MD Rating Websites: Current State of the Space and Future Prospects

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Introduction

The past few years have seen an explosion in growth of websites allowing patients to review/rate (usually rant or rave about) their health care providers. Recent mainstream media attention has focused on the rating of physicians, with over 30 such sites now operating. A few sites, including RateMDs and Healthgrades, have been around for a number of years, but several high profile initiatives were recently launched. Last fall, national health plan Anthem announced that it would be partnering with restaurant rater Zagat to allow its enrollees to rate their MDs online. And in April, Angie's List, whose subscribers rate a wide variety of local service companies, began to include all types of health care providers, including physicians.

Physician reaction to these sites has been generally unenthusiastic; but there is currently very little MDs can do legally to stop patients from posting opinions about them online. While this approach to reporting on MD performance has its shortcomings, there is also a growing recognition of the importance of accounting for patient experience in evaluating quality of care. The federal government, through the Agency for Healthcare Research and Quality (AHRQ) is moving to collect patient experience-related feedback, such as that included in their annual consumer assessment of hospitals reports. An AHRQ/Consumer Assessment of Healthcare Providers and Systems survey tool on patients' experience with physicians has also been developed and is currently in use in a number of settings.

Given the recent ramp-up in sites and their newly legitimized role, the future for online MD rating seems fairly rosy. But is this really the case? What are reasonable expectations for the performance of specific sites and the overall space? Just because we've seen a flurry of activity and funding doesn't mean that this trend has much staying power. The previous dot-com boom/bust cycle should make us wary of being taken in by the newest "new thing," especially in the frequently over-hyped realm of health care online.

The purpose of this informal analysis is to scope out the prospects for online MD rating space. I do this by considering three key questions: 1) What is the value (i.e., benefit, controlling for broadly defined "costs") for the consumer/patient/user; 2) How fair are these sites to the MDs being rated (where fairness and accuracy of ratings are positively associated with value for the consumer); and 3) Where will the financial resources come from to support operation of these sites? This last question is critical, not only because value/fairness alone will not ensure website survival if no one is willing to cover the costs, but because the actual source of underlying funding (e.g., advertising, other clients, and/or sponsors) may create an impression of bias, and reduce interest and traffic, ultimately dooming the site itself.

While I have tried to be as thorough as possible in identifying MD rating websites and exploring the major issues, this is only a preliminary effort, not the definitive analysis on this space. In fact,

I'm hoping that blog-publication will stimulate lots of feedback on my assessment of this space from those who know as much if not more than I do about this topic.

Methodology

The research for my analysis took place over the summer of 2008. My goal was to check out as many MD rating sites as I could identify and track down. Sources of possible sites came from Google searches, articles in the mainstream media, my health care colleagues, and contacts at other MD rating sites. I wanted to create individual but standardized profiles of all of the sites and use this "database" to generalize (if possible) about the prospects for value, fairness and financial viability in this space.

The list of sites that served as the "universe" for this analysis is presented in **Table 1**. Note: All tables referenced appear at the end of the text. Depending on their primary functions, the websites are classified as 1) general local search; 2) health care content; 3) mostly MD rating. The first group is not health care specific, but includes general free yellow-pages-type operations as CitySearch and Yelp, as well as Angie's List, which requires a paid subscription to see or post ratings. The second group provides a wide variety of mostly free health care content, of which MD (and in some cases other provider) ratings is only one category. The last and largest group focuses pretty much on health care provider quality and/or satisfaction ratings, always including physicians.

I realize that given problematic sampling methods, most online metrics of website traffic are highly suspect, but I did want to give a very rough approximation of how relatively popular these various sites are today. So I created what I refer to as my Alexa Rank Categories (ARC), which lump Alexa rankings into 9 large buckets, where 1 implies highest traffic and 9 implies the lowest. (Refer to the Exhibit notes for the category cut-off values.) These MD rating websites are sorted by their ARCs (if available) within their respective grouping.

My major criterion for inclusion was that, at the minimum, the site had to allow consumers/users/patients to post reviews or ratings of MDs. As it turned, there was one exception to this selection rule (www.mdnationwide.org) which sells MD "quality" ratings based on information in official databases but does not allow consumers to rate MDs. Given its business model, however, it is useful to include it to contrast with the other sites. This is discussed in the analysis which follows.

In addition to using information available in the media (mainstream and online) and on each site, I was very interested in actually talking to representatives of as many of these sites as possible. I contacted all of the sites on my list, told them I was writing an economic analysis of the current MD rating space and requested an interview. **Table 1** shows which sites were willing to talk to me or at least answer some of my questions by e-mail. See **Table 2** for my interview questions.

Background

According to recent surveys, consumers are increasingly interested in finding out more about their doctors via online sources. A March 2008 *Wall Street Journal*/Harris poll got a very enthusiastic response when asking about whether patients were interested in viewing and contributing MD ratings on trust, communications, medical knowledge, availability and office environment on a website sponsored by their health plan. Ninety-one percent of respondents were very or somewhat interested in referring to such ratings while 87% were equally interested in providing this sort of online feedback about their doctors. (See **Table 3** for the complete answers to these questions.)

Despite apparent general interest, another recent (late 2007) California HealthCare Foundation/Harris poll showed that while actual experience with MD ratings site is growing (up from 14% in 2004 to 22% in 2007), a distinct minority of people accessing those sites found information helpful in making MD change or selection decisions. (See **Table 4**.) Even by 2007 fewer than 10% of those who had viewed MD information online actually changed MDs as a result. Taken together, these surveys suggest something of a public disconnect between the expected value of such MD-specific information and what currently exists online for consumers and patients. Why might this be? In what ways are these sites suboptimal and how can they be improved to deliver a higher level of value?

One possible explanation for these results has to do with the type of MD-specific data most sites currently provide. Maribeth Shannon, director of the market and policy program at the California HealthCare Foundation, believes the results of her organization's survey suggest consumers are not finding information specific enough to meet their needs. For example, information on health plan sponsored MD-rating sites may involve non-intuitive quality metrics or be suspect in equating low-cost with high quality, as has been emphasized by the office of the New York State Attorney General in its recent investigation of MD ratings by large national health plans operating in that state. While this may have been a good explanation for the discrepancy between expectations and value in the past, it will be less helpful in the future as independent (i.e., non-health plan sponsored) MD rating sites come to dominate this space. Of the 33 sites I examined for this analysis, only 4 were sponsored by health plans.

The MD rating websites in this analysis vary on a number of different dimensions, including: ownership status, scale/scope of operations, business/revenue model, sponsorship, and information viewing/posting policies, as well type of information collected and posted for review by consumers/users. Although each of these differentiators play a role in the ultimate success of sites in this space, I want to argue that *the* single most significant (and in my mind obvious) success factor is the type and quality of MD-specific information the site makes available.

MD-specific information comes in two basic forms, which I characterize as: 1) Objective/Official; and 2) Subjective/Opinion. Objective/Official information about individual MDs comes from professional and regulatory sources, is generally available for free or a nominal fee to the general public if they are willing to track it down, from, for example the AMA data base and most state medical boards. What the websites (in theory) do primarily is to aggregate these existing data bases for consumers, improve ease of access to this widely dispersed data

and, in some cases, provide software applications to facilitate inter-MD comparisons. Subjective/Opinion information does not pre-exist elsewhere as does Objective/Official information but is instead created for the specific websites by their consumer/user/patient communities. This information tends to be unique to the site, unless consumers contribute MD-specific ratings to multiple sites, which of course they are free – but unlikely – to do. I describe each in more detail below.

Objective/Official Information

MD rating websites use one of two approaches for dealing with objective/official information. For some sites, this information serves as the foundation of their operations; it is then supplemented with the opinion data posted by users. Collecting and/or purchasing this information are troublesome and costly. As a result these sites consider it a major asset and tout its value to their users. Examples of such sites include: Healthgrades, Vitals, Vimo, and RevolutionHealth. Given the considerable overhead costs, other sites bypass purchasing this official MD database information. Many make it easy for users to link to related official information sources, such as state medical boards to follow up and verify the identity and credentials of the MD they are rating. Other sites represent a half-way position: they compile official information but only on those MDs rated by users of the site. Examples of such sites include: RateMDs, SuggestaDoctor, and Doctorscorecard.

This section focuses primarily on the first type of sites above which claim access to comprehensive national MD databases, whether they charge users to view any or all of this information or not. In determining the value of this information for users, the first question to ask is simply, what does it consist of? At the most basic level, it should provide the MD's name and contact information, including an office address. In many cases the following information is also available: medical school attended, year of graduation, location of internship/residency and board certification (if any). It may also be possible (depending on the policy of each state medical board) to get information about disciplinary actions and malpractice decisions above a certain monetary level.

This information is obviously important in helping correctly identify an MD to be rated, especially in cases of very common names. Likewise, knowing whether physicians are board certified in their self-professed specialty and how many years of experience they have provides a certain level of confidence about general knowledge and capabilities. But this aside, how useful is this information (even if "objective" and "official") for differentiating among doctors on quality attributes? Even assuming that this information is up-to-date and otherwise generally accurate (not a safe assumption, as shown below), it's not clear how valid a measure of relative quality this information gives, especially if limited to the basics (i.e., excluding disciplinary matters and malpractice experience).

The websites that provide this information (free or for a charge) typically imply that it does provide a good measure of quality, especially those sites (such as Findadoc.com and MDnationawide.org) which "crunch" related data via proprietary quality algorithms that allow MDs to be directly compared on this common metric. While mainly relying on objective/official

data to create MD-specific quality scores, these two sites differ in a few important ways related to minimal use of patient experience information, level of transparency regarding specific factors used in determining quality and user charges for MD ratings.

One obvious way to evaluate the potential user value of this type of information is to assess how complete and accurate it is. A number of the sites I spoke with deplored the current state of MD information generally available to the public through their health plan directories, a problem well documented by the *Wall Street Journal's* "Cranky Consumer" column a couple of years ago. So I decided to find out how readily these and other MD rating sites had been able to deal with MD data deficiencies and, in particular, how current sites compared with each other on the comprehensiveness and accuracy of their own provider directories.

I started with a sample of 10 doctors on whom I had irrefutably correct information, Kaiser Permanente Southern California Region family practice providers (8 MDs and 2 DOs) based at the Long Beach medical office building. Basic directory level information on each of these providers is available to the general public at www.kp.org. I searched for each provider on the MD rating websites in my sample that provide free access to what they imply is the most complete physician directory information available. In addition, I also looked up these doctors through the AMA's DoctorFinder function (which includes both AMA members and non-members), the California State Medical and Osteopathic Boards' licensing search function, and on WebMD, (which does not provide MD quality or satisfaction ratings but does provide free access to a national MD directory). The results are presented in **Table 5**.

There is huge variation in how well the different sites performed. Indeed I was surprised at how poorly the majority did. Only Vitals came close to getting a perfect score and the rest did worse than one would expect given how much they tout the importance of this information and the supposed reliability of their sources. Clearly up-to-date information on these providers is available, as the results of the AMA, the California State Medical and Osteopathic Boards, and Vitals searches show, but unfortunately few of the other sites have figured out how to access it.

