Physician - Patient Privacy:  
A Study of the Prevalence, Frequency, and Methodology of Alternate Charting

By

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A thesis submitted in partial satisfaction of the requirements for the degree of

Master of Science

In

Health and Medical Sciences

In the

GRADUATE DIVISION

of the

UNIVERSITY OF CALIFORNIA, BERKELEY

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Spring 1999
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ABSTRACT

Background:
Patient privacy and the confidentiality of the medical chart does not exist. There are three factors that contribute to private health information management. 1) Lack of privacy with the medical chart, 2) patient perception of this and the accompanying alteration of health seeking behavior and 3) physician practices with alternate charting (any form of editing information before it enters the medical chart). It has not previously been known whether alternate charting actually occurs, although its existence has tremendous implications for patients, physicians and all organizations that rely on health data for research and other purposes.

Methods:
To document the practice of alternate charting by physicians, an anonymous mail survey was sent to a proportional random sample of 600 Family Practice and Internal Medicine physicians in the Bay Area. These physicians must have been actively working in any of the 9 counties of the Bay Area. The response rate to the survey was 56% and was analyzed using STATA to tabulate and analyze for association.

Results:
Among the respondents, 82 percent reported deliberately leaving out pertinent medical information from the official medical chart at some point in their medical career, 59 percent reported currently leaving out information, and 46 percent reported alternate charting. Nearly one quarter (23 percent) of the physicians who alternate chart make 6 or more alternate charts per month with the mean number of 92 patients seen per week. Only 14.2 percent of consulting physicians had access to the alternate chart and a significant number of patients were not told that they had an alternate chart. The most popular method of alternate charting was the use of code words to disguise information followed by the use of post-its or detachable pages that detached when the official medical chart was copied or sent out of the office. Alternate charts were made most frequently for HIV+ status, history of recreational drug use, and sexual orientation. Physician demographics showed no significant association with the practice of alternate charting. However, individual physician perceptions of patient privacy being increasingly compromised (p<.000), threats to privacy straining the physician – patient encounter (p<.003), and how alternate charting affects the quality of care (p<.003) were significantly associated with the practice of alternate charting.

Conclusion:
Alternate charting is not medical folklore. It does occur and needs to be recognized. The risks of alternate charting include loss of crucial medical information to other physicians caring for the patient, ethical and legal risks to physicians who alternate chart, and skewing of all secondary data that is based on medical chart information. In the face of these risks, the fact that almost half of physicians engage in alternate charting highlights the importance of privacy in medicine. Efforts to preserve privacy which try to regulate the medical chart without recognizing the importance of alternate charting are not adequate. Guidelines to regulate and safeguard the practice of alternate charting are necessary, and the creation of a national database of medical information may alleviate some of the problems with alternate charting. Alternate charting is a necessary
component of preserving medical privacy and efforts to study and protect this practice to minimize the risks are necessary.
INTRODUCTION

There are three main factors that interfere with the goals of preserving patient disclosure and preserving the confidentiality and privacy of medical information. These are: 1) the lack of privacy of the medical chart; 2) patient perception of the lack of privacy and the accompanying changes in health seeking behavior; 3) Physician practices with alternate charting in an effort to preserve patient privacy. I investigated this third component, alternate charting asking specifically:

- Do physicians alternate chart?
- What is the prevalence of physicians who alternate chart?
- How often are alternate charts made?
- How is this done?
  - Who initiates the alternate chart?
  - Who has access to the alternate chart?
  - What methods are used?
  - What factors precipitate the alternate chart?
  - What conditions warrant alternate charts?

Once personal information is recorded into the official medical chart, it is no longer private. The American Medical Records Association has identified “twelve broad categories of “social” users and twenty-four ways medical information is used outside the medical treatment and payment process.” 1, p.261 Patients today are concerned about the privacy and confidentiality of their medical information. 1, p.247 2, p.850 3, p.6 Up to 47% of patients report withholding possibly pertinent medical information from their physicians. 4 Efforts to preserve the confidentiality of medical information focus essentially on two foci, regulating the destination of the medical chart and editing personal information entered into the medical chart. First, I will focus on the regulation and control of the destination of the medical chart. This includes regulating access to the
chart as well. While the Department of Health and Human Services (DHHS), various Senators (Kennedy, Leahy, and Benett, to name a few), and House Representatives (Rep. Condit) are proposing regulations or legislation to control the destination of, and access to the medical chart, there are few federal laws or regulations currently in existence. While there are state laws that regulate the privacy of medical records, existing laws are far from comprehensive, only occasionally provide meaningful guidance, and privacy lawsuits hardly ever succeed. It is logical to assume from the lack of regulation that, once information is in the medical chart, it is accessible to numerous organizations for a variety of different purposes. The other variable in efforts to preserve the privacy of medical information centers on controlling the flow of information before it gets into the medical chart by selectively editing the information as it is entered into the medical chart. Thus, the second possibility is to alternate chart. This is defined as:

Any method of recording information, which would otherwise be written directly and fully into the medical chart. This may include but is not limited to: Using code words which refer to certain conditions or elements of the personal history; Writing on post-its or detachable pages which can be removed before the chart is sent out of the office; Creating completely separate “shadow” charts which detail private information and which stay in the office not to be sent out with the official medical chart; Using code colors or stickers which indicate certain conditions, risk factors, or other elements of the person’s history.

Since, there are numerous ethical and legal issues involved with this type of practice, there is a question as to whether alternate charting actually happens. Do doctors practice alternate charting, and if so, how do they do it? The results of this study show that alternate charting does occur. But first, in order to understand the importance and the

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* Alternate Charting is defined on the next page.
* As this is the first study which details this type of practice in physicians, the definition of Alternative Charting was created and defined as part of this study.
implications of alternate charting, it is essential to recognize the issues surrounding medical information privacy and the possible harm unauthorized access can do.

Additionally, it is important to understand the motivating factors driving physicians to alternate chart and the possible repercussions of this particular practice.

**Public Medical Chart**

The medical chart is becoming more comprehensive and as a document is increasingly central to the medical care delivery system. Initially, at the turn of the century, the medical chart was a ledger of names, dates and a record of payment. The evolving paradigm of medical care delivery changed the amount and the methods of recording medical information. With more knowledge of disease processes, mechanisms of disease and prognostic risk factors, it became more important that the patient disclose pertinent medical information and that the physician be more diligent about recording that information. Specifically, the information explosion, medical specialization, the advent of third party payers and the increasing frequency of patient mobility (specifically in regard to changing physicians) has lead to a need for more comprehensive and aggressive recording of medical information. Thus, within the past 50 years, there has been a marked increase in the amount of medical information that has been routinely recorded and transferred. The consequence of this is the existence of a document that now contains more intimate, personal information on a person than can be found in any other single document.
The comprehensive nature of the medical chart has made it a valuable resource for secondary uses. The American Medical Records Association (AMRA) has documented 12 distinct categories of non-medical "social uses" of the medical chart and 24 different ways the information is used. Some examples cited include public health research, medical and social research, employers, insurance companies for tracking the treatment process and ensuring accurate delivery of medical care, insurance companies for screening new applicants, government agencies on all levels, judicial processes and law enforcement agencies, education institutions, the media, and even credit investigation agencies. The AMRA acknowledges that this is an incomplete list and does not distinguish between appropriate and inappropriate uses. As evident here, the medical chart has transcended its uses as a document strictly for planning patient care and is now used as a legal document, research tool, and a record of medical services and treatment provided. The majority of the American public is aware that their medical chart is not confidential, but most people "would be surprised at just how exposed they really are." 

In an effort to curb the rampant secondary uses of the medical chart, especially the inappropriate uses, legislation is being proposed by a number of politicians and departments. The privacy issue has not been a legal focus in the past, as evident from the lack of federal legislation on the matter. Currently, there is no comprehensive federal
legislation regulating the privacy of medical chart information. However, the Health
and Kassebaum, specified that legislation regulating access and usage of the medical
chart must be passed by August of 1999. 12, p.152 Failure to pass such legislation would
shunt the responsibility of drafting and implementing such regulation to the Department
of Health and Human Services.13, p.59**

While the implementation of legislation or regulation to control access and usage
of the medical chart is crucial and will help solve the privacy dilemma, this may not be
adequate to fully secure the confidentiality of the medical chart and the privacy of the
patient – physician encounter. This is true for two reasons. First, because the medical
chart is such a valuable resource, there is considerable surreptitious trafficking that
cannot be stopped through simple legislation. Second, case examples have shown that a
number of the most harmful and devastating instances of medical chart disclosure are due
to carelessness, even with adequate regulation.

