

August 17, 2007

Mail Stop 4561

Jonathan Bush
Chief Executive Officer
athenahealth, Inc.
311 Arsenal Street
Watertown, MA 02472

**Re: athenahealth, Inc.
Registration Statement on Form S-1
Amendment No. 2 filed August 3, 2007
File No. 333-143998**

Dear Mr. Bush:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with supplemental information so we may better understand your disclosure. After reviewing this information, we may or may not raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

All page numbers refer to the marked courtesy copy of the registration statement that you provided to us.

Prospectus Summary

Overview, page 1

1. We note your response to prior comment 6. As previously requested, please revise to disclose the measure by which you are a “leading” provider of internet-based business services for physician practices.

Risk Factors, page 8

We may be unable to adequately protect, and we may incur significant costs in enforcing, our intellectual property and other proprietary rights, page 14

2. Please revise to clearly state that your patent application relating to the athenaNet Rules Engine system has been rejected by the USPTO. We note the revised disclosure on page 74.

If our security measures are breached or fail and unauthorized access is obtained to a client’s data..., page 17

3. We note your response to comment 13, as well as your additional disclosure that your clients have, on occasion, failed to perform certain security activities. Please tell us whether these incidents have constituted material breaches or failures of security measures. If so, please revise to provide a materially complete description of the material breaches or failures. Disclose when such breaches or failures were discovered and what remedial measures have been taken to specifically address each situation.

Management’s Discussion and Analysis of Financial Condition and Results of Operations, page 37

Operating Expense, page 38

4. We note your additional disclosure in response to Comment 19. Please describe your “beta-testing program.” Similarly, please explain what you mean by “beta client,” which you reference on page 44.

Consolidated Results of Operations, page 46

5. We reissue Comment 22. We note, for example, that you have expanded your disclosure on page 47 to state the percentage increase in the number of physicians using your services; however, to the extent practicable, please quantify the amount of the change in revenue that can be attributed to this increased percentage of physicians using your services. See Section III. D of Release 33-6835.

6. In your discussion of “Other income (expense)” on page 48, you state that you had an unrealized loss on warrant liability of \$3.7 million, which is an increase of \$3.4 million from the previous year. You attribute this increase to a change in the fair value of the warrants. Please expand your disclosure to further explain the cause of the change in fair value.

Intellectual Property, page 74

7. We note your response to prior comment 36. Please revise further to disclose whether you have any registered trademarks.

Directors, Executive Officers and Key Employees, page 76

8. On page 78, please state where John A. Kane was employed from 2006 – July 2007. Refer to Item 401(e) of Regulation S-K.

Compensation Discussion and Analysis

Determination of Compensation Awards, page 82

9. Please revise the second paragraph to disclose all of the factors that the compensation committee considered in determining executive officer compensation for 2006. Your use of the word “including” indicates that there are some factors you have not disclosed. Similarly, please revise the third paragraph to identify all of the peer companies.
10. We note the statement that “most” of the peer companies had revenue between approximately \$100 million and \$200 million. Please disclose the full range of revenue or separately identify the companies that fell outside this range and disclose their revenues.
11. We note your use of a compensation consultant. Please provide the disclosure required under Item 407(e)(3)(iii) of Regulation S-K.

Base Salary, page 83

12. We note your response to prior comment 41. Please provide a more detailed description of the base salary factors for each of your named executive officers. Disclose the specific objectives established for each person. Also, describe how the CEO and the Compensation Committee measured each item in the “portfolio of competencies” listed in the second bullet point on page 83. Similarly, disclose how the Compensation Committee measured each factor in the third bullet point and describe how all of these measurements factored into the determination of base salary. It is not sufficient to say that the committee reviewed the NEOs’ achievements.
13. Please revise to disclose whether base salary amounts for 2007 reflect good performance and compensation at the 60th percentile of peer companies or superior performance and compensation at the 75th percentile. Also, describe how the Compensation Committee assessed whether performance was good or superior.
14. We note the disclosure indicating that the CEO makes recommendations to the Compensation Committee to help determine salary increases (page 83), annual cash incentives (pages 84-85), and long-term stock-based compensation (page 86). Please disclose whether the CEO recommends actual compensation amounts to the Compensation Committee. Also disclose whether the Compensation Committee ever grants awards that differ in amount from what the CEO has recommended.

Annual Cash Incentives, page 83

15. We note your response to prior comments 42 and 44. Please provide us with a more detailed explanation of why you would be damaged by competitors obtaining access to specific performance targets. Explain in more detail why you would be placed at a competitive disadvantage as a result of disclosing information that is tied to gross margin, revenue, and EBITDA, all of which are disclosed in or derived from your financial statements. Discuss more specifically how targets relating to customer satisfaction rates and client days-in-accounts receivable would provide a roadmap to your strategic plans and operating objectives.
16. We note your response to prior comment 43. Please disclose how the CEO measured Messrs. Byers’ and Nolin’s overall job performance in making his recommendation to the Compensation Committee. Disclose any specific factors that the CEO considered in assessing overall job performance, including both qualitative and quantitative factors. Explain how these factors differed, if at all, from the base salary factors described on page 83. Also, please disclose the percentage of the 25% bonus target that was actually awarded to Messrs. Byers and Nolin for 2006.

Long-term Stock-Based Compensation, page 85

17. You state on page 86 that the Compensation Committee uses qualitative factors to help determine stock option award grants. Please explain how the consideration of these factors resulted in the actual amounts paid to each NEO.

Consolidated Financial Statements

Note 2 – Summary of Significant Accounting Policies, page F-7

Warrant Liability, page F-10

18. We have read your response to prior comment 55 and understand that at the time of your adoption of FSP 150-5, you were a private company and reported on an annual basis. However, considering that your financial statements are included in a Securities Act registration statement, we believe that the financial statements should adhere to all SEC requirements incremental to US GAAP. In light of the fact that the guidance in FSP 150-5 should generally be applied to the first reporting period beginning after June 30, 2005, and you have prepared and reported on interim periods subsequent to June 30, 2005 in your Quarterly Results on page 52, we remain unclear why you applied the guidance as of January 1, 2006. Please further advise us or revise accordingly.

Part II

Recent Sales of Unregistered Securities, page II-3

19. We reissue comment 57. Please revise to provide a more detailed description of the type and amount of consideration you received for all warrants and options described in this section. Refer to Item 701(c) of Regulation S-K.
20. Please disclose the exemption from registration that you relied upon for granting stock options and for the issuance of shares upon exercise of those options.

* * *

As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested supplemental information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

We will consider a written request for acceleration of the effective date of the registration statement as a confirmation of the fact that those requesting acceleration are aware of their

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respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

You may contact Rachel Zablow at (202) 551-3428 or Cicely LaMothe, Accounting Branch Chief, at (202) 551-3413 if you have questions regarding comments on the financial statements and related matters. Please contact Angela McHale at (202) 551-3402 or me at (202) 551-3780 with any other questions.

Sincerely,

Karen J. Garnett
Assistant Director

cc: Via Facsimile (877) 767-8438
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