Note: By the selection criteria for my study, WebMD does not qualify as an MD rating site, but I decided to do a comparative WebMD-search because I frankly expected they would do very well. That was not the case at all, however. WebMD's was the only directory which contained *none* of my test subject providers. As the "number one" health care content site (judged by ComScore traffic metrics) I expected it to set a standard for comprehensiveness, that is, until I read the fine print regarding how it obtains its information on physicians. WebMD seems to have no pre-existing database/directory, but relies on MDs to approach them about being included (for free, of course) and provide WebMD with very accurate and up-to-date details about their practice including location and contact information. As a result WebMD's directory should be considered more of a marketing tool for physicians than a complete and objective guide for consumers. I have to wonder how many of WebMDs consumer users realize its deficiency in this regard.

There are a few obvious conclusions to be drawn from this test of the MD rating sites' directories. First, the sources many sites are using to access this information seem quite untrustworthy (and especially out of date) to begin with. While it may be difficult to get doctors

to update contact information when they move within a state, it is puzzling that the information on most sites was not even as good as that available from the California Medical and Osteopathic Boards (which is both easy to find and free). What this implies is that sites like RateMDs (which does not purchase official MD directory information but instead simply provides a direct link to the MD's licensure info at the relevant state Medical Board) may actually provide more robust and reliable (more valuable) objective/official information. Finally, based on my discussions with many of these sites, I have to wonder if management and staff are even aware how poor (incomplete and out-of-date) much of their posted MD directory information is.

Beyond these initial observations the most interesting aspect of these results is their implications for user value. If useful information on a particular provider is not available because the directory is incomplete, that reduces the value for all users. Based on my test sample of providers, this happens quite frequently, certainly more than half of the time for most sites. Even if this information may currently be of somewhat limited value in truly differentiating among MDs, ensuring that the directory is as complete as possible is important, if only for reasons of convenience. But the spotty information might do more than inconvenience the user, it might also send a negative signal about the overall reliability of the site and all the information it contains. That a site cannot maintain an accurate directory of even the most basic MD-specific information could raise user concerns that the more complex information presented may be even less trustworthy, deterring interest in and reliance on the site. This is especially problematic when it is clear that complete and accurate information is available from public sources and on competitor MD rating sites.

Because of its inherent limitations and inaccuracy, objective/official information on MDs may not be providing much user value today and could be reflected in the California HealthCare Foundation/Harris survey responses as shown in **Table 4**. Certainly better information about individual MDs from professional and regulatory sources could be made available online. Consumer's Checkbook has been battling the US Department of Health and Human Services in court to get Medicare physician procedure volume data made public. Dr. Robert Wachter has also proposed what he considers an ideal system for providing MD-specific information. In addition to a variety of patient satisfaction, structure, process and outcome measures of quality, he felt it would be a good idea for the

> appropriate specialty board (ABIM, American Board of Surgery, etc.) to tell whether the physician is meaningfully engaged in quality improvement activities, and how well he or she did on the certifying exam – the best measure we have of knowledge and clinical judgment. (http://www.the-hospitalist.org/blogs/wachters_world/archive/2007/10/28/rating-doctors-like-restaurants.aspx)

But it's also important to understand how health care consumers view the various types of information on providers when attempting to evaluate quality and in particular when selecting a provider for themselves or family members. Even if objective/official information were perfect (more complete and detailed on relevant measures), consumers would still find it lacking.

Research has shown that prospective patients are much more interested in information and insights about providers, especially MDs, from "people like me" than those based on quality metrics created by experts. This has been reinforced by a 2007 Forrester Research survey which found that health care consumers find information about providers from their peers vastly more helpful in evaluating provider quality than more official sources, whether online or not. (See **Table 6**.) With 60% of survey respondents saying that they rely on or at least use "word of mouth" for this purpose, the significance of this information source cannot be overstated. "Word of mouth" for the purposes of this survey seems to be defined as an offline source. But it's reasonable to believe that under the right circumstances, patient-to-patient sharing of the MD-specific experiences of care could easily move online. In fact, the emergence and rapid growth of MD-specific subjective/opinion information on these sites indicates this is exactly what is occurring.

Subjective/Opinion Information

When recently quizzed about the biggest challenges MD rating sites face, Mitchell Rothschild, founder and CEO of Vitals.com had this to say, "It's not really a challenge, but our biggest objective. We want to get a lot of user-generated opinion… the more user-content, the better the overall site." The value of a large database of user-generated opinions on MDs is clearly considered essential for success of these sites, but why is this so? There are a couple of closely inter-related reasons.

First, patients have expressed and demonstrated a strong preference for "word-of-mouth" information from their health consumer peers when choosing health care providers, doctors in particular. Paralleling the expectation that fellow patients provide the best idea of how a doctor is likely to perform, the general public also believes that such patient satisfaction ratings are a highly desirable way to measure MD performance with respect to quality of care. (See **Table 7**.) In the same 2008 *Wall Street Journal*/Harris poll mentioned above, 76% of respondents felt patient satisfaction surveys to be the fairest way to compare quality of care provided by medical groups (and presumably MDs within those groups), while only 65-66% believed this to be the case for more official indicators, assessments by medical boards and other third party organizations that monitor health care quality. Subjective ratings and patient opinions regarding their MD-specific experiences with care are thus viewed as highly credible by health care consumers, the major targeted users of these MD rating sites.

Second, and as a result of its value as viewed by the patient, user-generated information is generally considered a "must-have" asset by these sites. Moreover, unlike the MD directory information that sites can purchase from the same professional and official sources, a site's user generated database is typically considered a unique and proprietary asset. As the volume of patient opinions on the site grows, value to consumers/patients and users can increase dramatically. This is especially true for users concentrated in a given geographic area. More feedback from patients means that a greater proportion of local MDs are reviewed and that there are more reviews per MD, increasing validity and reliability of the overall ratings. It should be obvious why management at Vitals felt expanding patient reviews to be one of its highest priorities.

Most of the sites I interviewed recognized the importance of not only accumulating patient ratings, but getting the jump on the competition in this regard. In addition to implementing policies to promote organic growth, a number of sites have considered merger and/or licensing initiatives. I had little luck persuading many sites to reveal exactly how many MD ratings they've accumulated, but based on what I do know it appears that RateMDs is the current leader. Even so, last fall RateMDs made a deal with former competitor, NDDB.net, to fold in its 10,000 user-generated MD ratings. RateMDs's powerful position with respect to user-generated content has also attracted the attention of its current competitors. Until last month, Vitals licensed RateMDs' user-generated ratings to appear on its own site. It is also my understanding that Vimo has made at least one offer to buy RateMDs out in its entirety, primarily to get access to its user-opinion database.

But rapidly "growing" user-generated content is not the simple task it might seem. While volume matters, it is also important to protect the integrity of the information posted. A greater number of ratings should give a more accurate picture of MD performance, but only if the site employs filtering mechanisms and other techniques to prevent rating manipulation. Even the perception of manipulation can erode the trust that users place in the site and may reduce traffic and participation. Actions taken to boost MD consumer ratings, thus, involve a conscious trade-off. Encouraging users to post opinions needs to be counter-balanced with methods to insure the validity of those ratings. With effective protections in place, expansion of the site's user base should cause it to become increasingly representative, accurate and fair to MDs. The bigger the database of user-generated content, the more robust and valuable it will be to users.

How are the various sites meeting this challenge? In thinking about website strategies and decisions beyond the merger and licensing approaches just mentioned, it's useful to put them back in the context of creating the most value for the user. Value is a function of the user's perceived benefits and costs (not necessarily monetary) related to accessing and contributing information. The sites with the best results in growing their consumer-generated content databases will be those that enhance benefits and reduce costs (or risks, which could be expected costs) for the users to encourage as much participation (contribution of ratings) as possible. While the following is not exhaustive, I have come up with a list of at least 5 site decisions or policies that can affect the users' benefits and costs of viewing or posting MD opinions.

<u>1. Charge to view and/or post MD ratings/opinions:</u> Charging to access or post MD-specific information clearly entails a monetary cost to users and, all else being equal, should reduce their interest in a site. Excluding MDnationwide.org (which does not allow patients to post ratings or reviews at all), the only two sites I examined that charge for viewing and/or posting ratings are Angie's List and Healthgrades. While Angie's List charges a monthly membership fee for posting and viewing, Healthgrades only charges for viewing information (actually getting an e-report) and only for certain categories of information – most specifically state disciplinary actions and malpractice judgments (where required by state law).

According to Angie's List, revenue generation is only one rationale for charging for access to the site. They feel the modest price they charge, along with the requirement for users to register, allows the site to protect the integrity of the information collected. While this does undoubtedly

cut down on the number of frivolous or even malicious postings, it also acts as a brake on the overall contribution of opinions. That would be a significant problem even if Angie's List was the only game in town. But since the vast majority of other sites are free, this policy seems to place them at a very serious competitive disadvantage, despite their widespread reputation and many years in the local service rating business.

2. Level of rating/opinion-poster anonymity: Sites vary in the amount of identifying information they require users to provide about themselves. Users would like to keep as much of this information as private as possible due to related risks (i.e., potential costs). These range from an increase in spam-volume to concerns that even a legitimate negative rating could result in legal action or the blacklisting of a patient, not only by a single MD, but by many of his/her colleagues. It is important, however, for the sites to have some way to detect and handle the problem of data manipulation – either by patients or providers and so some level of detail is essential. Currently we see three levels: 1) total anonymity - no registration required but the site will have a record of the IP address (e.g., RateMDs); 2) partial anonymity - registration is required, so that the e-mail address is known to a site but not to providers (e.g., Anthem/Zagat); 3) no anonymity with the review/rating poster agreeing to provide information so his or her identity can be made known to providers as well as to the website (e.g., Angie's List).

How does this affect interest in a site and willingness to contribute? In theory, since the risks (potential costs) are lower, the higher the degree of anonymity, the greater user interest in the site and the greater the expected contribution of ratings and reviews. Total anonymity appears to be the best option since the added step of registering may deter some people even if they know that no MDs will even see this information. Too much anonymity could backfire, however, if ratings and reviews get too extreme and nothing is done to monitor and exclude those that are obviously libelous. If the site gets a reputation for irresponsible comments, it would be expected to lose credibility with all – patients and MDs.

The impact of the level of anonymity on accumulation of user-generated content and ultimately the creation of a credible ratings database will depend on the site's ability to maintain the integrity of the data. Sites use a variety of techniques to do this. These include: automated "filters," review and oversight by paid staff and volunteers administrators (especially to scrutinize but not necessarily remove clearly negative comments), reporting by the site's user "community" (i.e., other posters and viewers of this information). In addition, a few sites (e.g., Anthem/Zagat and Thehealthcarescoop.com) have a "rate the rater" feature similar to Amazon's about the usefulness of user-posted book reviews. For obviously libelous comments, sites try to make it clear that they are simply serving as an online forum and posters of such content can be sued.

3. Type of information collected and displayed for all users: The vast majority of sites ask patients to provide MD-specific feedback of two types: 1) scores based on specific criteria/questions about their care experience; and 2) free-text opinions. The two exceptions are Healthgrades (which does not allow users to contribute free-text comments) and Thehealthcarescoop (which collects only free-text comments). Healthgrades's rationale for excluding free-text comments is that this policy reduces the likelihood of attracting patients who simply want to rant about their negative experiences. But it's also clear that this sort of

information would be impossible to incorporate into its proprietary provider comparison scheme, which requires standardized responses to a set of specific questions. Healthgrades considers this approach superior to the use of free-text comments, which are considered less accurate since they are too subjective. But this gives a sense of spurious precision. How, for example, do we really know that one patient's "1" (worst) ranking of a provider is the same as another patient's "1"? One helpful thing about free-text comments is their ability to clarify the issues and the patient's level of concern and expectations.

