



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

Mail Stop 3030

July 2, 2009

John R. Barr
President and Chief Executive Officer
AGA Medical Holdings, Inc.
5050 Nathan Lane North
Plymouth, MN 55442

**Re: AGA Medical Holdings, Inc.
Registration Statement on Form S-1
Filed June 5, 2009
File No. 333-151822**

Dear Mr. Barr:

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 information so we may better understand your disclosure. After reviewing this information, we may 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.

Prospectus

1. Please do not use unexplained acronyms in your document. For example, we note the use of PIK on page 5 and HDE in your cover graphics. From the graphics, it is unclear whether the HDE product can be sold in the United States. Likewise, from your disclosure on page 98 regarding the length of the HDE process, it is unclear why the 2007 HDE application that you mention on page 80 remains pending.

Use of Proceeds, page 36

2. Please quantify the amount of the interest payment mentioned in the second paragraph.
3. We note your revised disclosure in the fourth paragraph that affiliates of underwriters “may” receive proceeds from the offering. Please tell us why you are unable to determine whether affiliates of underwriters would receive proceeds from the offering and are unable to quantify those amounts.

Overview, page 47

4. We note that developments that you previously disclosed in the fourth paragraph as expected in 2008 you now disclose as expected in 2009. We also note the delays represented by the revisions on pages 71 and 85. Please tell us the reasons for the delays and where you have discussed these reasons. See also Regulation S-K Item 10(b)(3)(ii).

Critical Accounting Policies

Goodwill and Intangible Assets, page 53

5. In the interest of providing readers with a better insight into management’s judgments into accounting for goodwill, please disclose the following:
 - Each of the valuation methodologies used to value goodwill (if multiple approaches are used), including sufficient information to enable a reader to understand how each of the methods differ, the assumed benefits of a valuation prepared under each method, and why management selected these methods as being the most meaningful for the company in preparing the goodwill impairment analysis;
 - How you weight each of the methods used including the basis for that weighting (if multiple approaches are used);
 - A quantitative and qualitative description of the material assumptions used and a sensitivity analysis of those assumptions based upon reasonably likely changes.

Significant Factors Used in Determining the Fair Value of Our Common Stock, page 56

6. Please revise to disclose the reasons why the estimated fair value of your common stock did not change throughout 2008 and through the first quarter of 2009. We note that revenue increased during this period and you have had numerous discussions with underwriters and have made several filings of your registration statement related to the planned public offering. Your disclosure should clearly indicate the reason you believe that no events occurred that warranted a change in the estimated fair value of common

stock through March 31, 2009. This should include a discussion of your business activities during this period.

7. Please tell us whether there have been any updates to the contemporaneous valuation studies discussed on page 55 since June 2007. Please also expand your disclosures on page 55 of the valuation methodologies to discuss the significant assumptions and estimates that were used in these valuations to determine the fair value of your stock. In addition, tell us whether you have had discussion with your underwriters and when they were initiated about possible offering price ranges. Please tell us any preliminary pricing information that you have received from your underwriters.
8. We reference the discussion on page 56 that your Board of Directors “determined that all commitments to grant stock options entered into between June 21, 2008 and December 31, 2008 would contain an exercise price equal to the initial public offering price, unless...” Please clarify whether you used an estimated offering price in valuing the stock options granted during this period. If not please clarify this disclosure with regard to the use of an initial offering price. In addition, disclose the additional informal input received from the underwriters of your offering with regard to their views of market conditions discussed on page 56.

Results of Operations, page 57

9. We note that, in many instances, your updating of your disclosure appears to have involved primarily changing the numbers without significantly revising the textual discussion. Please tell us whether there were any materially different developments and trends experienced during the periods presented. For example, what is causing the changes in the rate of sales increase? What is causing the differences in product mix? Are your marketing or pricing efforts emphasizing different products? Are economic trends affecting sales for specific products? Has the nature of your “investments in corporate infrastructure” changed over the periods presented? Why or why not?