While there have been attempts to document the various uses of the medical chart,
and it is widely acknowledged that the chart is used for many purposes both within and
outside the medical field, there is no comprehensive source that details all the uses of the
medical chart. This is presumably due to the fact that there is considerable evidence of
surreptitious trafficking of medical charts. Case examples and past litigation have
highlighted this fact. To illustrate, here are a few examples. Twenty-four hospital clerks
in Maryland were convicted of selling private patient information obtained from the State’s Medicaid database to four local health maintenance organizations in 1995. 2. p.850 Additionally, the Royal Commission in Ontario, Canada, after testimony from over 500 witnesses, concluded that illicit activity was occurring to procure unauthorized medical information. The Royal Commission was able to elicit an admission from the Insurance Bureau of Canada that its members had gathered medical information without the authorization of the patient. Subsequent investigations exposed a number of these insurance companies as subsidiaries of American companies. 1, p.265 Furthermore, in a Privacy Commission report to the U.S. Senate, the District Attorney of Denver Colorado, Arthur Tooley described the practices of an investigative reporting agency that had been convicted of "engaging in a nationwide business of obtaining medical information without the patient’s consent." This company had file cards on virtually every hospital in the nation. Their practices included paying nurses and interns to gather information, and even using employees to pose as doctors to elicit personal information. 14 The conclusion of the Privacy Protection Study was that "from the evidence, it is clear that the problem with respect to the privacy of medical records in this jurisdiction exists in many cities and jurisdictions across the nation." 1, p.265

The second reason contributing to the decreased efficacy of legislation and regulation is the fact that simple carelessness results in a number of the most devastating instances of compromised confidentiality. For example, at the Newton-Wellesley Hospital in Boston in 1995, a convicted rapist, who was subsequently working as an

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and the relationships between various legal entities, while interesting and clearly germane, is not the intent of this paper. As such, this complex issue is beyond the scope of this paper.
orthopedic technician, used a top-clearance password from a departed senior executive (the password was never terminated when the executive left) and gained access to numerous patient records. He then scanned 954 electronic medical charts for the phone numbers of girls, some as young as 8 years of age, to whom he allegedly made obscene phone calls. Another example occurred in Florida. A teenage daughter of a hospital employee used a vacant computer terminal and gained access to the records of patients who had come in for pregnancy or HIV tests. As a joke, she then called them up and told them they were pregnant or HIV+. Thus, it is evident that legislation and regulation, while key to ensuring medical record confidentiality, can never fully ensure privacy.

Patient Perception and Behavior

As mentioned earlier, patient disclosure is key to a successful patient – physician relationship and essential to adequate health care delivery. “In the therapeutic context, health information is confided by or collected from patients under the patients presumption that it is necessary to meet his or her therapeutic needs.” Additionally, the fact that the primary purpose for the collection and recording of personal information is now, and has always been, to benefit the patient, is testimony to the importance of patient disclosure. Secondary medical chart usage and medical chart information disclosure is a problem worthy of recognition. Furthermore, it requires modification if patients perceive the associated lack of confidentiality as a problem, and if it affects patient disclosure and health seeking behavior.

First, numerous surveys show that an overwhelming majority of the American public is concerned about the confidentiality of their medical records. A poll in 1998 for
the U.S. Congress showed that 75% of the American public “...don’t believe that their medical records are truly confidential.” 3 Public awareness is further highlighted by a recent survey showing that 85% of the American public is concerned about the privacy of their medical records, calling it a “very important or essential issue.” Additionally, 27% of the same respondents reported actually knowing that their medical information had been improperly used. 18

While patient perception that the confidentiality of their medical record is a problem, it becomes a critical issue when this perception leads to decreased disclosure of pertinent medical information and changes health seeking behavior. It has long been postulated that without the understanding that patient’s disclosures will be kept secret, patients may withhold personal information. 19, p.522 In fact, fear of the loss of confidentiality does change disclosure and health seeking behavior. In a recent anonymous survey of 263 patients (90% of whom responded), at two general medicine clinics affiliated with UCSF, 47% of the respondents reported withholding medical information from their physicians; 26% reported that they would not have responded openly even if directly asked about a specific topic; and 19% reported asking their physician not to write certain information into the official chart. 4 Furthermore, a survey of high school aged adolescents in central Massachusetts (1,493 students, 87% of whom completed the survey), concluded that “a majority of adolescents have concerns they wish to keep confidential and a striking percentage report they would not seek health services because of these concerns. Interventions to address confidentiality issues are thus crucial to effective adolescent health care.” 20 Thus, concerns about the lack of confidentiality are a problem because they affect patient disclosure and health seeking
behavior. It is clear that the preservation of the reality and perception of trust and confidentiality of personal medical information is crucial to the maintenance of quality health care.

*Alternate Charting*

The major focus on medical records’ privacy and the flow of medical information has centered on the destination of the medical chart. However, given the importance of disclosure, the overwhelming perception that there is no medical chart confidentiality, and the pressure physicians feel to preserve patient confidentiality, it makes sense to look at physician practices with alternate charting. Furthermore, this issue is critical when we consider the central role the medical chart plays in preserving pertinent medical information for a patient who is seen by multiple physicians, and in being used by numerous organizations for legitimate research and the social good. Thus, it is evident that the recognition of alternate charting has tremendous implications both within the medical field, and for all organizations downstream, who rely on accurate and complete medical chart information.
METHODS

Study Design:

This study was modeled after Dillman's Total Design Method. The questionnaire was made into a booklet 8 pages long measuring 6 X 81/2 inches. It consisted of 24 questions, ultimately translating into 62 distinct variables. The mailings included the questionnaire, a stamped, pre-addressed return envelope, and a cover letter. Additionally, the first mailing included a $1 bill. A list was compiled with ID numbers to track the physicians. This ID number was on the return envelope, but not on the questionnaire. As soon as the survey was returned, the number was recorded and the envelope destroyed. Thus, all the surveys were anonymous. The second and third mailings were similar, with the exception of the $1 bill and minor changes to the cover letter.

In looking at physician practices with editing and selectively disguising or concealing information before entering it into the medical chart, it became necessary to define a new term because this practice has never been documented before. The term Alternate Charting is defined in the introduction. There are essentially two categories of information that are disclosed but not entered into the official medical chart. These include information that is not considered pertinent to the delivery of quality medical care, and information that is pertinent, but too sensitive or private to trust being put into the official medical chart. Recognizing this, it was necessary to differentiate between the two categories. I wanted to study the management of information in the latter category (information that is pertinent but too sensitive to trust in the medical chart). It makes sense to leave this differentiation to the individual physician. Since there is a lot of

* Refer to Appendix A for a copy of the survey and associated materials
irrelevant information that is not important enough to the patient’s medical care to write down, it is logical to assume that any information which is written is considered important to the patient’s medical care. Thus, I specifically limited the definition of alternate charting to any information that is written and chose not to include mental notes or other information that is left out. It is important to recognize that a subset of physicians (29.6% according to the data) leave out medical information that they consider pertinent to medical care, but make no written notation of it, relying only on mental notes.

Study Population

There are 69,611 board-certified physicians in the state of California. The most current information detailing physician distributions in 1997 show that Family Practice physicians comprised almost ten percent of total physicians and Internal Medicine physicians comprised 15.7% of the total number of physicians in California. [AMA, 1999 #45] I sampled 600 Family Practice and Internal Medicine physicians proportionally, in the nine counties of the San Francisco Bay Area, which collectively account for twenty-six percent of all physicians in California. This included the counties of Alameda (4.5%), Contra-Costa (2.7%), Marin (1.7%), Napa (.5%), San Francisco (5.7%), San Mateo (3%), Santa Clara (5.7%), Solano (.8%), and Sonoma (1.4%). The sample list (table 1) was obtained from the California Medical Association from a database that included all physicians in the Bay Area, board certified as either Family Practice or Internal Medicine physicians. Physicians were sampled using a stratified random sampling design by geographic location.
<table>
<thead>
<tr>
<th>County</th>
<th>Family Practice</th>
<th>Internal Medicine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alameda</td>
<td>310</td>
<td>493</td>
</tr>
<tr>
<td>Contra-Costa</td>
<td>186</td>
<td>296</td>
</tr>
<tr>
<td>Marin</td>
<td>117</td>
<td>186</td>
</tr>
<tr>
<td>Napa</td>
<td>34</td>
<td>55</td>
</tr>
<tr>
<td>San Francisco</td>
<td>393</td>
<td>624</td>
</tr>
<tr>
<td>San Mateo</td>
<td>207</td>
<td>329</td>
</tr>
<tr>
<td>Santa Clara</td>
<td>395</td>
<td>620</td>
</tr>
<tr>
<td>Solano</td>
<td>55</td>
<td>88</td>
</tr>
<tr>
<td>Sonoma</td>
<td>97</td>
<td>153</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1794</strong></td>
<td><strong>2844</strong></td>
</tr>
</tbody>
</table>

*Table 1 Number of physicians per county sampled from.*

The list of physicians provided by the CMA was two years old, and subsequent investigation of addresses showed that a significant number (about 14% were confirmed) of the sampled physicians had moved. Because the CMA would not release the phone numbers for policy reasons, I was not able to follow up by phone. Furthermore, because I could only disqualify a physician who moved if I got any of the envelopes back with a stamp stating the wrong address or other mode confirming that the physician was no longer at that address, I could not account for other nonrespondents who may have moved and could not disqualify them. Physicians were not counted in the sample size if we confirmed that they never could have received the survey (i.e. confirmed wrong address). Additionally, physicians were disqualified if they were retired or practiced another specialty, even if they were Board Certified as Family Practice or Internal Medicine. The final response rate was 56%, 295/527.