I think it is useful to collect both types of user-generated information since they reinforce each other and make it possible to present a more complete picture of the patient's experience. Free-text, while not easily analyzed, is helpful because it gives the viewer a better understanding of how the quantitative scores are calibrated. Free-text can, for example, help explain exactly *why* a doctor got a very poor rating. Revealing more details allows viewers to decide how seriously to take the scores. Being able to view free-text comments is particularly helpful for evaluating MDs with many posted reviews (negative, positive or variable) because viewers can see if the concerns appear consistent and are corroborated by a variety of different individuals. Free-text comments increase the potential for transparency, which itself contributes to higher levels of accuracy and fairness.

For most sites users can see whatever is posted by their fellow patients. But in a few cases, what is posted is not visible to consumer visitors to the site. For example, on DrScore, a site which provides physician satisfaction survey services to medical groups, contracting doctors can see free-text comments while other site visitors (and potential posters) can only see the summary score statistics for a particular MD. On Doctorfeedback patients can post information on MDs, but see nothing at all (everything goes to the MDs who contract with the site). On some sites, MD-specific information is not posted until it reaches what is considered a critical mass, so that patients do not get a warped view of any MD based on a small number of comments. On the Aetna site, MD scores are not be posted until there are at least 5 ratings. For the Anthem/Zagat initiative, MD-specific ratings are not posted until there are at least 10, but free-text comments go up immediately, with no minimum number.

How does policy about collection and display of this information affect willingness to contribute MD reviews and ratings? Allowing both the posting of free-text and scores on standardized dimensions would be expected to induce more contributions because this allows posters to provide as complete information as possible about their experiences. Why bother to take the time to do this unless you can be as clear and explicit as you want about your issue or concern? Regarding display of this information, clearly the more that is readily available, the greater the interest in the site. But I think that widespread public posting of this information will also encourage more MD ratings, since sharing their experiences with other patients is one of the strongest motivations for contributing to the site.

<u>4. General user interface issues that can help or hinder participation:</u> Other aspects of the website can affect user behavior or even interest in visiting the site at all. These mostly boil down to how user-friendly the site is. This is where a well-tested and vetted user-interface makes all the difference in the world in attracting and retaining users. In the eyes of users big problems causing frustration are: being incredibly slow, crashing, the need to go through a vast number of

page views to get a simple bit of information, confusing screens and page sequences, and the inability (!) to print pages or screens. Some sites in my sample were excellent in this regard but a few were surprisingly sub-par. If a site is the only game in town, I guess it can get away with these pretty much inexcusable performance issues. When there is competition, however, users can pick and choose among sites that strive to enhance the user MD rating experience.

<u>5. Activities/initiatives used to encourage the contribution of reviews/ratings:</u> The discussion so far has been about site operating polices or design decisions that encourage or discourage traffic and MD review and rating activity. There are in theory a few other ways that sites can influence contribution of MD ratings. First are general public relations activities. Publicity supports a number of objectives, but news coverage of a site's functions can help drive traffic and participation in rating. Many sites advertise online (via Google, especially) but a few (Angie's List and Kudzu) use more traditional media sources (billboards, TV, newspapers). Angie's List told me a significant share of the $35 million in recent venture capital (VC) funding will go to developing, producing and distributing a new series of ads, specifically focused on rating health care providers. But even before tackling the health care ratings market, Angie's List advertised heavily in widely read mainstream media sources, such as the *New York Times* and the *Los Angeles Times*. Angie's List also has a membership publication with general and site related articles that is mailed to all members each month.

A number of the sites try to appeal directly to their current users and/or prospective raters through ratings incentives systems. Careseek has developed "carepoints" which reward contributors with donations to a few health related charitable causes and with targeted gift certificates. Angie's List seems to have the most developed strategy for promoting rating activity, especially related to their new health care initiative. They use a variety of approaches and channels to get their current Angie's List members to contribute. Whenever a member signs on to the site, he/she is presented with a list of MDs and asked to rate any if known. After every Angie's List site visit, members receive an automated follow-up e-mail message which, among other things, reminds them to rate their providers. Submitting reviews/ratings also allows members to enter drawings for prizes. Announcement of a new promotion (rating drive) was recently e-mailed to all members. They can get a Flip Video mini-camcorder (estimated retail value per Amazon = $115.00) if they submit 15 "valid reports" (at least 3 must be medical) between October 1 and 31. In addition, for submitting these reports members will be entered into drawings for a $5,000 gas card and trip to visit National Public Radio headquarters in Washington, DC.

To get a better feel for how these various factors and policies might help or hinder the accumulation of user-generated MD reviews and ratings, I decided to track the experience of Angie's List from the time they started rating health care providers, including doctors, in April of this year until the end of September. **Table 8** shows their experience in "growing" user-generated content on physicians, dentists, psychologists and chiropractors in the Los Angeles area (primarily Los Angeles and Orange counties, but also a few postings about providers in Ventura and Riverside counties). As of September 21, Angie's List had accumulated ratings on 593 of these types of health care providers. As of that date, only 25 had more than a single rating (24 had 2 ratings each and 1 had 4 ratings). How does this compare to the major competitor in the area (and nationally), RateMDs? On the same date, RateMDs had ratings on 4,553 unique

health care providers in Los Angeles and Orange counties. While many of these providers had only a single rating as well, many had multiple ratings, even running into the double-digits. Angie's List may eventually begin to add provider ratings at a faster pace but at their current rate, it would take more then 3 years to reach the level of user-generated content that RateMDs currently has. And since RateMDs also continues to grow, it's hard to imagine Angie's List catching up soon, especially given their policies (described above) which may discourage user participation, at least relative to other sites.

Attracting a consistently high (and ideally representative) volume of MD ratings from users is one critical success factor for MD rating websites. When combined with other objective and official MD-specific information, this ensures value for users and fairness for the providers being rated. But this alone will not ensure success or even survival without a solid financial game plan.

Financial Viability

What are the financial prospects for MD rating sites as they are (variously) structured today? It's not enough to provide value to users and be fair to the MDs being rated since independent survival also requires a viable business model. In my interviews with site founders and staff as well as industry experts, I heard a wide spectrum of opinions about financial prospects. These ranged from expectations of massive profitability to the belief that they would extremely lucky to simply break even.

Turning next to a brief overview of financial fundamentals for this space, I will try to answer the following questions: 1) what aspect of these sites provides the "killer" competitive advantage; 2) whether even under this optimally competitive organizational model profitability is remotely possible; and, 3) which sites, if any, are currently profitable and what do their experiences tell us about the financial prospects for others in this space?

I've come to the conclusion that the key to competitive advantage in this space is the control of a very large and high quality database of user-generated MD ratings as well as the website capabilities (including an excellent relationship with the user-reviewer-poster community) to keep fresh ratings coming in a on a continuous basis. MD directories that contain objective/official information (if complete and accurate) provide value and attract traffic to the site. However, since this information is not a unique asset of the site, but can be purchased by anyone, it will quickly be considered a commodity. As the CEO of Vitals indicated, the most important objective in creating value and driving website performance is getting, maintaining, and growing a critical mass of user-generated content.

But even with this asset, what is the likelihood of being profitable or even breaking even? I can't answer this definitively, but for clues I can examine some of the most important factors in determining profitability, the nature of costs and revenues in this space – both overall and for specific sub-categories of sites.

Costs are generally classified as fixed or variable. Fixed costs include those related to creation of the original site, development and maintenance of the directory of objective/official MD

information (one estimate I heard was $80,000 to contract for this information annually), and some fixed administrative functions (including sales and marketing and PR). Variable costs include dealing with the volume of ratings as they are posted (including possibly screening for inappropriate comments and verifying credentials) and other day-to-day website activities that increase with the level of site traffic.

One thing I learned from my interviews is that MD rating sites are not currently considered particularly "scalable." For many of the sites, not only were there sizeable fixed or start-up costs, there were still substantial costs that rose steadily with the volume of business/traffic. Two somewhat special cases are Zocdoc and Alijor which are incurring substantial costs associated with the number of MDs (and other health care providers) signed up to link to appointment scheduling systems (Zocdoc) or post prices (Alijor). As a result, rapid growth does not necessarily significantly reduce average costs and improve margins, at least not for quite a while. Difficulty in scaling is a particular problem for high-burn sites which must compete with very-low-burn sites that can function with very limited budgets since they benefit from volunteer labor to cover many of their variables costs. Such sites as RateMDs and DoctorScorecard are examples of this model, preferring to pass up offers of financial assistance from VCs and other investors and instead rely on their communities of users, which act, in part, to ensure integrity of the site information.

The three main sources of revenues in this space are: 1) transaction fees and subscriptions from users ; 2) advertising revenue, including general search and display ads as well as "featured" listings by MDs and other providers; 3) sponsors, who subsidize the site and typically include media organizations and health plans. MD rating sites can use any one or all of these approaches to generate revenue. By far the most prominent is search advertising. In addition to the monetary expectations associated with each revenue source, relying on the various sources has implications for the site's relationship with its users. This is especially relevant when the user is not the paying customer, such as with the advertising or sponsorship revenue models. Some users may worry that a financial conflict of interest will cause posted information on MDs to be biased in favor of those paying the site. Most sites go out of their way to stress that this does not happen. With such a business model, doubts on the part of users probably can never entirely be erased.

<u>Transaction/Subscription Revenue Model:</u> There are a small number of sites that rely on subscription and/or transaction revenue, that is, charging users for access to MD information or even for providing user-generated content. It's unlikely that sites like Angie's List and Healthgrades can afford to totally forego this source of income but it's becoming increasingly unpopular, especially as most of the competition will provide total access to their sites for free. Just as with online news and media, people now simply expect this information to be free and increasingly shun sites that charge, at least without a clear demonstration of greater value for the money. But of course the biggest problem with this revenue model is that it discourages users from contributing MD ratings and reviews, which are vital to the site's functioning and survival. Randall Stross, in his recent *New York Times* column comparing the value of restaurant information from Yelp and Zagat, predicted the demise of paid sites. Because of their ability to both attract a much larger number of credible reviewers and safeguard the integrity of site information (at least in his opinion), free sites would ultimately prevail. It's not much of a leap to

apply his logic to the MD rating sites. Given this serious flaw in this revenue approach, it's even more important to focus on other revenue sources, recognizing both their relative advantages and shortcomings.

Advertising Revenue Model: MD rating sites have a number of options for generating advertising revenue. Google (AdSense) search ads are the first to come to mind. Participating in AdSense is the cheapest and easiest way to get targeted ads in front of site users. Depending on the level of traffic, some sites also post banner and other types of display ads. Finally, a number of sites hope to get advertising dollars from doctors and other providers who would like to enhance their images to prospective patients through featured profiles that showcase their practices. What are the financial and other implications of relying on these two major sources of ad revenue?

