

December 12, 2008

Mail Stop 6010

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 November 24, 2008  
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.

Contractual Obligations, page 63

1. We note your response to prior comment 2. With future amendments to your filing, please provide us updates regarding the status of your discussions with Mr. Amplatz. If there has been no progress, please also tell about the reasons for the delay.

Other Studies, page 84

2. Please clarify the implications of receiving “conditional” approval for your clinical study.

Compensation Determination Process, page 108

3. Please expand your disclosure provided in response to prior comment 3 to address each named executive officer. Also:
  - clarify what you mean by your disclosure that a payment is “competitive” with the disclosed percentile; and
  - with a view toward clarified disclosure, please tell us the extent that the compensation you paid was above or below the disclosed percentile.

Annual Cash Incentive Payments, page 111

4. Given your response to prior comment 4 that your objectives determine the bonus pool, it remains unclear how you conclude that those objectives are not a material element of your compensation program. It continues to appear that you should disclose your quantitative targets or alternatively tell us why you believe disclosure would result in competitive harm such that the information could be excluded under Instruction 4 to Regulation S-K Item 402(b).
5. We note the last sentence of your response to comment 4. It appears that you have changed the Summary Compensation Table but not the following table. Please tell us the reasons for the inconsistency, including an analysis of relevant authority regarding whether your awards are plan-based.

Principal and Selling Stockholders, page 131

6. We note your revisions in response to prior comment 6. Please revise to avoid repetitive and complex disclosure in your table and footnotes and instead identify clearly and concisely the individuals who beneficially own your shares.
7. Please provide us your calculations of how you determined that the numbers in clause E of Footnote 1 reconcile with footnotes 18 and 20 to 23 as you describe in your response to prior comment 7. It does not appear that the amounts in these other footnotes equal the amounts in clause E of Footnote 1.

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
- 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.

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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.