*Analysis*

The returned surveys were given a new ID number, which had no relation to the respondent. The responses were entered into an Excel file for storage and subsequently
imported into STATA. All of the statistical analysis was done using STATA. The analysis of the data involved essentially two phases, tabulation and analysis for association. The tabulation phase involved three distinct categories demographics, information on physician views regarding privacy and its effects on medical practice, and physician practices with alternate charting. In analyzing for association, I decided first to create categorical variables for all data elements. I then crossed each variable with all the others to test for statistical significance using either the Chi square test or Fischer’s Exact Test where variables had small numbers per cell.  

For the questions about the importance of precipitating factors to alternate charting and the medical conditions that are charted, I used a 5 point scale from least important to most important and very unfrequently to very frequently, respectively. This allowed me to analyze the absolute importance or frequency and to estimate means for the different variables in these questions.

Because I was surveying physicians about their views, any comment they had on patient behavior is second hand information. Given that this practice of alternate charting involves both patients and physicians, it is logical to assume that physicians are in a position to accurately comment on patient behavior. However, I did not ask physicians to guess at patient behavior, rather I asked them to report what patients have actually told them. It is important to remember that while useful and telling, information on patient perspective is second hand information. Possible future research on alternate charting should include an examination of patient behavior in regards to requesting alternate charts.
<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Number (#)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>187</td>
<td>63.4%</td>
</tr>
<tr>
<td>Female</td>
<td>90</td>
<td>30.5%</td>
</tr>
<tr>
<td>Unknown</td>
<td>18</td>
<td>6.1%</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian american</td>
<td>40</td>
<td>13.6%</td>
</tr>
<tr>
<td>Caucasian american</td>
<td>206</td>
<td>69.8%</td>
</tr>
<tr>
<td>Hispanic american</td>
<td>11</td>
<td>3.7%</td>
</tr>
<tr>
<td>Other</td>
<td>16</td>
<td>5.4%</td>
</tr>
<tr>
<td>Unknown</td>
<td>22</td>
<td>7.5%</td>
</tr>
<tr>
<td>Practice type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closed panel HMO (e.g. Kaiser)</td>
<td>45</td>
<td>15.3%</td>
</tr>
<tr>
<td>Private practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large multispecialty</td>
<td>24</td>
<td>8.1%</td>
</tr>
<tr>
<td>Group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solo or Small Group</td>
<td>137</td>
<td>46.4%</td>
</tr>
<tr>
<td>Academic Practice</td>
<td>24</td>
<td>8.1%</td>
</tr>
<tr>
<td>Other</td>
<td>46</td>
<td>15.6%</td>
</tr>
<tr>
<td>Unknown</td>
<td>19</td>
<td>6.4%</td>
</tr>
<tr>
<td>Years out of residency training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-8 years</td>
<td>85</td>
<td>28.9%</td>
</tr>
<tr>
<td>9-18 years</td>
<td>91</td>
<td>30.8%</td>
</tr>
<tr>
<td>19-28 years</td>
<td>63</td>
<td>21.4%</td>
</tr>
<tr>
<td>29 + years</td>
<td>37</td>
<td>12.5%</td>
</tr>
<tr>
<td>Unknown</td>
<td>19</td>
<td>6.4%</td>
</tr>
</tbody>
</table>

*Table 2. Demographic information on all respondents. n=295*
Results

Given the state of medical health care delivery in the U.S. and the pervasiveness of the issue of medical charts and confidentiality, it is crucial to look at physician practices with alternate charting. Specifically, I am referring to the factors mentioned in the introduction, which include abuses with the lack of medical chart confidentiality, the adverse effect this has on patient health seeking behavior and the potential implications of unrecognized inaccurate or incomplete medical records. Thus, the main research questions of this study revolve around physician management of sensitive, private, potentially damaging, personal information. I wanted to know if physicians were engaging in alternate charting, and if so, I wanted to document the practice. Specifically, the questions I wanted to answer are:

1. Do Physicians Alternate Chart?

2. What is the Prevalence of Physicians who Alternate Chart?

3. How often are Alternate Charts made?

4. How is this done?
   a) Who Initiates the alternate chart?
   b) Who has Access to the Alternate Chart?
   c) What Methods are used?
   d) What factors Precipitate the Alternate Chart?
   e) What Conditions warrant Alternate Charts?

1 & 2) Prevalence

In answer to the first two questions, our results show conclusively that physicians do alternate chart with a prevalence of 46.6% (fig.1) of all the respondents.
A large majority (82.1%) of the respondents reported deliberately leaving out pertinent medical information at some point in their medical careers, while 59.9% of the respondents reported that in their medical practices, they currently leave out pertinent medical information. (fig. 2) Thus, 22.2% of the respondents do not currently leave out pertinent medical information although they have in the past. Of the respondents who have ever left out pertinent medical information, 29.6% reported making no written notes, memorizing all pertinent information they leave out. 31.4% reported memorizing most of the information, but making occasional written notes; 11.8% reported writing and memorizing left out information equally; 14.6% reported making more written notes than mental notes; and 12.7% reported always writing things down (fig. 3). Of the physicians

*Alternate Charters, FP & IM Physicians, SF Bay Area, 1999*

![Bar chart](chart.png)

**Figure 1**

- Yes
- No

who reported alternate charting, 9.5% do not currently engage in this practice.
Percentage of FP & IM Physicians Who Leave Pertinent Information Out of the Chart, SF Bay Area, 1999

![Bar Chart](image)

Figure 2

□ Yes □ No

Percentage of FP & IM Physicians Who Make Mental vs. Written Notes About Pertinent Medical Information, SF Bay Area, 1999

![Bar Chart](image)

Figure 3
3) *How often alternate charts are made*

The number of alternate charts physicians made per month varied widely and ranges from less than one a month to seventy-five charts per month. To this end, data shows that 8.8% of the respondents who alternate chart make less than one chart per month; 27.2% made one chart a month; 40.8% made between 1.1 to five charts per month; 7.2% made between six to nine charts per month; 15.2% made more than ten charts per month; and 0.8% of the physicians who reported alternate charting made seventy-five charts per month (fig. 4). Physicians saw a mean of 92 patients in a typical 5-day workweek.

![Number Of Alternate Charts Made Per Month, Per Physician, SF Bay Area, 1999](image_url)

**Figure 4**
4a) Who initiates the alternate chart*

We categorized all physicians who alternate chart into three categories: 1) physician self-initiates the alternate chart, meaning that he/she individually decides to withhold certain data from the official medical chart without patient input or awareness; 2) physicians and patients jointly initiate the alternate chart; 3) the patient specifically requests a separate chart. These categories are not mutually exclusive. Most physicians fell into more than one category. For example, a physician might report that he/she self-initiated alternate charts 60% of the time, initiated jointly with the patient 10%, and

![Figure 5](image)

initiated by patient request 30% of the time.

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* These percentages all specifically refer to the respondents who responded that they alternate chart. i.e. 100% refers to 100% of physicians who alternate chart.
The data (fig. 5) show that 22.1% of the physicians only self-initiate alternate charts, 8.7% of the physicians always initiate an alternate chart only by patient request and 3.9% of the physicians only initiate an alternate chart jointly with the patient. Conversely, 18.1% of the physicians never initiate an alternate chart by themselves, 37% never initiate alternate charts by patient request, and 52.8% never initiate a chart jointly with the patient. We did not ask more specifically about physicians changing alternate chart initiating patterns.

A minority of physicians (22.1%) always self-initiate the alternate chart. However, 81.9% of the physicians who alternate chart report self-initiating some of the time. Among the physicians who self-initiate the alternate chart, 21.7% always tell the patient that the alternate chart exists; 22.5% tell most of the patients; 17.5% tell the half of the patients; 28.3% of the physicians tell less than half the patients; and 10% never tell patients of the existence of the alternate chart. Thus, the majority (61.7%) of physicians self-initiating an alternate chart tell half or more of their patients that an alternate chart exists. (fig. 6)
4b) *Who has access to the alternate chart*

Alternate charting allows the physician to personally control access to certain information allowing him/her to provide more direct and supervised control of sensitive medical information to better protect the patient and reduce the potential harm of patient disclosure. (fig. 7) Not surprisingly, 100% of the physicians who alternate chart have access to the alternate chart they made. There is a significant drop in access to everyone else: 54.3% of the physicians who alternate chart allowed their office staff access; 49.6% of the physicians allowed access to other physicians within the same practice; 14.2% gave access to consulting physicians not within the same practice; 7% to Insurers; and 5.5% to administrators. Physicians in closed panel or large multispecialty groups were more likely to give access to consulting physicians not within the group (p<.000), and
administrators (p<.001) compared to physicians in small group practices, or academic medicine. There were no significant differences between practice type and access to insurance companies, office staff, or other physicians within the same practice.