Online advertising by non-Internet companies has been the big success story emerging out of the dot-com bust. Although the rate of growth has begun to slow a bit, the market is currently huge and expected to continue healthy expansion in the future. In an August *Los Angeles Times* article, eMarketer, Inc. predicted that overall levels of online ad spending would increase from $25.9 billion in 2008 to $30 billion in 2009. Even a likely recession is not expected to have much effect, since search ads are considered a bargain and the most efficient way for smaller companies to reach a targeted audience in difficult economic times.

Search ads are indeed cheap. The MD rating websites using them to promote themselves appreciate this. But their low cost means these ads are not particularly lucrative for the sites displaying them. In a number of my interviews I was told that nobody takes a "search ad only" revenue model seriously. Sites need a massive amount of traffic to make money on any form of advertising since payment for search ads (per 1,000 page-views) is reported to be very low, typically between 25 cents to $3.00. As can be seen from Table 1, very few sites have enough traffic to benefit much from search ads. Exceptions, however, are Healthgrades and RevolutionHealth. In the last year or so Healthgrades has been trying to shift part of its revenue stream from user transactions to advertising, primarily to take advantage of the high levels of traffic it gets. RevolutionHealth likewise is an extremely high-traffic site and as of October 3rd upped the ante by announcing that it would be acquired by Waterfront and combined with Waterfront's own major content site, Everyday Health.

One early rationale for optimism about ad revenue was based on a special advantage of health sites (including MD rating sites): they provide a great way for pharmaceutical companies, typically big spenders, to target their growing direct-to-consumer audience. One source I came across indicated that pharmaceutical display ads typically pay between $50 and $100 per 1,000 page views, while other advertisers pay at most $15. Unfortunately, we haven't seen many drug ads on these sites thus far. And the opportunity for profiting from generous pharmaceutical industry spending may decline significantly in the future as more brand name drugs go off patent, since brand competition is what drives advertising outlays.

At first glance, general online advertising revenue models seem like a perfect fit for MD rating sites, but the reality is that unless a site's traffic is substantial and growing, this approach will not suffice. Although I don't have as much evidence to support this, this phenomenon also seems to

be the case for MD advertising. It turns out that there is simply not much of an MD demand for enhanced practice profiles on these sites. One thing I learned more than a decade ago while working as director of policy research at the California Medical Association is that physicians are generally very stingy. It's extremely hard to get them to part with their money for anything that does not result in an *immediate* return on their investment. As Dr. Charles Saunders put it more than 10 years ago when he was Healtheon's medical director, "with doctors, *free* isn't cheap enough!" As a result, it's not wise to rely too heavily on this source of revenue. I never got a chance to talk to the management at Xoova (which seemed to be folding just as I began my research project) but I have to wonder if a miscalculation about this sort of revenue contributed to its demise.

As a source of funding, advertising has serious limitations, at least for all but the largest sites. But that's not its only problem. Unless sites are careful to maintain a strict and even journalistic "media" model (i.e., keeping an unbreachable firewall between advertising and editorial content) ad policy can signal a conflict of interest, causing users to lose confidence and abandon the site. The concerns are not likely to be with the search and display ads, over which the site typically has little control. The potential problem is when the site makes money from ads purchased by providers, who are also reviewed and rated on the site. Sites must inform users that advertising content by providers (e.g., self-reported information or "featured" practices) will always be clearly identified as such. In addition, sites must scrupulously abide by such policies. If it becomes known that the site has betrayed consumer trust in this regard, the risk to its reputation could seriously dampen interest in the site.

Even sites that rely heavily on ads and take this potential problem seriously can run into problems. While not specifically health care focused, the significance of trust in the online media model recently emerged with complaints about Yelp in San Francisco. In July (2008) the *San Francisco Chronicle* and a number of other news sources reported that local Bay Area merchants had expressed concern that advertising revenues appear to be causing manipulation of ratings. They claimed that Yelp ad sales staff had promised to move favorable ratings higher in a merchant's Yelp search results if that merchant spent more on ads. I couldn't determine if this was true, but the allegation was forcefully denied by Jeremy Stoppelman, Yelp CEO and Chairman, who said that Yelp simply could not afford to have even the hint of this type of behavior, because if people lose confidence, the site has no future - "Trust is our oxygen." Trust is equally important for MD rating sites and financing models can thus present threats. Ad policy can contribute to this problem, but the sponsorship revenue model can raise concerns as well.

<u>Sponsorship Revenue Model:</u> MD rating sites need a stable source of capital at least in their early days if they do not plan to generate revenue via user subscriptions/transactions or ads. Under the most extreme form of sponsorship revenue model, an established organization underwrites the start-up costs of the MD rating site and may even agree to subsidize its operations for the foreseeable future if the site provides a value-added service for the organization's current customers.

There are two main examples of the sponsorship model. The first is represented by sites like Kudzu (owned by Cox Enterprises) and CitySearch (owned by IAC), where large media companies have created or acquired general local search sites that allow users to rate MDs.

Although the parent companies currently subsidize or partially subsidize these operations, there is every expectation that they will eventually become self-supporting and profitable under the advertising revenue model. So this is really simply a variant of the "media" model. We're really more interested in the second type of sponsored sites, those sponsored by health plans. There are four sites in my sample that fall into this category, thehealthcarescoop.com (in part sponsored by Blue Cross Blue Shield of Minnesota) and the three sites sponsored by Aetna, Anthem/Zagat; and Regence Blue Cross Blue Shield. Thehealthcarescoop.com differs significantly from the other three. It is open to the general public, gets some revenue from search ads and plans eventually to break even and become a totally independent operation.

MD rating sites controlled by health plans raise some obvious trust concerns that their sponsors must defuse if they want to be successful in attracting MD rating contributors and viewers. Health insurers have had consumer confidence problems dating from the "managed care backlash" of the late 1990s and most visibly reflected in Michael Moore's *Sicko*. Aside from an overall antipathy, consumers and enrollees today might have reason to be particularly skeptical of MD-specific information presented by health plans. Over the last few years, a number of large health plans (including Aetna, CIGNA and United Healthcare) have provided physician performance reports to their enrollees to motivate selection of more highly rated MDs. Many MDs, however, complained about the questionable validity of the performance measures used and suggested that the better rated MDs were more likely to be lowest cost rather than highest quality. Andrew Cuomo, New York State Attorney General, found these concerns to be reasonable. Last fall he issued a consumer alert about what he called "potentially deceptive programs." In a press release Cuomo told consumers "to be aware that doctor ranking programs as currently designed may steer patients to the cheapest, not necessarily the best doctors, letting profits trump quality." In light of these accusations, health plans operating in New York State have agreed to restructure their MD performance ranking programs to improve objectivity and transparency.

Health plan sponsors clearly need to work hard to win the trust of their enrollees. The MD-specific ratings on the sites I examined are in large part contributed by enrollees and patients, rather than being based on seemingly obscure performance measures that might favor the lowest cost providers. In general, this information is expected to be significantly more trustworthy, at least if the health plan can make a credible argument that ratings truly reflect enrollee contributions without any "adjustments" on the part of the plan to improve the standing of the lowest-cost MDs. The representative of the Anthem/Zagat collaboration I interviewed clearly recognized the potential seriousness of the problem. It is essential to do as much as possible to build up enrollee confidence in the health plan's unbiased operation of the site. But if past concerns persist, health plan sponsored sites may be at a competitive disadvantage with others in this space. I was unable to get traffic figures and find out how quickly these sites were accumulating MD ratings, but creation of sizeable and representative ratings databases will ultimately be the measure of their success.

<u>Other sources of revenue:</u> A few sites have other significant sources of revenue. Healthgrades (which came into existence in the late 1990s as a physician practice management company) also makes money from consulting with its provider clients, primarily hospitals, as well as licensing its ratings if hospitals want to use their Healthgrades scores for advertising purposes.

Healthgrades also sells quality reports on a wide variety of health care providers, including MDs. They recently announced that they will be selling a hard copy report via traditional booksellers as well as through online retailers. Their goal appears to be to exploit their major asset, their mainly objective/official provider databases, as much as possible.

The major source of revenue for Zocdoc is its appointment referral fee. It's a major upfront cost for Zocdoc to connect to providers' appointment systems. They do this without charge but providers pay when site users start making appointments. I expect that this is an attractive arrangement for providers, given its low-risk nature. MDs don't actually have to pay anything until mostly new, I assume, patients start booking appointments. Not quite money in hand, but about as close as you can get and certainly much more compelling than purchase of MD ads, enhanced practice profiles or featured listings.

Which sites are actually profitable? Because Healthgrades is publicly traded, information about its financial status is available. Healthgrades is profitable, although its margins have been shrinking modestly in recent years. Most sites were not willing to say much about this, but I assume that those who were profitable would have been happy to tell me. Only two other sites had anything to say on this topic. Kudzu told me that its operations were profitable in some of its local areas. MDnationwide.org, a low-burn site that charges users for MD-reports based on objective/official information, told me that it had been profitable since 2004. Given how early we are in the evolution of this space, I'm not sure how important current profitability is. Most sites are clearly in start-up mode. In my opinion, what's more important is who has the optimal approach for attracting users and building informational assets.

Finally, since most of these sites are unlikely to be self-supporting very soon, the question of outside funding (aside from the organizational and corporate sponsors mentioned above) remains critical. Although health care was as devastated by the dot-com bust as was the rest of the Internet, optimism has begun to return in recent years. According to at least one source, renewed interest by venture firms in "web health ventures" started to build in early 2005, when capital began to flow again. But, as Tom Salemi noted in the *Wall Street Journal*,

> Overall, the commitments remain relatively modest – roughly $41 million had been spread over five companies in a little more than a year, according to industry tracker VentureOne… But technology investors see health care as a huge opportunity for Internet-based businesses. Larry Orr, general partner at Trinity Ventures… said health care is the latest niche gaining traction among consumers over the Internet… "It is natural that health care would be [the next major industry] that is in need of this type of solution" ("Prognosis Positive: Web Health Ventures," May 25, 2006).

Only a few of the sites I examined have received funding from the major venture firms, but the overall level of enthusiasm noted in the *Wall Street Journal* article seems to have encouraged contributions from other smaller investors including the founders of these sites and others associated with them.

But the major question now should be, can we expect this degree of interest and financial commitment to continue? Even if ultimately profitable (and this remains to be seen) these sites will need a certain amount of time to build and demonstrate their capabilities. Zocdoc and Angie's List recently got sizeable VC investments. However, not all sites are doing so well in the area of investor confidence. Healthgrades (the only publicly traded company) has seen steady share price decline over the last year and previously well-regarded Xoova recently stopped operations when it appeared that it could not count on getting additional investor funds. And that retrenchment occurred prior to the onset of the current, massive credit crisis.

Future of the online MD rating space

What can we expect this space to look like in the next 5-10 (or even just 2) years? That depends on which of the current or yet to emerge sites manage to best meet the needs of users, physicians and funders. How will they do this? What do these sites need to do to succeed (and even survive, given the very short financial leash they have been given)? They need to get big, fast. This old (but not always valid) advice from the earlier dot-com boom actually does make sense in this space today, at least with respect to the volume of user-generated content about MDs.