Cash Flows Provided By (Used in) Operating Activities, page 62

10. Please discuss the reasons for the changes in the financial statement line items you cite.

Contractual Obligations, page 63

11. We note your response to prior comment 1 that you have not received a response or further enquiry from Mr. Amplatz. However, your current disclosure in footnote 2 on page 66 states you “are currently in discussion with Mr. Curtis Amplatz” which would imply that this is still an open issue. Please clarify your disclosure to more closely comport with your explanation of the status in your response to this comment.
12. Please clarify the difference between a “discounted contingent obligation” as mentioned in the first sentence of footnote 9 and the obligations if revenue targets are met as

mentioned in the second sentence of that footnote. Also, with a view toward disclosure, please tell us the amount of the obligation absent the discount and why you believe it is appropriate to apply the discount in this table.

Other Studies, page 88

13. With a view toward disclosure, please expand your response to prior comment 2 to tell us the “specified conditions” to be satisfied before completion of your clinical trial and to provide us your analysis of the materiality of those conditions.

Manufacturing, page 90

14. With a view toward clarified disclosure, please tell us the nature of the findings mentioned at the end of the third paragraph and why you do not believe additional regulatory actions will be required.

Patents, page 92

15. Please disclose the duration of your patents as required by Item 101(c)(1)(iv) of Regulation S-K.
16. Please disclose the material terms of your material patent licenses. Also, filed these licenses as exhibits to your registration statement.

Compensation Determination Process, page 115

17. We note your revised disclosure on the top of page 115 where you state that equity grants to your CEO and CFO were at the 27th and 7th percentile, yet were “deemed” to be above the 50th percentile based on “projected” appreciated value of equity grants. Please clarify how and why the comparable percentiles of the “at grant” values and appreciated values of your equity grants vary so significantly.

Base Salary, page 115

18. Please reconcile the salaries mentioned in the penultimate paragraph of this section with the salary disclosure in your Summary Compensation Table. Also show us your calculations supporting your disclosure that 50% of the salaries are reflected in the table on page 124.
19. Please disclose how the committee determined to increase salaries by 3% in January 2009. Was the performance assessment objective? How? What increase was the committee considering absent the “current economic environment”? How did the committee determine amount of discount to apply given the “current economic environment and low cost of living”?

Mr. Lund’s Consulting Agreement and Employment Agreement, page 126

20. Please disclose in your prospectus the existence and purpose of the December 2008 reformation agreement filed as exhibit 10.26.

Termination as of December 31, 2008, page 130

21. Please tell us why this table does not include information regarding payments upon termination for cause given your subsequent disclosure of required payments in that event.

Principal and Selling Stockholders, page 131

22. We will continue to evaluate your response to prior comment 6 after you complete the blanks in this table.
23. Regarding your response to prior comment 6 and your response to prior comment 7, please provide us with a table that shows clearly how you reconcile the information in your beneficial ownership table with the information in your current and previous Part II disclosures regarding “Recent Sales of Unregistered Securities.”

Certain Relationships and Related Transactions, page 133

24. Please clarify the purpose of the January 2009 amendments mentioned in the second and third subsections of this section.

The AGA Division of AB Medical Financial Statements

Note 2. Basis of Preparation of Financial Statements, page F-44

25. Please revise to disclose the specific methodologies and significant estimates and assumptions used to allocate the commercial, administrative expenses and costs related to the AB Medica structure to the AGA Business.

Exhibits

26. Please file the attachments missing from exhibit 4.4, exhibit 4.5, which was originally filed as exhibit 4.6 and exhibit 10.1.
27. Please tell us why you have not filed as exhibits your recent acquisitions from your distributors. We note for example, you paid \$41 million for the acquisition of your former Italian distributor's operations and this and other acquisition agreements require you to make future payments to these distributors as you show on page 66.
28. We note that you disclose in the last sentence on page 63 that Bank of America assumed the participation of Lehman Brothers in your credit agreement. Please tell us whether you amended your Credit Agreement as filed as Exhibit 10.1 as a result of this or other changes.

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 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 urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Act of 1933 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and

John R. Barr
AGA Medical Holdings, Inc.
July 2, 2009
Page 7

- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their 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 Jeanne Bennett at (202) 551-3606 or in her absence, Brian Cascio at (202) 551-3676 if you have questions regarding comments on the financial statements and related matters. Please contact Jay Mumford at (202) 551-3637 or me at (202) 551-3617 with any other questions.

Sincerely,

Russell Mancuso
Branch Chief

cc (via fax): John B. Tehan, Esq.
Kenneth B. Wallach, Esq.