![Percentage of Alternate Charting FP & IM Physicians Allowing Access of Alternate Charts, SF Bay Area, 1999](chart.jpg)

Figure 7

4c) Methods that are used*

After talking to numerous doctors about the “folklore” surrounding alternate charting, it became clear that most of the known methods of alternate charting could be reduced to four specific categories (fig. 8). The first method is the use of code words that are used to disguise or conceal certain medical conditions or behaviors. This involves writing words into the official chart that have a specific individual meaning only to the physician or other people who are familiar with his/her individual code. While not

* These percentages all specifically refer to the respondents who responded that they alternate chart. i.e. 100% refers to 100% of physicians who alternate chart.
documenting things in detail, these words serve as reminders to record the existence of whatever condition or behavior is present, without the use of separate charts or papers. Second, there is the usage of post-its, or detachable pages (hereafter, the term "post-its" will be used to indicate all forms of recording information on post-its, pages, etc. that are detachable). Thirdly, there is the creation of shadow charts, which are separate medical charts that document in detail any relevant information that is not specifically entered into the official medical chart. These charts are kept in a separate file cabinet that is confidential, known and accessible only to the physician and/or any other specific person with access. These charts never leave the office and are not copied with other charts to send out. The fourth category involves the usage of code colors or color stickers that mark a certain condition. In this case, for example, a blue sticker might denote a person who smokes, a red sticker, an alcoholic, etc. In this instance, only personnel with access to the coding legend know what each specific color or sticker denotes. Finally, several physicians reported other types of methods that they individually used.

Recognizing that many physicians may use more than one method, I asked the physicians to rank the methods in order of frequency of usage. In this way, the method ranked first was considered their primary method, the second the secondary method, etc. In fact, the majority of physicians who alternate chart use more than one method. I analyzed the data three ways: 1) the primary method used by physicians; 2) the total number of times a method was picked regardless of ranking; and 3) weighting the times a method was picked based on its ranking. In the third method I assigned ten points for a primary method, eight for secondary, six for tertiary, four points for the forth ranking, two points for the fifth ranking, and zero points if not ranked. For each method of
ranking, the relative usage of each method was the same. The most widely used was
code words, followed by post-its or detachable pages, shadow charts, other individual
methods, and lastly, code colors and stickers. For example, 44.7% of the physicians who
alternate charted ranked code words as their primary method; 22.4% used post-its as their
primary method; 16.4% used shadow charts as their primary method; 11.2% had other
methods; and 5.2% used color codes or stickers as their primary method. Furthermore,
when I looked at total numbers of physicians using each method, regardless of ranking, I
found that 65.1% of the physicians used code words; 41% used post-its; 28% used
shadow charts; 23.3% had individual methods; and 10.1% used code colors/stickers.

When I assigned each method points adjusting for primary, secondary,... status, the total
points were 788 for code words; 474 points for post-its; 324 points for shadow charts;
250 points for other; and 108 points for code colors/stickers. In all cases, code words
were the most popular method followed by post-its, shadow charts, other individual
methods, and then code colors/stickers.

Other methods several physicians described involved writing sensitive
information on a piece of paper at the back of the official medical chart. Then they would
fold the paper in half, staple it, and write “confidential” on the front. When the chart was
copied, only the stapled front labeled confidential could be copied. This sheet was then
deleted from the chart before being sent out. Another physician described his/her usage of
“family” charts. When sensitive information warranted alternate charting, this physician
would create a completely separate chart. The second problem under the problem list

\[\text{Once again, this percentage adds up to over 100\% because it is describing the \% of physicians using each method. Thus, if a physician uses multiple methods, each will method will count individually, and the total percentage is over 100\%}\]
section of the official medical chart was then labeled “Family” which referred specifically to the existence of a separate chart. Another code involved HIV status where the physician would write the patient’s phone number in the progress notes section if the patient was HIV+. One physician reported writing notes containing sensitive information on loose-leaf papers and then putting them all under the matting of the desk. Clearly, while there are certain “core” methods that are used by the majority of physicians who alternate chart, there are also a variety of different ways to alternately record information.

![Diagram of Primary Method of Alternate Charting by Percentage of FP & IM Physicians, SF Bay Area, 1999]

4d) Precipitating factors to alternate chart

There are numerous factors that contribute to the decision to alternate chart, most of which relate to the issue of privacy. We asked physicians to rate a number of factors on a scale from 1-5, one being very unimportant to five being very important.
I asked physicians to comment on two levels: 1) from their specific perspective when they feel the need to alternate chart (fig. 9); and 2) what patients report when they request an alternate chart (fig. 10). I specifically did not ask physicians to comment on each issue in relation to the other issues. Rather, I had them answer each issue separately on a 5-point scale. I then took all the responses and created means. Thus, it is possible to use the means to compare the issues to each other, as well as comparing each factor to the absolute scale.

Specifically, I asked about seven issues, and then left room for “other” reasons. The first issue was the concern for patient privacy that physicians reported as the most important issue precipitating physicians to self-initiate or jointly initiate alternate charts (4.63/5). The second most important issue for physicians is physician fear that the patient will be precluded from, or have difficulty getting, insurance in the future (4.11/5). The next two issues, using alternate charts as a tool, and fear of information leaking to a patient’s employer were important (rated at 3.31/5 and 3.30/5, respectively). The philosophy behind using alternate charting as a tool to promote patient trust and disclosure is that physicians are sending a message to patients that they are willing to alternate chart because they realize that the patient’s concerns about privacy and medical information is real. As a tool, alternate charting removes a patient’s fear of a lack of privacy (which physicians rated as 4.7/5) and patients will disclose more personal information that may be pertinent to their medical care. Interestingly, physicians reported that patients view using alternate charts as a tool as relatively unimportant (2.34/5), which we will discuss more in the discussion section. Next, physicians felt that concerns about information leaking to family/friends and the lack of security of computer records
was not very important (2.99/5 and 2.95/5 respectively). Lastly, the issue with the lowest mean, being the most unimportant (2.48/5), was the fear of lack of confidentiality due to the team approach to medicine. The team approach to medicine refers to medical specialization and the fact that a patient will see multiple physicians and be in contact with other health care staff. In this case, numerous health care personnel have access to the chart in the course of dealing directly with the patient.

Given that patients request alternate charts as well, it makes sense to ask physicians what patients report as important in making them want an alternate chart. These issues are presumably the same ones that contribute towards patient nondisclosure\textsuperscript{††}. The issues are the same as for physicians. In this case physicians reported that patients rated their concern for privacy as most important (4.67/5), followed by the fear of preclusion from insurance (4.105/5), fear of information leaking to employers (3.88/5), fear of information leaking to family/friends (3.62/5), computerized records (2.77/5), the lack of privacy with the team approach to health care delivery (2.66), and lastly, having physicians use alternate charts as a tool to promote trust (2.34/5)\textsuperscript{‡‡}.

\textsuperscript{††} As mentioned in the \textit{methods} section, because we are surveying physicians about their views, any comment they have on patient behavior is second hand information. Given, that this practice of alternate charting involves both parties, however, it is logical to assume that physicians are in a position to accurately comment on patient behavior. We did not ask physicians to guess at patient behavior, rather, we are asking to report what patients have actually told them.

\textsuperscript{‡‡} Relatively, the issues were rated similarly, except for using alternate charts as a tool to promote patient trust. Physicians felt like this was the 3\textsuperscript{rd} most important issue while they reported patients as seeing this as least important, relatively.
Factors Precipitating Alternate Charting by FP & IM Physicians, SF Bay Area, 1999

FP & IM Physician Reported Factors Precipitating Alternate Charting Requests by Patients, SF Bay Area, 1999
4e) Medical conditions warranting alternate charting

The practice of alternate charting exists to protect the confidentiality of personal sensitive private medical information for patients. A majority of physicians deliberately leave out pertinent medical information and alternate chart the information because a breach of confidentiality is harmful to the patient. I asked physicians what medical conditions or issues they felt was sensitive enough to warrant the use of an alternate chart (fig. 11). I then asked physicians for what medical conditions or issues their patients wanted alternate charts. (fig. 12). They were asked to rank various medical conditions and lifestyle issues on a frequency scale from 1 to 5, 1 being never to 5 being very frequently.

The medical condition most frequently alternatively charted by physicians when self or jointly initiating the chart is HIV+ status (3.44/5). This is followed by a history of recreational drug use (2.89/5), sexual orientation (2.78/5), present mental health diagnosis (2.56/5), history of high risk sexual activity (2.52/5), past mental health diagnosis (2.5/5), history of criminal activity (2.26/5), history of domestic violence or abuse (1.89/5), history of abortion (1.81/5), genetic testing results (1.61/5), patient compliance with medical treatment protocols (1.53/5), and chronic medical conditions (1.45/5). The fact that the frequencies are so low may be due to a variety of factors. The low numbers on the absolute scale are not surprising when we consider that the frequency of alternate charts made per month are not high. Thus, in this case, it makes more sense to look at the relative frequencies of alternately charting these medical conditions.