The main reasons to get big have to do with conventional and non-conventional economies of scale and network externalities. Conventional (also known as "supply-side") economies of scale typically relate to the presence of high fixed or start-up costs. If costs are primarily fixed, expanding output drives down average costs (and drives up average profits) dramatically. As noted in the previous section, most of these sites also have important variable costs (associated with volume of output) but their fixed costs are sizeable Therefore getting big ASAP does help financial performance.

But what makes this prescription most compelling is the presence of substantial "demand-side" economies of scale. In this situation a rising volume of output increases the value of the product/service for all consumers/users. We see something of a network effect (*à la* eBay) where the more MD ratings are posted, the more users are drawn to the site to view and (it is hoped) rate. Use of the site by other patients and consumers makes it more attractive. Volume drives value in the following way. As more ratings are posted, the odds that specific providers will show up online increase. In addition, the validity and reliability of MD-specific ratings rise as the number of ratings per MD increases. For maximum user value the number of ratings per MD is as important as the number of MDs rated.

All sites that rely on user-generated content as their primary informational asset must attract as many legitimate users as possible, just to maintain their competitive edge. For those sites built on a media model, traffic is doubly important, since ads are an important source of revenue. What's the best way to get big fast? There seem to be 3 major approaches: 1) for new entrants, build a consumer MD rating function onto current general non-health care rating capabilities; 2) consolidate/merge with current market participants; and 3) continue to grow user-generated-content organically.

Angie's List provides an example of the first strategy, hoping to grow quickly by offering MD and general health care rating capabilities to its current "installed-base" of existing members. Although this undoubtedly gives them a sizeable advantage over most other new entrants, rapid growth is far from assured.

The strictly fastest way to grow is by merger and acquisition. With the exception of the 2007 RateMDs and NDDB.net deal to combine MD ratings and the recently announced merger of RevolutionHealth and EverdayHealth, this does not appear to be a popular option or even consideration. It's obvious to see why mergers are unlikely – they would be difficult to carry out, given the wide variety of site models, approaches and philosophies out there. A better way to quickly boost site ratings would be the licensing approach as we saw, at least temporarily, with RateMDs and Vitals. Despite the lack of overt interest in mergers, "passive" consolidation may still play an important role in boosting average volume of ratings per site, i.e., if the smaller sites simply disappear. A number of sites have dropped off the radar screen recently, including the much publicized Xoova.

M&A can address problems of growth in the short term but it cannot be a site's sole strategy. Even if the acquisition of a competitor could quickly leap-frog one site into the lead, it is necessary to ensure continued traffic and growth in ratings. To succeed, a site must be able grow organically. In order to do this it must not only drive viewer traffic but encourage participation (posting of ratings/reviews) by as broad a spectrum of its user audience as possible. This will be necessary to keep information on MDs fresh and accurate.

An earlier section explained how users view a site's value and described 5 decisions sites can make to affect value from the perspective of consumers. But other factors and forces in the environment and society also affect site participation and have an impact on how well the site's specific strategies work. A number of recent surveys (see **Table 9**) suggest that interest in both viewing and posting online ratings (of all types, not just related to health care providers) will grow over time because of greater use by younger populations. The Pew Internet & American Life Project (2004) and Forrester Research (2006) both show an almost 3-fold difference in experience with online ratings in general (either visiting such sites or posting ratings online) between the youngest (Generation Y) and oldest (aged 62+) in their samples. The results from the 2007 California HealthCare Foundation/Harris poll found a similar, but somewhat less extreme, age gradient when asking specifically about use of the Internet to find ratings about health care professionals.

Based on these findings, it's reasonable to conclude that as Internet-savvy generations age interest in online ratings overall will increase. But it's not obvious how these findings apply to health care and particularly to the rating of physicians. Specifically while the 2007 California HealthCare Foundation/Harris survey shows that more than a quarter of respondents under the age of 65 were interested in *viewing* provider ratings online, we still don't know how many would be willing to *post* ratings or opinions. And willingness to contribute (and not just view) this information is the most importance factor in determining success – both of individual sites and this space overall.

Although it's possible to make some educated guesses, there is currently little hard research on who contributes to such sites and why. The 2004 Pew poll cited above indicated that men were more likely (29%) than women (22%) to use Internet rating systems (not specific to health care). Men seemed less shy about expressing their opinions (in general) online than women, but the reason for the difference is not clear. In fact, since dealing with family medical concerns are typically considered primarily a female responsibility, women might be more likely to both view and post MD ratings. Regardless of what the current gender breakdown of MD raters looks like, there has been much recent discussion about using women's themed blogs and sites to drive traffic to some of the major health sites.

Aside from the demographics, what other environmental and societal forces might influence interest in rating MDs online? What are the motivational factors and dynamics behind MD rating and how might they differ (if at all) from those driving the rating of other types of local businesses and services, such as restaurants, hotels, auto repair shops and plumbers? I have to confess that I don't know enough to say anything remotely definitive in response to these questions, but I have come up with some possible clues based on my research.

One thing that came up a number of times, especially in interviews with what I call low-burn and relatively more community-oriented websites, was the apparent benefits that users got not just from the information viewed, but the from the act of posting or sharing MD specific information (be it a positive or negative opinion) with others – the website community. This was especially the case, I believe, where there had been a very negative experience and the user/poster seemed to feel that sharing this information would prevent others from having to undergo a similar ordeal. I use the term community loosely, but it does seem that the more users come to identify with others who use (or are likely to use) the site, the more personal satisfaction they are likely to gain by sharing information useful in finding excellent MDs and avoiding problematic ones. This would imply that sites developing the strongest sense of community would have the highest levels of participation and, all things being equal, win the "get big fast" contest.

In trying to understand what motivates people to contribute to MD rating sites, I happened across some intriguing evidence. **Table 10** is based on data from the RateMDs website and enables us to compare the level and nature of MD rating activity in the US and Canada over the past 4 years. Because the RateMDs site went live in the US and Canada at approximately the same time in 2004, we can view its comparative MD rating experience as something of a natural experiment.

What's most startling is the much greater propensity Canadians show for rating their MDs online. Nearly 60% of all Canadian MDs have been rated at least once, while the comparable figure for the US is just 12%. In addition, the average number of reviews per Canadian MD rated was much higher than in the US (7.0 vs. 1.9), making MD-specific information more trustworthy and thus more valuable to users in Canada. Finally, Canadians rate their MDs more favorably (4.30 vs. 3.94, on a scale of 1 to 5, where 1 is worst and 5 the best). I have not yet done any tests of statistical significance, but judging by the consistency of the state and province level figures, I believe that these differences are likely to be meaningful.

What can explain this pattern of variation? I can't come close to answering in this analysis but I can suggest a few ideas. I would also like to take this opportunity to solicit insights from my readers. Three possible (and likely partial explanations) have occurred to me: 1) favorable market conditions in Canada where RateMDs managed to get a "first mover advantage," which was not possible in the US due to the greater number of competitors; 2) various differences between the US and Canadian health care systems; 3) socio-cultural, non-health care population-based or economic differences between the US and Canada.

As far I know, when RateMDs went "live" in the US and Canada, there were few MD rating sites operating in the US and no others in Canada. This may have been due to higher barriers to entry (or perceived barriers to entry) for operating in Canada, including: 1) the need for website staff to be fluent in French as well as English if the site is to cover entire country; and 2) the possible legal risks from more strict libel laws in Canada than in the US. The second of these turns out to be a problem only for MD rating sites based in Canada since US based sites such as RateMDs need only abide by US law, which is extremely protective of free speech, both under the US Constitution and recent Supreme Court rulings. RateMDs does have staff who can review MD opinions in French, especially important since the site has turned out to be very popular with the Quebecois.

A first mover advantage relies on the existence of network effects or network externalities. This simply means that the more users a site has, the more valuable it becomes to other users. As a result, an increase in volume of users is self-reinforcing. The classic example from the first dot-com boom is eBay, where the site attracted more and more buyers and sellers as it grew, simply because the larger the marketplace, the greater the odds of making the best deals – for both buyers and sellers. Because of this dynamic, it may be possible for the "first mover" to grow so fast and become so attractive to potential users that all other market entrants are either squeezed out or simply discouraged from entering the market. I doubt this is the only reason for RateMD's different experiences in Canada and the US, but it might provide a partial explanation. Although RateMDs probably didn't have the entire US space to itself in 2004, there were few competitors, and, yet, its experience in terms of percentage of MDs rated, number of ratings per MD, and average MD scores was very, very different. This strongly suggests that something special about Canada, not just the underlying market conditions, is driving these results.

We'll start with the health care system, which everyone knows to be significantly different. Unlike the US, Canada provides universal health care coverage for all its citizens, although the details can vary somewhat by province. In the US, at any time approximately 15% of the population is without health insurance coverage. It was not immediately apparent to me why fewer financial barriers to care would necessarily cause Canadians to be so much more enthusiastic about RateMDs. I wondered if other aspects of the care system might have an impact, for example the overall availability of MDs? Canada has only slightly fewer MDs/1,000 population than the US. Since its percentage of specialists is lower than in the US, when these are excluded, Canada actually has a higher ratio of primary care providers (PCP) to population than the US.

Still not sure what impact this could have on the RateMDs results, I had a long discussion with a high level staffer at the Canadian Medical Association (CMA) and learned a few interesting

things. First of all, despite Canada's relatively high PCP MD/population ratios, the perception nationwide is of a serious and growing shortage of PCPs. It was suggested to me that possible factors contributing to this problem include: a large number of women MDs who prefer to work part-time; lack of financial barriers to access raising effective demand; and the inability of patients to self-refer to specialists – they are instead required to see a PCP "gatekeeper" first, also boosting effective demand for PCPs. Despite limited access to specialty care, Canadians are very free to select whatever PCP they wish, the main constraint being whether their provider of choice can accommodate their needs for care in a timely manner. The nature of most Canadian complaints on RateMDs, which are more about delays in getting appointments and in waiting rooms rather than about quality of care or even courtesy issues, seems to support the idea that this aspect of their system – the PCP shortage – might at least partially explain Canadians' greater use of RateMDs. But it's still not clear how different this is from the situation that most American patients face in getting care these days.

As a result, I find it hard to believe that these two factors totally explain the degree of difference that we see. There seems to be a huge residual explanatory factor, but I have no good idea what that might be. The few Canadians I spoke with scoffed at the idea that the average Canadian might possibly be more interested than the average American in sharing their opinions regarding their MDs for the good of their community and fellow patients. The RateMDs statistics are more than just a fascinating puzzle. Figuring out why the two countries differ so much should provide clues about which aspects are unique to Canada and which may be translatable to the US. At a minimum, understanding the popularity of rating Canadian MDs can provide clues as to how far this trend is likely to play out in the US in the near term.

In developing an explanatory model, it might be interesting to compare the growth of MD rating in Canada to the rise of open-source software programming in the mid- and late 1990s. It would first be important to understand the pre-existing culture of the contributors (i.e., computer programmers worldwide vs. Canadian health care consumers), to find out what personal and environmental aspects could lead to the formation of a "community" that supported these activities. Next, we need to identify the spark or trigger that started this dynamic process. In the case of open source software, it appears to be the modest proposal and request for input and assistance sent out by Linus Torvald that led to the development of Linux. For widespread MD rating in Canada, it was the appearance of RateMDs. Finally, once the (snow)ball got rolling, at what point did it attain its critical mass, that is, when did its value become both real and apparent? Although the volume of MD ratings in Canada suggests that critical mass has been reached, clearly more participation can be expected to increase value (validity and reliability) of this information even further.

