.00
Total Cost per File		\$ 11.00	\$ 17.50
<u>Footnote:</u>			
<sup>1</sup> Quoted rate from FedEx Kinko's			
<sup>2</sup> Inferred market rate based on discussions w ith several document/file storage firms			

## CONCLUSION OF FAIR MARKET VALUE

As shown in the table below, the range of possible solutions to re-create a patient medical record could cost a hypothetical buyer between \$5.88 and \$22 per file.

File Re-Creation Solutions			
	Copying Cost	Scanning Costs	Imaging Fee from
	FedEx Kinkos	FedEx Kinkos	File Storage Firm
Cost per File	\$ 5.88	\$ 11.00	\$ 17.50
			\$ 22.00

\* Based on 1700 patient files and 50 average pages per file

I believe a prudent hypothetical buyer **would not** be willing to pay much more than \$5.88 per chart. And since the current owner of the custodial rights to the medical files typically must pay an annual fee to store the files, the prudent hypothetical seller would be willing to forego the storage expense in exchange for \$5.88 per medical file. Since \$5.88 per file is the *avoided cost* by the buyer, the fair market value of a patient medical file, in this particular example, would be \$5.88.

Application of the Cost/Asset Approach - **Electronic Medical Record (EHR)**

Calculating the FMV of electronic medical records (EHR) is performed in a similar manner by analyzing the likely costs that would be avoided by the hypothetical buyer of EHRs. So, what does this look like?

Most hospital buyers in today's market environment operate on an EHR platform. Therefore, the buyer of medical records would much prefer to have the file in electronic format rather than paper form. It takes significantly less time and expense to perform a data migration/integration on an EHR platform than it does to convert paper files to electronic format. Therefore, the *avoided cost* is represented by the estimated time it takes to convert paper records to electronic format.

The cost associated with converting paper medical files to electronic format include primarily labor costs. Most medical practices that convert from paper files to electronic files do so gradually. They would set a "go live" date and each patient that come into the office is entered into the EHR system. The labor costs associated with a paper file-to-electronic file conversion can be measured using the following formula:

$$\frac{(\# \text{ of keystrokes per page} \times \# \text{ of pages per file} \times \# \text{ of records} / \# \text{ key strokes per minute})}{60 \text{ minutes per hour}}$$

$$\times \$ \text{ hourly labor Rate} = \$ \text{ labor cost of conversion}^4$$

Using an example of 1,700 patient medical files and 50 average pages per file, the cost analysis would be as follows:

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<sup>4</sup> *Healthcare Valuation* - Volume 2; Robert James Cimasi; 2014; page 847

Paper File to Electronic File Conversion Costs	
Description	Estimated Costs/Metrics
Estimated # of keystrokes per page <sup>1</sup>	250
Estimated # of pages per file <sup>1</sup>	25
Average # of keystrokes per patient file	6,250
Actual number of patient records	1,700
Total estimated number of keystrokes	10,625,000
# of keystrokes typed per minute <sup>2</sup>	133.33
Total estimated # of clerical minutes of typing/inputting	79,688
Minutes per Hour	60
Total estimated # of clerical hours to type/input patient data	1,328
Market hourly rate for medical records clerk	\$ 18.59
Estimated Cost to Re-Create 1700 EHRs	\$ 24,690
Average Cost per Electronic Health Record (EHR)	\$ 14.52
<b>Footnotes:</b>	
<sup>1</sup> HVG estimate; approximate figures can be obtained from actual case	
<sup>2</sup> Average of 8,000 KPH (keystrokes Per Hour)/60 minutes = 133.33.	
Source: <a href="http://www.learn2type.com/typingtest/tenkeyspeed.cfm">http://www.learn2type.com/typingtest/tenkeyspeed.cfm</a>	

## CONCLUSION OF FAIR MARKET VALUE

In this particular example, the *avoided costs* by the hypothetical buyer of EHRs is \$14.52 per EHR which is the total estimated cost that the buyer would normally incur to convert the paper files to electronic format. Therefore, the fair market value of a single EHR, in this example, is \$14.52.

*It is important to note that no valuation model is perfect and the ultimate outcome is based on the specific facts, circumstance and assumptions of the particular case.*