Patients requested alternate charts for similar medical conditions with a few differences. They requested alternate charts most frequently for HIV+ status (3.15/5),
followed by a history of recreational drug use (2.95/5), present mental health diagnosis (2.59/5), sexual orientation (2.56/5), past history of mental health diagnosis (2.57/5), high risk sexual activity (2.41/5), history of criminal activity (2.34/5), history of domestic violence and abuse (2.12/5), history of abortion (1.85/5), chronic medical conditions (1.73/5), genetic testing results (1.53/5), and issues with compliance to medical treatment (1.32/5).
Relative Frequency of Alternate Charting Certain Medical Information by FP & IM Physicians, SF Bay Area, 1999

Figure 11

Relative Frequency of Alternate Charting Certain Medical Information, Requests By Patients, SF Bay Area, 1999

Figure 12
Demographics

There were no significant demographic differences between the respondents did and did not alternate chart. The demographic characteristics I analyzed were gender, ethnicity, medical practice setting, and years post-residency.

There was no significant difference between physician gender and the practice of alternate charting. (fig. 13) Among physicians who alternate chart, 62.9% were male and 37.1% were female. Among physicians who did not alternate chart, 72.1% were male and 27.9% were female.

Percentage of Physicians by Gender and Alternate Charting Practices, SF Bay Area, 1999

Figure 13

There was no significant difference between ethnicity and alternate charting practices. (table 4). Among alternate charters, 11.1% were Asian-American (vs. 18.1% for non charters); 82.5% were Caucasian-American (vs. 68.8%); 3.2% were Hispanic-American (vs. 4.9%); and 3.2% were “other” ethnicity (vs. 8.3%).
There was no significant difference between practice type and alternate charting practices. (fig. 15) Among physicians who alternate chart: 11.8% practiced in a closed panel HMO (e.g. Kaiser) (vs. 20.6% in non-charters); 11% practiced in a private practice large multispecialty group (vs. 6.9%); 55.12% were in a private practice solo or small group (vs. 44.5%); 7.87% were in an academic practice (vs. 9.6%); and 14.2% were in another type of practice (vs. 18.49%).

There was no significant difference between the number of years a physician has been finished with residency training and alternate charting practices either (fig. 16) Among alternate charting physicians, 27.9% have been out of residency 0-8 years (vs. 31.8% for non-charters), 36.4% had been out 9-18 years (vs. 29.7%), 17.8% had been out of residency 19-28 years (vs. 27%), and 17.8% of the physicians who alternate chart had been out of residency more than 29 years (vs. 11.5% for non-charters).
Percentages of Physicians by Practice Type and Alternate Charting Practices, SF Bay Area, 1999

Figure 15

Percentages of Physicians by Years Post-Residency Training and Alternate Charting Practices, SF Bay Area, 1999

Figure 16
Physician Perspectives

I asked all physicians three questions about their perspectives with the issue of privacy: 1) to what degree they believed that their patient’s privacy and ownership of personal medical information is becoming increasingly compromised; 2) whether they felt threats to this privacy produced a strain on the patient-physician relationship; and 3) whether they felt the practice of alternate charting adversely affected the quality of medical care administered to patients. I asked them to what degree they felt each issue was true and provided a scale from 1 to 5, 1 being not at all to 5 being very much so. There was a significant difference between all of these perspective questions and alternate charting behavior. Individual perception on the magnitude of this privacy problem was a significant factor driving physicians toward the practice of alternate charting.

Physicians who feel that patient’s privacy is being increasingly compromised are more likely to alternate chart. (p<000) The first perspective question we asked was “to what degree do you believe that your patient’s privacy and ownership of personal medical information is becoming increasingly compromised?” (fig. 17) Among physicians who alternate charted: 0% rated 1 (vs. 10.8% for non-charters), 3.9% said 2 (vs. 11.5%), 18.6% said 3 (vs. 19.9%), 41.1% said 4 (vs. 30.7%), 36.4% said 5 (vs. 16.3%). No one in the alternate charting group left this question unanswered while 10.8% of the physicians who do not alternate chart did not answer the question.
Physicians who felt that this privacy problem strained the patient-physician relationship were more likely to engage in alternate charting (p<.003). I asked “in your experience, to what degree do you think threats to privacy produce a strain on the patient-physician relationship?” (fig. 18) Among physicians who alternate chart: 3.9% said 1 (vs. 12% of the non alternate charters); 20.2% said 2 (vs. 21.7%); 24.8% said 3 (vs. 28.92%); 36.4% said 4 (vs. 18%); 13.9% said 5 (vs. 9% of non charters). Among physicians who do alternate chart .78% did not answer this question (vs.10.2% of the non-charters).

The less physicians believe that alternate charting adversely affects the quality of health care administered, the more likely they are to alternate chart (p< .003). I asked “to what degree do you believe that alternate charting adversely affects the quality of medical care administered?” (fig.19) The data show that: 26.4% of the physicians who alternate chart said 1 (vs. 15% for non charters) meaning that they did not think alternate charting
adversely affected the quality of medical care; 30.2% of alternate charting physicians said 2 (vs. 14.5%); 25.6% said 3 (vs. 23.5%); 12.4% said 4 (vs. 18.7%); and 5.4% of alternate charter said 5 meaning they thought that it adversely affected the quality of medical care very much so (vs. 11.5% for non-charters). Every physician who alternate charts answered this question while, 16.8% of the physicians who did not alternate chart did not answer this question. This data suggests that individual physician perception of the current state of medical chart security and privacy is a major factor influencing the practice of alternate charting.

Perspective - Physicians’ Views That the Lack of Privacy Threatens the Patient-Physician Relationship and Alternate Charting Practices, SF Bay Area, 1999

Figure 18

P<.003
Perspective - Physicians’ Views That Alternate Charting Adversely Affects the Quality of Medical Care Administered and Alternate Charting Practices, SF Bay Area, 1999

Figure 19

P<.003
LIMITATIONS

There are several limitations with this study, both internal and external. Internal limitations include response bias as well as the fact that it was hard to control for physician mobility with a sample list two years old. External limitations include the unique health care delivery system in California, the liberal mind set of physicians in the Bay Area, and issues surrounding the generalizability of two outpatient primary care specialties to other specialties and inpatient settings in the medical field.

Internal Limitations

Internal limitations to this study included response bias and limitations of the sample list available. It is possible that physicians who alternate chart are more likely to return the survey than physicians who do not alternate chart, although in looking at the demographic data, there were no significant differences in gender, ethnicity, practice type, or years post-residency with the likelihood of a physician to alternate chart. I did do bi-variate analysis, but did not do multi-variate analysis to control for other possible confounders. This is an area in need of further analysis.

Furthermore, the list was two years old and a significant number of physicians have moved. Since it was not possible to control for nonrespondents unless I received a confirmation stating that the physician had moved, there is no way to confirm the number of additional physicians who have moved without my knowledge. This potentially affects the response rate.

Additionally, while there is specific data on the state level about age, gender, and practice type, this data does not exist on the county level. Thus, background statistics on physicians in the Bay Area had to be extrapolated from state data. This does not take into
account factors that contribute to possible physician clustering into certain geographic areas.

*External Limitations*

There are several limitations to the generalizability of this study. First, the health care delivery system in California is unique in that it has an unusually high penetrance of managed care and its organization of physicians into large medical groups is unique. Thus, the forces applying pressure to alternate charting, specifically the forces from insurance companies, are not the same in all parts of the country and may not apply to more conservative states with less managed care. The mind set in the Bay Area is much more liberal than other parts of the country. It is not clear whether any differences in practice behavior can be attributed to this fact.

I sampled Family Practice and Internal Medicine specialties. These are both predominantly outpatient primary care specialties. The populations of patients who see other specialists, or are seen primarily in the inpatient setting have a different set of issues that may limit the generalizability of this study to outpatients seeing Family Practice or Internal Medicine physicians. For example, several physicians stated in their responses that they would not alternate chart in an inpatient setting because the patient is usually in much worse condition and more health care personnel rely on chart data.

The populations vary across the nation. California has a higher proportion of minorities and immigrants. Since alternate charting is in some cases, a joint process, population heterogeneity across the nation is a limitation to generalizability. I did not address populations of people who avoid going to physicians due to any significant barriers to health care, which may be the people who need alternate charts the most.
DISCUSSION

With 82% of the Family Practice and Internal Medicine physicians responding to the survey reporting deliberately leaving out pertinent medical information and 46% of the respondents reporting alternate charting practices, it is clear that the practice of alternate charting is pervasive. This practice puts patients, physicians, and all legitimate primary and secondary uses of the medical chart at risk. The fact that a large number of physicians engage in the practice of alternate charting, even with the tremendous risks involved, suggests that the benefits of alternate charting are important for quality medical care and that there are serious problems with the current paradigm of health care delivery. The purpose of this discussion is to contextualize the practice of alternate charting subsequently highlighting specific areas of health care delivery that need reform. Alternate charting has tremendous positive and negative implications.