Before ending this section, I want to add a few words about other implications for scale, especially with respect to health plan sponsored sites. We now recognize that scaling out both operations and user participation is key to success. One obvious shortcoming of health plan sponsored sites is that they restrict access to their enrollees, placing constraints on their accumulation of ratings from "day one." At least with the Anthem/Zagat collaboration the health plan membership being targeted is quite large. According to their press statements, there are over 35 million enrollees covered under all types of Anthem health insurance products nationally. But given that Anthem is itself a member of the national Blue Cross Blue Shield Association,

Anthem and other BCBS plans (including Regence) could reach critical mass much more quickly by utilizing a single, national MD rating site that aggregated and consolidated user-generated content from all Blues plans. Based on my interviews, I got the impression that the current wave of experimentation by state and regional BCBS plans was considered a good thing since it promoted "competition" within the national association to develop the best approach to MD rating and that eventually the "winner" would be adopted by all. That may very well be the ultimate outcome, but it's unclear how long this process will take. Speed is important if the BCBSA considers such a site to be a significant differentiating strategy for its member plans, since delay decreases the odds of a "first mover" advantage victory for a national Blues-sponsored MD-rating site.

As a result of their greater absolute number of enrollees nationally, the Blues have a natural advantage in reaching scale if they can figure out how to join forces with their fellow trademark holders. But that does not imply lack of value for MD rating sites sponsored by other, relatively smaller, health plans, including those with membership concentrated in particular geographic regions. Group Health of Puget Sound and Kaiser-Permanente are 2 examples of such plans. Given their vertically integrated models, both plans already have access to detailed, accurate and complete objective/official information about most of their physician providers and typically allow the general public to access this information through their member websites. Although it's not clear if or when these plans would be willing to release other MD-specific information of interest to patients (e.g., ABIM certification scores, procedure volumes) they could certainly do this easily if it become a priority in differentiating themselves from the competition. Collection and display of enrollee-generated content on these providers should also be of great interest to the membership of these plans in large part because of their geographic concentrations (e.g., Seattle, Portland, Denver, San Francisco Bay area, Atlanta, San Diego, etc) that enable ratings per MD to more quickly reach a critical mass signaling greater validity and reliability and thus greater value for the site user.

I'm not up-to-date on related Group Health initiatives, but since it is organized as a member cooperative, I assume it is more attuned to membership interests and concerns than Kaiser, of which I am a former employee and current (more than 20 years) member. It is my understanding that a number of Kaiser regions are now considering providing a limited amount of MD-specific patient satisfaction information to their members. This would not, however, involve letting members freely post opinions about Permanente MDs. It would instead take the form of the relevant Permanente Medical Group (PMG) posting information that allowed identification of only the most highly rated MDs, based on the results of the organization's internal and ongoing post-visit patient survey process. Initially this information would be available only to employees via Kaiser's intranet. Obviously, however, once this happens, there's really no way to keep it, as limited in scope and detail as it is, from becoming public.

Based on my experience with Kaiser, it seems highly unlikely that it would set up the type of MD rating function that we see with Anthem, Regence or even Aetna. But as I mention below in the final section of this analysis, lack of sponsorship does not have to imply a lack of information, if those who expect to benefit understand the tenets of "organizing without organizations" and are willing to get involved in creating a site that meets their needs. In other words, there is nothing stopping Kaiser members (locally focused but nationally coordinated)

from establishing their own PMG MD rating site(s). Indeed, given the trust issues about health plan sponsored sites discussed previously, an *independent* health plan-focused MD rating site initiated and managed by enrollee-users might be the ideal way to go in creating the maximum user value.

Final Thoughts

As I was wrapping up this project I happened upon Clay Shirky's new book, *Here Comes Everybody: The Power of Organizing without Organizations.* His general approach is very helpful in puzzling out what's likely to transpire in the MD rating space. **Table 11** presents some of his major concepts that are important for understanding the value these sites can provide as well as the requirements (including financial) necessary for them to succeed.

Objectives are the 4 types of organized behavior sites can carry out. Shirky ranks them in order of increasing effort and commitment on the part of participants as well as increasing value to all involved. Starting at the bottom is "sharing," which involves the contribution and aggregation of discrete pieces of information and "creates the fewest demands on the participants." Moving up a rung is "cooperating," which is somewhat more difficult because it "involves changing your behavior to synchronize with people who are changing their behavior to synchronize with you." Next is "collaborative production," "a more involved form of cooperation, as it increases the tension between individual and group goals. Structurally, the biggest difference between information sharing and collaborative production is that in collaborative production at least some collective decisions have to be made." Finally, we reach "collective action," which is "the hardest kind of group effort, as it requires a group of people to commit themselves to undertaking a particular effort together, and to do so in a way that makes the decision of the group binding on all individual members"

MD rating sites, at first glance, seem to be an obvious example of simple information sharing. But if well designed, I would argue that these sites actually make it possible to do more than aggregate many personal opinions. They instead could allow for that rarest of all phenomena, synergistic change. The sites would enable a bunch of fragmented personal observations to be transformed into a robust database of MD ratings, with the new whole now greater than the sum of its parts. If participation were sizeable and widespread, it would thus be relatively easy to jump from simple sharing to collaborative production with little additional effort on the part of users. Collective decisions typically needed when moving from sharing to joint production would not require extra effort or coordination because they are made implicitly as participants agree to the site's information use policies. Although collaborative production is currently the main functional objective of these sites, it's possible they could provide greater value in the future, including support of collective action. Given time, the accumulation of credible information combined with the development of a cohesive user community may enable some sites to serve as platforms for launching initiatives into areas of public concern, including improving access to and quality of health care.

In order to accomplish even the simplest of these objectives, Shirky believes that all sites must meet three requirements, also listed in **Table 11**. To start with, they must demonstrate a

“plausible promise.” This answers the most basic question regarding value: why join or participate in the first place? A site must show benefits for the individual beyond what currently exist. Even if there are no monetary costs, expected value return on time and effort spent must be clear. Next, a site must have the appropriate “social tools” for the activity it is trying to carry out. Social tools can vary depending on the site’s specific objectives, from wikis to e-mail to user bulletin boards to interactive databases and beyond. Finally there is the all important, make-or-break requirement, the “bargain.” The bargain comes last because “it only matters if there is a promise and set of tools that are already working together.” It “establishes the rules of the road” for all involved. Specifically the bargain explains what you can expect from the site and what is expected of you and your fellow users.

A “plausible promise” for MD ratings sites has been at least tentatively accepted. But I think that continued use will depend on further demonstration of value to patients/consumers and fairness to MDs. For this to happen, the number of users (viewers and especially posters) will have to increase dramatically. As I mentioned previously, use and value are self-reinforcing but it is first necessary to accelerate growth to reach this “virtuous circle.” One of the major challenges is increasing the level of traffic and rating contributions needed to reach the critical mass for MD-specific information validity and reliability. For sites where scale is an essential component of value, Shirky has the following suggestions: 1) make it as easy as possible to participate (reduce all costs and hassles); 2) create individual and group value (try to understand how categories of users benefit and enhance these site aspects); and 3) subdivide potential users into smaller sub-groups that allow for more targeted value creation. All of these ideas are very applicable to user rating of local health care providers. It will be interesting to see which sites are able in the near term to take advantage of them to boost their relative promise with users .

MD rating sites’ use of “social tools” is well established and mostly conventional, but in some cases definitely shows room for improvement. Most sites make use of the same few core applications, but there is a great deal of variability in details of use, implementation and especially the user interface experience. When choosing the most appropriate social tools, Shirky’s recommendation is for sites is to stick with those that are “robust and universally accepted,” as well as easy to use and understand. New and especially complex technology is not necessarily better if it’s a high priority to attract and retain as large a user-base as possible.

The MD rating site “bargain” is much less developed or standardized across the sites I examined than either “plausible promise” or “social tools.” We still seem to be in the midst of figuring out just what an optimal “bargain” for this type of site would look like. One key aspect of the bargain, however, seems to revolve around the idea of trust or confidence in the integrity of the MD-specific information collected by and displayed on the site. If this trust is threatened, the value of the site can decline precipitously. The bargain must clearly state that such trust is warranted and explain why. Unless an MD rating site can demonstrate the accuracy of its information, either explicitly or implicitly, participation will be insufficient to support the virtuous circle of use/value on an ongoing basis. This is one way the bargain plays a make-or-break role in the site’s survival. Getting its terms right cannot be overstated.

One major threat to trust is the realization by users that they are not the most important customers of the site. In fact, as more and more sites recognize the importance of attracting users

to contribute MD opinions, users are not really conventional customers at all, since their access to this information is now almost universally free. The sites, however, still need funding to operate, which increasingly comes from ad revenues or other large organizational sponsors (including media companies, health plans and venture capital firms). These sources of funding raise concerns about possible conflicts of interest that could affect the validity and reliability of information displayed on the site. Dealing with these user concerns is probably the most important aspect of the MD rating site bargain. Given the wide spectrum of financial models, some sites will find this a bigger challenge than others. But only those that understand these issues and address them effectively via their user bargains will succeed.

It frequently seems that the main outcome (or even the explicit objective) of exploratory research is to raise as many questions as it answers. That has definitely been the case with this analysis and I hope readers can provide insights on many of the questions posed and issues discussed above. In my opinion, the outstanding question we are left with is prompted by consideration of Shirky's conceptual approach to understanding "organizing without organizations," and in particular the critical significance of striking the right bargain. My final, and, I think, most important question is about the roles that commerce and community should play for MD rating sites. Both appear to be essential elements for success and even survival, but I'm not sure if they can co-exist given the nature of information collected from and provided to users. One way to approach this question is to compare MD rating sites to two well-known and emblematic online "institutions," eBay and Wikipedia, which function under quite different "bargains" with respect to commerce and community. Which of these online entities do MD rating sites most closely resemble and what, if anything, can they tell us about the future prospects for these sites?

Community and commerce together serve as the foundation of eBay. EBay presents a rare example of a successful transaction revenue site, which, unlike the vast majority of early e-commerce companies, has been profitable from pretty much "day one." But community is as important as commerce. Without it, it's unlikely that eBay's highly improbable online trading model would ever have taken off. Despite the recent slowing of the online auction activity, eBay is still one of the most wildly profitable companies of all time. This is not only because community and commerce are compatible for eBay, but because, at least in the early days, these two elements actually reinforced each other. It's my understanding that Pierre Omidyar, eBay's founder, came up with the idea to have eBay users monitor and rate each other initially as a matter of convenience. But what resulted was a novel and robust system for protecting the interests of the honest participants in online auctions and, ultimately, establishing eBay's reputation for trustworthiness, which stimulated further growth. Expansion in traffic and transactions led to higher revenues and profits. This early-stage financial success meant that the company did not need to rely on handouts from VCs and other meddlesome investors. Early profitability gave eBay the time and freedom to evolve its own unique (and very community-oriented) organizational model.

Unlike eBay, Wikipedia functions as a pure community model online operation. Although Wikipedia does get revenue through donations of supporters and users (I assume), from its early days, any commercial sources of funding were strictly prohibited. Given its huge volume of traffic, the idea of benefiting from online ads comes up periodically, but has, so far, been voted down. The primary objection to allowing even search ads is that any such promotional activities

could raise concerns about possible biases in the content of Wikipedia articles. Once a seed of doubt is planted, trust in the whole enterprise is threatened. If this happened, the expectation is that Wikipedia's days as a unique and wide-ranging collaborative source of information would be numbered. Unless Wikipedia decides to experiment with advertising in the future, we'll never really know exactly what the consequences would be. In his book, however, Shirky presents a compelling argument for the importance in Wikipedia's early years of shunning such commercial entanglements. At that time, keeping free of any commercial influence was considered essential for organizational cohesion and growth. If Wikipedia had broken apart over the ad revenue question, Shirky suggests that overall use and contributions would never have taken off to the degree needed to ensure the success that we see today.

Community is critical to the success of MD ratings sites since that is what drives user participation to levels necessary to generate real value on an ongoing basis (reaching the virtuous circle). But these sites need much more to be successful; they need substantial amounts of funding, especially in their start-up periods. Unlike Wikipedia, donations do not appear to be a reliable source of funding, so it's necessary to revert to the three main sources of revenue discussed previously, and consider, in particular, the relative threats they are each likely to pose to community.

Transaction fees and subscriptions are the one the source of revenue that really raises no trust issues. However, charging for access to the site will reduce user participation and thus reduce growth and even development of a user community. Despite its large war chest ($35 million in VC money) to be used in large part for breaking into the MD rating space, Angie's List is finding the going slow. This is, I expect, due mainly to their subscription fees, since virtually all other sites provide similar and in some cases better information (at least in terms of number of MDs rated - think RateMDs) for free. This revenue model is pretty much a non-starter, at least while pricing in the market is so lopsided. And if the expectation is that this information should be provided for free (like online news) that will become the accepted convention and it's unlikely that anyone will be able to charge for it in the future. Of course if a free site evolved into a powerful monopoly, it could attempt to charge for its information. But that would severely violate its original bargain with users. There's a huge risk users would simply desert the site and that would be the end of the goose that laid the golden eggs. Regardless, transaction fees are a risky proposition, now or later.

We are thus left with the more problematic advertising and sponsorship revenue models. These, especially the automatic search ads, do not pose the threats to trust that ads do for Wikipedia. That's the good news. The bad news is that MD rating sites, in a sort of a chicken-or-egg situation, must get a huge volume of regular traffic before this source of revenue begins to amount to anything. There is also a potential problem related to ads paid for by MDs who are also likely to be rated by users of the site. Of course all sites doing this or planning to do this indicated to me that they realized the need to keep information in such "featured" listings separate and distinct from ratings contributed by patients of these MDs. But it's important to be aware that even if sites are scrupulous about telling users how to distinguish ads from ratings, the user reaction is all important. The sites must defend themselves against even an apparent conflict of interest, since what erodes trust is not necessarily reality, but perception.

I've already talked quite a bit about the trust issues associated with sponsorship revenue models, but given the problems just mentioned with the other two sources of funding, they will likely play a significant role in the future of the MD ratings space. We need to think more creatively about more appropriate sponsors than we've seen thus far: health plans, venture capital firms, and media companies (just a version of the advertising model). By "more appropriate" I mean organizations that are more likely to elicit trust than distrust about their motives being aligned with the users of the site. I think such an organization could serve as a neutral (or even pro-consumer but not anti-MD) focal point for the aggregation of all of the information (objective/official and subjective/opinion) discussed above. One possible candidate for this role might be Consumers Union, which has a sterling reputation for independence, longtime experience in providing trusted consumer information, and a large existing subscriber base that could serve to jump-start participation in MD ratings and the creation of a relatively highly engaged community of users.

In closing, I want to leave readers with this final question: do *you* think that community and commerce can be compatible in the operation of MD rating websites? Clearly, figuring out how to construct the optimal "bargain" in this space, one that encourages widespread and regular user participation, would greatly benefit society. What's much less obvious is whether the financial terms of this bargain and its associated monetary returns would be sufficient to ensure financial success or even viability. For this to happen, it will be necessary to devise a business model that can support the site and appropriately reward innovators who have worked to create it but does not pose a threat to user confidence in the value of the information posted. This may prove to be a very tricky balancing act. At this time, the outcome is far from assured.

Table 1

MD Rating Websites Examined in Current Analysis

Classification 1/		Interviewed?	Alexa Rank Category 2/
GLS	www.yelp.com	No	1
GLS	www.citysearch.com	No	1
GLS	www.angieslist.com	Yes	3
GLS	www.kudzu.com	Yes	3
GLS	www.whitecollarfinder.com	No	9
GLS	www.justclicklocal.com	No	9
HCC	www.revolutionhealth.com	No	2
HCC	www.healthcare.com	Yes	3
HCC	www.wellness.com	Yes	3
HCC	www.healthworldweb.com	No	5
MMD	www.healthgrades.com	Yes	2
MMD	www.vimo.com	No	4
MMD	www.ratemds.com	Yes	4
MMD	www.vitals.com	Yes	4
MMD	www.xoova.com	No	5
MMD	www.zocdoc.com	Yes	5
MMD	www.suggestadoctor.com	Yes	5
MMD	www.bookofdoctors.com	No	6
MMD	www.doctorscorecard.com	Yes	6
MMD	www.drscore.com	Yes	6
MMD	www.findadoc.com	Yes	6
MMD	www.mydochub.com	No	7
MMD	www.alijor.com	Yes	7
MMD	www.careseek.com	Yes	7
MMD	www.mdnationwide.org	Yes	7
MMD	www.yourcity.md	Yes	7
MMD	www.thehealthcarescoop.com	Yes	8
MMD	www.medimundi.com	No	9
MMD	www.doctorfeedback.com	No	9
MMD	www.remarkabledocs.org	No	9
MMD	Anthem/Zagat	Yes	9
MMD	Aetna	No	9
MMD	Regence	No	9

1/ GLS = General Local Search; HCC = Health Care Content; MMD = Mostly MD (rating)
2/ Alexa Rank Categories (ARC) are: 1 <= 1,000; 2 = 1,000-10,000; 3 = 10,000-50,000; 4 = 50,000-100,000; 5 = 100,000-500,000; 6 = 500,000-1,000,000; 7 = 1,000,000-5,000,000; 8 = 5,000,000-10,000,000 9 = >10,000,000 or no data.

Table 2 - Interview Questions for MD Rating Sites

1) What other functions does this site do besides rating and allowing patients to rate MDs, if any?

2) Who is behind the site and how do you deal with related trust issues of whether content may be biased. For example, is your company managed by physicians, and if so, do you see any conflict of interest in that?

3) Are patient ratings of MDs anonymous? If they are not anonymous, how much do you know about the patients and how do you get this info (e.g., require them to register)? If reviews and comments are anonymous, how to do you prevent rating manipulation (posting biased reviews to make MDs either look worse or better then they really are)?

4) As of this date, how many MDs have been reviewed (unique individuals) and how many reviews have been posted (total number) so I can calculate an average and range of ratings (per MD). What is the approximate breakdown of favorable vs. neutral vs. unfavorable ratings (should add up to 100%)?

5) How do you encourage patients to review MDs and generally attract traffic to the website? Do you advertise (and if so how, search ads only or newspapers or other) or is this mainly viral or by word of mouth? Are there any other methods that you use?

6) What is the geographic scope of the rating activity (e.g., all US or only in major metropolitan areas or if international, what countries). Are the patients who rate MDs on your site in some other way restricted and how?

7) How long have you been business (year founded)?

8) What is the background of founder(s), esp. professional affiliations (MD or other health care) or past organizational experience? Also are there other companies he/she has started or worked on that led to developing this site? If not already mentioned, what was the major motivation for to starting this site?

9) What is your primary business model (i.e., esp. source of revenue)? How do you support yourself (in particular ads vs. subscription model)? In particular, is there a direct cost to patients to rate MDs or review others' ratings?

10) What is the relationship of MDs to the site? Do they contribute revenue and if so how does this work? Are MDs able to respond to patients' ratings and if so, how is this done?

11) Has the site ever been threatened by lawsuits on behalf of MDs? Has the site ever had to take down a review because the patient posting it had previously signed a contract with his/her MD promising to never rate this MD online?

12) How does the site deal with the possible libelous comments from patients? I assume that all comments are screened, but who does this? Volunteer site administrators or hired staff or other?

13) What kind of MD-specific info can patients who visit the site actually see? Can they see all comments (free text once screened) or can they only see summary statistics about how MDs rate on various dimensions of performance?

14) Is this site currently profitable? If not when do you expect it to be?

15) What kind of funding (venture, esp. and if so, which VCs specifically) have you received in the past and do you have now?

16) Where are operations for this site based (city and state)?

17) What is your exit strategy – do you plan to keep doing this for the foreseeable future or do you plan to sell out and if so to whom (possible company or types of company examples)?

18) What are the future plans for this site beyond your current activity if any, esp. if you do not intend to sell?

19) How many people (FTEs) does this site employ?

20) What is your opinion and/or interpretation of the recent California Healthcare Foundation / Harris Interactive poll on consumers' use of MD rating sites. See:
http://blog.washingtonpost.com/checkup/2008/06/patients_unmoved_by_internet_d.html

Table 3

Wall St. Journal/Harris Survey 2008

Public Interest in Rating and Using Consumer Ratings of Doctors

Question:	Very Interested	Somewhat Interested	Very or Somewhat Interested	Not Very Interested	Not at All Interested	Not Very or Not at All Interested
If your health plan posted physician ratings on trust, communications, medical knowledge, availabilty, and office environment, how likely would you be to refer to those ratings when choosing a new doctor?	44%	47%	91%	8%	1%	9%
If your health plan had a website where you could rate doctors on issues like trust, communications, medical knowledge, availability and office environment, how interested would you be in providing that type of feedback about your doctors?	38%	50%	87%	10%	2%	12%

March 2008

Table 4

California HealthCare Foundation/Harris Survey
Awareness and Use of Online Physician Ratings
California, 2004 and 2007

	2004	2007
All respondants		
Saw rating information	14%	22%
Considered a change	2%	5%
Actually made a change	1%	2%
Respondants in fair/poor health		
Saw rating information	14%	25%
Considered a change	4%	7%
Actually made a change	1%	2%

November/December 2007

Table 5

MD Rating Site MD Directory Test Results 1/

MD/DO (year joined SCPMG 2/)	webMD	findadoc	yourcity	healthcare	drscore	health worldweb	careseek/ drgreene	vimo	revhealth	healthgrades	vitals	AMA	California MOBs 3/
Baer, Monique Marie, MD (2000)	NO	NO	NO	NO	NO	NO	NO	NO	**YES-**	NO	NO	**YES+**	**YES+**
Gavin-Headen, Vanessa E., MD (1997)	NO	NO	NO	**YES**	NO	NO	NO	**YES-**	**YES**	**YES+**	**YES+**	**YES+**	**YES+**
Green, David Ashley, MD (2000)	NO	NO	NO	**YES**	**YES-**	**YES-**	**YES-**	NO	NO	**YES**	**YES+**	**YES-**	**YES+**
Karapetian, John Christopher, MD (1988)	NO	**YES+**	**YES**	NO	**YES+**	**YES+**	**YES+**	**YES-**	**YES**	**YES+**	**YES+**	**YES**	**YES+**
Lin, Albert Jeffrey, MD (2005)	NO	NO	NO	NO	NO	NO	NO	NO	**YES**	**YES**	**YES+**	**YES-**	**YES+**
Marcos, Wadie Latif, DO (2006)	NO	NO	NO	**YES**	NO	NO	NO	NO	**YES**	**YES+**	**YES**	**YES-**	**YES**
Nguyen, Michael Tan, MD (2004)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	**YES+**	**YES**	**YES+**
Pham, Thang Ngoc-Chien, MD (1984)	NO	NO	**YES**	NO	**YES+**	**YES+**	**YES+**	**YES-**	NO	**YES-**	**YES+**	**YES**	**YES+**
Wang, Quincy Chu, MD (2000)	NO	**YES+**	**YES**	NO	**YES+**	**YES+**	**YES+**	**YES-**	**YES**	NO	**YES+**	**YES**	**YES+**
Whittaker, Amy Agnes Ng, DO (2004)	NO	NO	NO	NO	NO	NO	NO	NO	NO	**YES-**	**YES+**	**YES**	**YES**
Total found:	0	2	3	3	4	4	4	4	5	7	9	10	10

1/ Searches conducted on September 18, 2008.