*General implications of alternate charting*

The potential benefit to alternate charting is simple and straightforward. It seeks to preserve the confidentiality of sensitive medical information (that is necessary to record for the benefit of the patient’s medical care) and removes barriers to patient disclosure. Additional benefits of alternate charting are that it allows the physician and patient to control and select the type of information that is recorded and released. The patient does not risk keeping information secret, which may be integral to his/her medical care. Furthermore, alternate charting may protect the patient from potential damage inflicted by inappropriate secondary uses of sensitive private medical information. This may alleviate patient anxiety about privacy issues, allowing him/her to freely disclose any personal information, which may be pertinent or personally worrisome.
However, there are numerous risks to alternate charting as well. These encompass the patient, physician, and all organizations that access the chart for secondary use. Patients risk their physicians losing information about them as the official chart is shuffled around without the information that has been alternate charted. In this case, the risk is directly detrimental for the patient. Physicians are in a special dilemma. They risk legal action including breaches of contract*, and breaching ethical codes of morality. Additionally, secondary research depending on accurate data from medical records is potentially skewed because the records are not complete. The risks of alternate charting are significant.

Physicians are in the middle of this privacy dilemma for legal and ethical reasons. They cannot win either way. First lets look at physicians who do not alternate chart. They have fulfilled their legal and ethical obligations to supply full and accurate information to insurance companies and other secondary organizations. Additionally, they do not have to worry about a loss of information to other physicians and do not have to worry about issues with proving the standard of care in cases of malpractice. The medical record is complete and accurate, and can be used for research and all other secondary uses of information. However, if he/she records information fully, given evidence that patients do change health seeking behavior 20, it is questionable as to whether the physician has fulfilled his/her professional obligation to provide comprehensive care to patients,

*There are significant legal ramifications to alternate charting. Laws dealing with privacy are fragmented and complex. Legally, doctors are affected in the courts in disputes surrounding payment of care and quality of treatment. An analysis of these issues is extremely complex and involved, and as such, is beyond the purpose of this particular paper.
because he/she has not fulfilled the ethical obligation to protect the patient and preserve his/her privacy. There is a definite loss of confidentiality.

Physicians who alternate chart are removing a large barrier to health care. As mentioned earlier, they are essentially removing the most important concerns patients report when not disclosing information. Patients trust more and disclose more sensitive information, which may in some cases, be the very reason they need medical care. However, these physicians breach the ethical obligation to accurately record information into the chart, may not provide the best quality of care if information is lost (in this multispecialty paradigm of medicine), and risk skewing all possible secondary data.

There is a compromise. Research has indicated that patients change health seeking and disclosure behavior 4, 20, and this is certainly the case with sensitive information. Another option that physicians do, is illustrated by the ethical concept of patient autonomy, which includes the right to be made aware of all possible uses of personal health information. This is evidenced in the Canadian Medical Association Policy Summary, “It is not acceptable to withhold such knowledge from patients deliberately out of concern that knowledge could inhibit them from confiding important information fully and truthfully.” 17 Anecdotally, one respondent replied that he/she does not alternate chart but feels that it is his/her duty to inform the patient that any information told to him/her must be recorded into the official medical chart. He/she does not know, but does wonder quite often how much information is not disclosed to him/her.

Prevalence of alternate charting – research question #2

According to figure 1, 46.6% of the physicians responding to the survey stated that they engage in alternate charting. However, in looking at figure 3, it becomes clear
that 17.9% of the physicians who reported making some form of written note when leaving medical information out of the official medical chart denied alternate charting. Thus, although the prevalence of alternate charting is 46.6% of the Family Practice and Internal Medicine physicians responding to the survey, the “real” number is actually higher.

Looking at figure 3, 29.55% of the physicians who reported leaving out medical information try to remember everything. They did not count as physicians who alternate chart. They may be in a worse dilemma. Depending on the number of patients and how well the physicians know them, it may not be possible to remember everything about everyone. Thus, these physicians who agree that the information they are trying to remember is pertinent to medical care, may be putting the patient through the same risks of physicians that alternate chart without reaping the benefits of alternate charting.

*How often alternate charts are made – research question #3*

The data on the number of charts made per month is probably higher than I have reported them. They are on the conservative side due to response ambiguity. Physicians were asked how many times they made alternate charts and then asked to circle per *week* or *month*. If they gave a numerical answer to the number of charts made but did not circle *week* or *month*, I counted it as per month. Thus, these estimates are lower than the reality.

*Alternate chart initiation – research question #4a*

While a number of physicians only initiated charts one way (fig.5), most of the physicians who alternate chart fell into more than one category, initiating an alternate chart sometimes by themselves, sometimes jointly, and sometimes purely by patient
request. I did not look more specifically at the factors that affected physician alternate chart initiating behavior.

As mentioned in the introduction, most patients are concerned about the privacy of their medical information. Since the practice of alternate charting is to preserve the confidentiality of a patient’s medical information for his/her protection and security, we asked how often the physicians told patients of the existence of his/her alternate chart*. A large majority of physicians self-initiate alternate chart. (fig.5) Over half of the physicians self-initiating an alternate chart told half or less than half of their patients of its existence. It makes sense to focus on educating patients of the existence of the alternate chart for two reasons. It may help them feel more secure in their physician, and because it makes them aware of the possible risks of alternate charting, namely that if they see other physicians, this information may not be in the chart.

*Who has access – research question #4b

Patients confide information to physicians expecting the information to be used for their therapeutic needs.¹⁷ This is true for all physicians involved not just the primary care physician. The reality is that people see numerous physicians. With medical specialization as divided as it is today, information that is not in the chart is easily lost in the shuffle. With only 49.6% of physicians within the same practice able to access the alternate chart, half of the patients who may see other physicians within the same practice run the risk of not having all pertinent information disclosed. This issue is much more prevalent when we consider that most patients are referred to consulting physicians

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* Obviously, when the alternate chart is initiated jointly with the patient or by patient request, the patient is aware of its existence and this is not an issue.
outside of a physician's practice group. Only 14.2% of consulting physicians have access to the alternate chart suggesting that a fair amount of information is lost. This risk is compounded by the fact that over half of the physicians initiating an alternate chart tell patients of the chart’s existence half or less than half of the time. Patients who have disclosed information but are not aware of the fact that it is not in the official medical chart may assume that all other treating physicians have access to the chart and assume that they already know all the pertinent information. They may not be as strict or accurate retelling their history because of this. This era of multispecialty care and patient mobility, the risks of uncharted information being lost are much higher. Moreover, the creation of alternate charts and hiding of information provides an atmosphere of deception, sort of like “gaming the system” which presents a slippery slope that is hard to stop once initiated.

_Precipitating factors to alternate charting – research question #4d_

The main forces that worry physicians and patients are concern for patient privacy, the erosion of trust between physicians and patients, and fear of future preclusion from insurance. Physicians rated these as the top reasons they alternate chart. It is clear from the data that both physicians and patients are concerned about privacy. Second, physicians tend to worry that patients do not trust them. This could be due to the increased mobility of patients and the decreased amount of time spent with patients, which lead to a less personalized environment. The data shows however, that patients do trust their physician. This is additionally supported by research done by Fleishman – Hillard Research, who surveyed 1020 adults asking questions on their willingness of the creation of a national database of personal information. 70% of patients polled said they
would be willing to share their information if it was anonymous. 69% reported trusting physicians with their data, saying they would want the repository controlled by physicians. 23

It is not the physician, but rather the downstream accessibility and lack of medical confidentiality that concerns patients most. This is supported by the fact that overall, physicians reported alternate charting as a tool to show patients that they worry about the confidentiality of medical information and that they can be trusted with sensitive information. Conversely, physicians reported that patients do not report this as an issue when requesting charts. This suggests that physicians worry more about patients trusting them, while patients worry more about the downstream lack of confidentiality intrinsic in the medical system. These concerns, if left unaddressed, cause concern and may change patient behavior. To this end, alternate charting may be beneficial because it seeks to alleviate concerns about privacy, removing barriers to disclosure and increasing patient trust.

Conditions that warrant alternate charts – research question #4e

All medical information is theoretically personal and private. However, there is some information that is especially sensitive, as highlighted in our data. Relatively, HIV status, history of recreational drug use, and sexual orientation are the three issues physicians found most sensitive. Qualitative responses showed that there was more activity with alternate charting for HIV status in the 1980's when the epidemic was first discovered. However, even with the Americans with Disabilities Act and other special protections for the confidentiality of HIV status, it is still widely alternate charted. HIV + status brings with it numerous issues with insurance, discrimination, and other
psychosocial issues. As mentioned in the introduction, there are numerous uses of the medical chart that can result in harm to a patient. An additional anecdote from a respondent illustrates this point. This physician had a patient who was HIV-negative, but mentioned that he was living and taking care of his partner who had AIDS and was dying. The physician recorded this in the medical chart. The patient was subsequently denied life insurance and told that this was because he had stomach problems (which turned out to be simple gastritis that was treated and cured without complications). Other target issues were IV drug use, high-risk sexual behavior, and sexual orientation. Patients reported these same issues when requesting an alternate chart. Knowing which issues are particularly sensitive is important because it indicates to physicians that around these particular issues they need to be more aggressive in addressing the issue of confidentiality. Additionally, physicians almost never alternate chart chronic conditions. Clearly, a lack of confidentiality with all of these issues can lead to harm for the patient.