2/ SCPMG is the Southern California Permanente Medical Group. Information about these doctors is available to the public at www.kp.org.

3/ California State Medical and Osteopathic Boards

NO Doctor not found in site's directory, in one case same name but obviously wrong MD, probably correct MD but in wrong state

YES Doctor found, with just basic info

YES+ Additional info besides just name and address is included (education, residency, and/or specialty)

YES- Incorrect info about what insurance coverage MD accepts (VIMO) or right doctor but wrong location but must be within California (AMA, HealthWorldWeb and California Medical and Osteopathic Boards)

Table 6

Forrester Research 2007
How Consumers Evaluate the Quality of a Healthcare Provider

Consumers evaluating quality using the following sources:	Percentage
Online Sources:	
An online physician comparison tool to compare quality of multiple physicians	10%
An online hospital comparison tool to compare quality of multiple hospitals	9%
Online forums or health discussion boards	6%
Other online source	2%
Offline Sources:	
News reports about area hospitals	18%
Word of Mouth	60%

July 2007

Table 7

Wall St. Journal / Harris Suvey 2008
Perceived Fairness of Eight Methods Used to Measure and Compare Quality of Care

Percent of total responding re each method to the following question:

"Please indicate whether you think it would be fair for health plans to measure and compare the quality of care provided by medical groups in the following ways:"

	Fair	Not Fair	Not Sure
Patient satisfaction surveys	76%	9%	15%
Medical tests that measure how doctors are managing patients with chronic conditions	68%	10%	22%
Assessment by medical boards	66%	9%	25%
Assessments by third party organizations that monitor health care quality	65%	11%	25%
Frequency of preventive screening tests	64%	14%	23%
Use of electronic medical records or other information tools	58%	15%	27%
Malpractice suits	42%	31%	27%
The types of medications they prescribe for the patients	38%	37%	25%

March 2008

Table 8

Accumulation of Health Care Provider Ratings by Angie's List for the Los Angeles Area*
April - September 2008

Major Catogories	27-Apr	5-May	12-May	18-May	26-May	1-Jun	8-Jun	16-Jun	22-Jun	28-Jun	6-Jul	12-Jul	21-Jul	28-Jul	4-Aug	11-Aug	17-Aug	23-Aug	31-Aug	7-Sep	14-Sep	21-Sep
Cardiology - general	1	2	5	8	8	9	9	10	10	10	12	13	13	13	13	13	14	14	15	16	16	18
Chiropractic	3	5	8	14	14	14	15	15	15	15	15	17	17	17	18	19	19	19	19	20	21	24
Dentistry - endodontics, etc	1	1	2	5	5	5	6	8	8	8	9	9	10	10	10	10	10	10	10	10	12	12
Dentistry - general	15	23	39	52	52	52	57	63	65	68	71	80	89	101	108	124	145	149	161	182	197	211
Dermatology	2	4	8	12	12	14	14	14	14	15	16	16	16	16	17	17	17	17	18	20	21	23
OB/GYN	4	7	12	18	18	19	20	20	20	20	22	23	25	25	27	27	30	30	31	34	34	34
Opthamology	1	2	4	5	5	5	7	7	7	11	11	11	11	11	11	12	14	14	14	14	14	15
Orthopedics	0	2	2	3	4	4	5	6	6	6	7	9	9	9	10	10	10	11	13	14	14	15
Pediatrics - primary care	0	1	3	4	5	6	7	7	7	7	8	8	9	10	12	16	16	19	20	22	22	24
Physicians primary care	11	19	24	30	36	38	42	44	46	48	54	58	63	67	68	75	82	85	90	101	108	123
All other medical/dental specialties	4	15	23	36	36	37	40	44	44	49	54	57	59	62	63	67	70	76	79	87	91	94
Total	42	81	130	187	195	203	222	238	242	257	279	301	321	341	357	390	427	444	470	520	555	593
Number added in previous week	42	39	49	57	8	8	19	16	4	15	22	22	20	20	16	33	37	17	26	50	30	43
Providers with more than 1 review	0	0	0	0	0	0	0	0	0	0	1	1	3	4	5	10	10	11	12	19	21	25
Maximum number of reviews/provider											2	2	2	4	4	4	4	4	4	4	4	4
Percent of total with A rating	83.3%	84.0%	83.8%	92.5%	91.8%	92.1%	88.7%	89.5%	89.7%	89.1%	89.6%	89.7%	90.3%	90.9%	91.3%	90.8%	91.1%	91.0%	90.6%	91.2%	91.3%	91.2%
Percent of total with A or B rating	95.2%	92.6%	91.5%	97.9%	97.9%	98.0%	95.0%	95.4%	95.5%	95.3%	95.3%	95.0%	95.3%	95.6%	95.8%	94.9%	95.3%	95.5%	95.3%	95.6%	95.5%	95.6%
Percent of total with D or F rating	4.8%	7.4%	5.4%	3.7%	3.6%	3.4%	3.6%	2.9%	2.9%	2.7%	2.9%	3.3%	3.1%	2.9%	2.8%	3.6%	3.3%	3.2%	3.0%	2.9%	2.9%	2.9%

* Health care providers included are: MDs, dentists, chiropractors and psychologists. The geographic area is mainly Los Angeles and Orange counties, but there are also a few providers from Ventura and Riverside counties.

Table 9 - Impact of Age on Use of Online Rating

Pew Internet & American Life Project
Online Rating Systems
October 2004

Use of Internet Rating Systems: Percentange of Internet users in each category who say they have rated a product, service or person online:

Generation Y (Ages 18-27)	30%
Generation X (28-39)	28%
Trailing Boomers (40-49)	23%
Leading Boomers (50-58)	23%
Matures (59-68)	20%
After Work (69 and above)	11%

Forrester Research
Who is Using Social Computing?
October 2006

Percentage of North Amercian Online Consumers who visit rating sites:

Gen Y (18-26)	17%
Gen X (27-40)	16%
Younger Boomers (41-50)	12%
Older Boomers (51-61)	10%
Seniors (62+)	6%

California HealthCare Foundation/Harris
Awareness and Use of Online Physician Ratings
November/December 2007

Percentage who use the Internet to find ratings of health care professionals

18-39 years	29%
40-64 years	25%
65+ years	13%

Table 10

RateMDs - Canadian vs. US Experience Rating Health Care Providers (primarily MDs)
August 2008

Canada

Province	Number of HCPs Rated	Average Number of Ratings per HCP	Average Rating (1- 5)
Alberta	4,891	8.22	4.208
British Columbia	6,699	6.87	4.189
Manitoba	2,122	11.15	4.143
New Brunswick	1,300	7.95	4.366
Newfoundland	748	5.88	4.378
Nova Scotia	1,879	8.44	4.277
Northwest Territories	48	6.31	4.280
Nunavut	5	1.20	4.700
Ontario	15,870	7.19	4.230
Prince Edward Island	213	6.63	4.339
Quebec	10,911	6.02	4.332
Saskachewan	1,740	11.04	4.133
Yukon Territory	43	4.14	4.375
Total Number / Overall Average	46,469	7.00	4.304

Total MDs rated	38,453
Total Canadian MDs*	65,662
MDs rated as % Canadian total	58.6%
Total non-MDs rated**	8,011

* 2008 estimate from the Canadian Medical Association
** Mainly dentists (5,750) but other providers as well

United States

State	Number of HCPs Rated	Average Number of Ratings per HCP	Average Rating (1- 5)
Alaska	315	1.86	3.795
Alabama	1,765	1.99	4.087
Arkansas	876	1.79	4.021
Arizona	2,531	2.31	3.869
California	11,079	1.98	3.854
Colorado	1,630	1.74	3.917
Connecticutt	1,770	1.90	3.959
DC	548	2.99	3.937
Delaware	478	2.36	4.030
Florida	7,478	2.07	3.869
Georgia	2,900	1.94	3.947
Hawaii	360	1.58	3.937
Iowa	713	1.66	4.007
Idaho	400	1.92	3.855
Illinois	4,483	1.89	3.949
Indiana	1,889	1.76	3.951
Kansas	792	1.91	3.918
Kentucky	1,325	1.61	3.971
Louisianna	1,096	1.60	3.950
Massachusetts	3,234	1.87	3.988
Maryland	2,656	2.13	3.968
Maine	440	1.58	3.923
Michigan	3,986	2.08	3.997
Minnesota	1,549	1.77	4.068
Missouri	1,944	1.90	3.959
Mississippi	544	1.58	4.065
Montana	274	1.55	3.726
North Carolina	2,846	1.79	3.945
North Dakota	158	1.52	3.976
Nebraska	624	1.84	4.034
New Hampshire	585	1.86	3.937
New Jersey	5,815	2.74	4.063
New Mexico	528	1.68	3.874
Nevada	1,120	2.37	3.881
New York	8,847	2.23	3.937
Ohio	4,026	1.91	4.032
Oklahoma	1,459	2.10	3.981
Oregon	1,325	1.72	3.897
Pennsylvania	4,256	1.76	3.928
Rhode Island	527	2.16	4.038
South Carolina	1,264	1.82	3.916
South Dakota	217	1.85	3.992
Tennessee	2,184	1.72	3.944
Texas	6,773	1.90	3.936
Utah	1,104	2.20	3.984
Virginia	3,059	2.48	3.921
Vermont	150	1.53	3.936
Washington	2,124	1.79	3.925
Wisconsin	1,525	1.63	3.977
West Virginia	542	1.71	4.041
Wyoming	104	1.54	4.059
Total Number / Overall Average	108,217	1.91	3.954

Total MDs rated	98,249
Total US MDs*	817,500
MDs rated as % US total	12.0%
Total non-MDs rated**	9,969

* US DHHS HRSA estimated of number of active MDs in 2005 for workforce planning purposes
** Mainly dentists (6,760) but other providers as well

Table 11

Clay's Shirky's Key Concepts for Understanding "Organizing without Organizations"

Objectives:	Requirements:
• Sharing • Cooperation • Collaborative Production • Collective Action	• Plausible Promise • Social Tools • Bargain