To recap, alternate charting may remove numerous barriers to patient comfort and subsequent disclosure. It removes these barriers toward one specific goal: privacy for the patient. This may decrease the risk of subsequent harm to the patient and fosters trust between the patient and physician. The genesis of the comprehensive medical chart was originally to benefit the patient, to make sure that all information necessary to provide quality care was recorded and taken into account when appropriate. Primary uses of the medical chart (which include any use that directly benefits the patient) are the main goal of the physician. With this in mind, it is not surprising that physicians are alternate charting. With patients who do not need to see other physicians, or switch physicians frequently, there is no real risk of losing pertinent information with alternate charts. In
this case, alternate charting achieves its goal, the accurate recording of all potentially pertinent information and the preservation of trust within the patient—physician relationship, which allows comprehensive medical care. It provides an environment that reduces all concerns about the lack of privacy and confidentiality in medicine, and allows the patient to fully disclose any information, which may bother him/her.

Demographics and physician perspectives

There was no difference in the demographics between physicians who alternate chart and those who do not. However, all three perspective questions asking whether physicians believed privacy was becoming increasingly compromised, whether this produced a strain on the patient-physician relationship, and whether alternate charting adversely affected the quality of medical care delivery, were all significant (p<.000, p<.003, p<.003, respectively). This suggests that a major force in the decision to alternate chart depends on the individual perceptions each physician has in regards to the current state of medical chart privacy.

Numerous descriptive characteristics in this study highlight several important issues to consider. These include the forces that precipitate the need to alternate chart, the issues physicians and patients find particularly sensitive, the disparity between physician practices and subsequent patient awareness, and areas which are particularly vulnerable to inappropriate secondary uses of medical chart information. These characteristics serve to contextualize the practice of alternate charting pointing out the benefits, the risks, and highlighting areas within the current paradigm of health care delivery, which need reform.
CONCLUSION

Alternate charting is not medical folklore. Almost half of the Family practice and Internal Medicine physicians who responded to the survey report alternate charting. About one quarter of these physicians make six or more alternate charts per month and over half of these physicians do not tell more than half of their patients when they make an alternate chart for them. The most popular method of alternate charting is the use of code words, followed by writing on detachable pieces of paper. The most important reason causing the usage of alternate charts is concern for the privacy of the patient followed by concerns about being precluded from future insurance. HIV status was the medical condition most frequently alternate charted. The recognition of this practice and the study of the specifics of alternate charting are important because alternate charting is a possible solution to the problem of decreased privacy for patients, and because knowledge of the specifics of alternate charting will help minimize the numerous risks involved with this practice.

The current paradigm of the health care delivery system is such that significant forces contribute to the lack of patient privacy and confidentiality. This in turn has lead to a change in health seeking behavior and personal information disclosure by patients. The response to this force by some physicians has been the creation of alternate charting, a method of editing and omitting sensitive personal information from the medical record in an effort to counter the loss of individual privacy. Alternate charting highlights the value of privacy and the lengths to which both patients and physicians are willing to go to preserve it. This is a risky practice fraught with implications ranging from the individual patient and physician, to larger organizations such as insurance companies and all other
organizations that rely on medical chart information for secondary uses. The practice of alternate charting has implications that affect the entire population. Ultimately, the removal of the forces that contribute to alternate charting is the solution. As this requires significant change within the system, the short-term solution is to recognize the existence of this practice and its specific details. The recognition of specific practices will highlight areas that should be targeted for minimizing risk and damage. The ensuing challenge to issues of privacy is to create a balance, such that patients can be protected from harm, and their data used for research and other legitimate purposes. There are dangers in alternate charting, and the recognition of this practice and analysis of the issues and implications of this practice will serve to decrease the risks to all parties involved.

It is clear from respondent data that there is no consensus on how exposed the medical chart is, or to how much harm a patient is potentially exposed. In addition to creating an environment with adequate safeguards for patient information, it is important to educate health care personnel on the issue, as perception is a defining factor in the decision to alternate chart. Qualitative responses from physicians have shown a variety of different approaches to alternate charting. Individual perception ranges on a continuum from physicians denying any thought of this practice, to physicians who wonder whether this practice is medical folklore, to physicians who emphatically practice and advocate alternate charting. The world of information management is changing very rapidly and the uses of personal information are sufficiently diverse and secret, such that no one really knows how private or public personal information is. This lack of consensus is an important contributing factor to alternate charting. Basically, the concept of alternate
charting has always been an individual issue with numerous physicians wondering whether their colleagues engage in this type of behavior.

Until now, there has been much debate as to whether alternate charting occurs. The lack of recognition of this practice has lead to a lack of communication between physicians themselves, and between physicians and their patients. This is responsible for two issues that cause concern and risk the loss of information. First, since only 14.2% of the consulting physicians have access to alternate charts, the fact that alternate charting is prevalent behavior suggests that physicians should always ask whether there is an alternate chart, and what type of information it contains. This is especially true since up to 25% of the time, specialists are not clear why the patient has been referred. This is presumably due to poor communication of diagnosis, test results, and health status. Additionally, physicians who alternate chart may think they are in the minority and may not want to disclose their individual charting behavior. This study recognizes that this behavior is quite prevalent, which should decrease the secrecy surrounding this practice and hopefully enable physicians to be more open with other physicians about this practice. This should decrease the loss of information and directly benefit the patient. Second, the lack of communication between physicians and patients has lead to a significant barrier contributing to patient anxiety. It is clear from numerous surveys* that the majority of the population is concerned about the lack of privacy, a major motivating factor in preventing disclosure. Additionally, physicians report that they alternate chart to protect the privacy of their patients. Yet, a substantial proportion of the physicians who self-initiate alternate charts tell less than half of their patients of its existence. Given that

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* These were cited in the introduction
most patients are worried about this issue, it makes sense to address it. Increased communication here is important and can alleviate the concerns of many patients.

Much of the focus has been on politicians and other legislators trying to propose laws to control the security of the medical chart and limit access to such information. For example, there is extensive national attention being paid to proposals from politicians and regulations from the Dept. of Health and Human Services (DHHS) and the National Committee of Vital and Health Statistics (NCVHS) but not much focus on the ad hoc solutions which have been created by physicians. Ironically, these ad hoc solutions may be the best solutions because they are being tested in the “real world” everyday in practice and seem to be working. The fact that such a high proportion of physicians alternate chart is testimony that this practice should be considered another option to help regulate the privacy of medical information. Furthermore, this study highlights the fact that physicians are taking an active role in the preservation of privacy and that they, more than anyone else, understand the dynamic between patient management and the limitations of privacy. Thus, any solution in health information management and privacy should include further study of alternate charting and involve physician input. Physicians are caught in the middle of the privacy debate, and the responses I have gotten show that some have thought extensively on this issue.

Because there are so many risks to alternate charting, and because it is prevalent and works well, it makes sense to institutionalize the practice of alternate charting. This

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* The DHHS and NCVHS have been in the process of gathering information from a variety of sources in efforts to form regulations to control health information management and access to secondary users. This is in response to HIPAA which provided that if legislation is not ratified by Congress by Aug. of 1999, the DHHS will be in control of drafting regulations.
has many advantages. First, it may alleviate patient anxiety about the loss of privacy. Second, the institutionalization of alternate charting will allow attention to be paid to the specifics of alternate charting and allow the implementation of policy guidelines to regulate this practice to minimize the risks of alternate charting. Specifically, these guidelines should include patient education, physician awareness and communication, the institution of legal safeguards for physicians who practice alternate charting, and the institution of a multi-tiered national medical information database that can accommodate legitimate secondary uses of medical information.

Patient education is important because many patients are not aware that alternate charting occurs. First, patients should be told of the possible destinations of the medical chart and how many people potentially see their medical information. Second, they should be made aware of the fact that alternate charting is an option, as this may improve the amount of information patients choose to disclose. Third, should an alternate chart be initiated, patients should be aware of this. Patients should be told that an alternate chart exists, that it is only for that specific physician to see, and that they need to repeat this information to any other physician they see, as all information in the alternate chart is not shuffled with the official medical chart. Another possibility here is to emphasize that the patient can tell other physicians of the existence of the alternate chart and that it is okay to access it. Overall, patient awareness is key because it minimizes the risk of losing information and positively reinforces the fact that physicians are aware of the privacy.

* I am in no way suggesting that we start regulating the amount of information in the medical chart. The decision of “pertinent” information has always been and should always be made by professionals on an individual basis. Rather, I am suggesting that we look at this practice as a guide to the solution of privacy.
problem and are actively trying to preserve the confidentiality of the physician – patient relationship.

Physician awareness and communication about alternate charts is the next necessary guideline. Physicians should be aware that this practice exists and should always ask other physicians about the existence of such a chart for all new or referred patients. Physician awareness and communication is important for all physicians, even if they do not alternate chart themselves.

Physicians are at substantial risk when they alternate chart because it is not clear that this alternate chart will serve as a legal document in a court of law to refute malpractice claims or prove the quality of diagnosis and treatment. Thus, legal safeguards must be initiated to protect the physicians from legal redress with this practice. Additionally, legal safeguards for physicians should recognize that physicians cannot be tethered by the law or other regulations stating what specific information needs to be entered into the official medical chart. Law or policy should recognize that the definition of pertinent medical information is subject to individual interpretation and should rest on the shoulders of each individual physician. They have the training to decide what is and is not pertinent information to enter into the official medical chart and their autonomy should not be regulated by any outside source.

Next, we should look to policy and lawmakers on the national level to address the issue of computerized records and a national database. This issue is specifically pertinent to alternate charting because computerized records provides a solution to health information management which may be satisfactory to all parties that legitimately want access to medical information. Computer records provide the opportunity to specifically
tailor the amount of information released at multiple levels. Additionally, with computerized records, it is easy to selectively remove certain information. The creation of a multi-tiered national database run and regulated by physicians is a distinct possibility. In this scenario, there would be three specific tiers. The first tier would include all personal information about a person without any personally identifiable information. Personal identification information should at no point be linked to charts on this tier removing any possibility of hacking into personal information. Thus, this tier would be sufficient for the majority of organizations in need of medical information and would not be skewed because information that may have been alternately charted will be available. The second tier would involve some patient identifying information and include basic information that would be in a normal official medical chart. This information would be used for health care personnel that would normally have access to the official medical chart. The third tier would include all information including information that would be alternately charted and would be accessible only to the individual physician the patient has authorized access to. This may include any additional physician the patient has authorized, and only be accessible to those specific physicians. Since numerous breaches of confidentiality with medical records have been attributed to carelessness, computer terminals should time out after a predetermined time and ID passwords should be changed periodically, and updated at least annually.

It is my belief that these proposals will be important towards creating an environment whereby patients feel trust in the privacy of their medical information without the risks associated with loss of information. Additionally, physicians will feel more comfortable with alternate charting and not be at such risk. Lastly, these proposals
will help balance the need for individual privacy while maintaining accessibility of medical information for important research and other secondary uses of medical information that serve the social good.

This study calls attention to a previously unknown practice and recognizes that alternate charting does occur. It attempts to illuminate some specifics surrounding this practice but is by no means comprehensive. Rather, it highlights the need for further research in this area. The practice of alternate charting should be repeated with other populations of physicians in other geographic areas as well as other specialties to address the issue of generalizability. Additionally, research should be conducted to look at the prevalence and dynamic of privacy in an inpatient setting. This arena of medical care is very different from the outpatient units and has its own specific set of issues. Furthermore, research should be done looking at the characteristics of physicians who do not alternate chart to discover the motivating factors behind the decision not to alternate chart. Additionally, this study was a survey of physicians and does not take into consideration the various differences in patient characteristics. It is important find out what these differences may be and how they affect patient disclosure and physician behavior with alternate charting.

The recognition of alternate charting may affect numerous aspects of the health care delivery system. This is an issue that encompasses many professions calling for the worlds of medicine, law and politics to recognize and address the factors that contribute towards alternate charting and to help regulate and safeguard the practice of alternate charting. Since this was a previously unknown entity, there currently are no regulations that serve to minimize potential harm to patients and physicians, there are no safeguards
to protect physicians who engage in alternate charting, and there are no policies that incorporate alternate charting to help preserve the privacy and confidentiality of personal medical information.
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Appendix A
Dear Dr.

My medical school classmates and I in the UC Berkeley/UCSF Joint Medical Program invite you to participate in a research study investigating how physicians handle sensitive private medical information. We are looking at the practice of “alternative charting”, defined as any method of recording information other than writing it down directly and fully into the official medical chart. We feel that this is an important issue because surveys are showing rising levels of patient distrust in the privacy of their medical information. No one really knows how most physicians handle this issue, and as medical students, we know even less.

This issue is especially pertinent now, as “patient bill of rights” proposals in Congress and state legislatures around the country seek to change the ways physicians safeguard private information. Many institutions have their own ideas about the ownership and accessibility of medical information, without knowledge of what physicians really do. To know how best to preserve patient - physician confidentiality, it is important to first understand how physicians like you handle this issue. Please help us.

We ask you to complete the enclosed survey, which should take no more than 5-7 minutes of your time. Please return it in the accompanying stamped, addressed envelope. We understand that the survey is personal in nature and assure you that in compliance with the Committee for the Protection of Human Subjects at UC Berkeley, we have taken all steps necessary to ensure the complete confidentiality and anonymity of your responses.

Thank you for your time. Your participation is extremely important to us. Without adequate input, we cannot draw valid conclusions. Please keep the enclosed dollar bill as a token of our appreciation! If you have any questions about the survey or project, or would like a copy of the results, please do not hesitate to contact Marvin Lo by email at marvlo@socrates.berkeley.edu, or call him at (510) 558-1721.

Once again, thank you for your participation!

Sincerely,

Marvin Lo
Medical Student
UCSF/UC Berkeley
Joint Medical Program

Jeffrey Burack, MD, MPP, BPhil
Div. of Health and Medical Sciences
Faculty Advisor
Dear Dr. <name>,

My medical school classmates and I in the UC Berkeley/UCSF Joint Medical Program invite you, again, to participate in a research study investigating how physicians handle sensitive private medical information. We are looking at the practice of “alternative charting”, defined as any method of recording information other than writing it down directly and fully into the official medical chart. This is important because surveys are showing rising levels of patient distrust in the privacy of their medical information. No one really knows how most physicians handle this issue, and as medical students, we know even less.

This issue is especially pertinent now, as “patient bill of rights” proposals in Congress and state legislatures around the country seek to change the ways physicians safeguard private information. To know how best to preserve patient-physician confidentiality, it is important to first understand how physicians like you handle this issue. Please help us. We know how busy you are and ask you to complete the enclosed survey, which should take no more than 5-7 minutes of your time. Please return it in the accompanying stamped, addressed envelope. We understand that the survey is personal in nature and assure you that in compliance with the Committee for the Protection of Human Subjects at UC Berkeley, we have taken all the necessary steps to ensure the complete confidentiality and anonymity of your responses.

We have mailed you a survey before, so if you have already replied, thank you! If not, please take a few minutes right now to complete the enclosed survey. Your individual responses are extremely valuable to us. If we have not received your questionnaire in the next two weeks, we will telephone you to remind you of the study! Please keep the dollar bill we enclosed in the first mailing as a symbol of our appreciation!

Thank you for your time. Your participation is extremely important to us. If you have any questions about the survey or project, or would like a copy of the results, please do not hesitate to contact Marvin Lo by email at marvlo@socrates.berkeley.edu, or call him at (510) 558-1721.

Once again, thank you for your participation!

Sincerely,

Marvin Lo
Medical Student
UC Berkeley/UCSF
Joint Medical Program

Jeffrey Burack, MD, MPP, BPhil
Div. of Health and Medical Sciences
Faculty Advisor
3rd Cover Letter

Dear Dr. «name»«rest_of_name»,

My name is Marvin Lo and I am a third year medical student in the UCB/UCSF Joint Medical Program. As part of my thesis work, I have been conducting a research project over the past year looking at the practices of recording medical information, specifically any method of alternative charting, (ie. any method of recording information other than directly writing it in the patient chart). This includes the usage of shadow charts, post-its, or any other creative method of recording information.

It is my hypothesis that the transforming medical system has put pressure on the way physicians record and protect the privacy of their patients’ medical information. I want to know if this really is a problem, and if so, how physicians handle this issue.

Our data collection involves a mail survey of 600 physicians in the Bay Area. As I’m sure you know, as with any project, the success of the project and the validity of the data depend upon a high response rate. So far, ours is 50%, and we need it higher! PLEASE HELP ME!! I have previously mailed you two copies of the enclosed survey, I realize you are extremely busy, but hope that you will find five to ten minutes to fill out and return the survey in the accompanying pre-addressed, stamped envelope.

In an effort to shorten this letter, I have left out the details, but would like to ensure you that all of your responses are completely anonymous (this information is in the previous two mailings I have sent). If you have any questions about this, or concerns about the survey or project, please feel free to contact me at (510) 558-1721, or by email at marvio@socrates.berkeley.edu

Once again, Thank You for your time, your input is extremely valuable to us!

Sincerely,

Marvin Lo
Medical Student
UC Berkeley/UCSF
Joint Medical Program