

Mail Stop 6010

September 25, 2008

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

**Re: AGA Medical Holdings, Inc.
Amendment No. 2 to Registration Statement on
Form S-1
Filed September 10, 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.

Industry Data, page 32

1. We note your revisions in response to prior comment 6. With a view toward clarified disclosure, please provide us an example of how you adjusted data. Include the source data and your calculations in your response.

Management's Discussion and Analysis...page 43

Significant Factors Used in Determining Fair Value of Our Common Stock, page 52

2. We refer to your response to comment 12 in our letter dated August 26, 2008. Please revise to clearly disclose the reasons why the estimated fair value of your common stock did not change between October 23, 2007 and June 20, 2008. We note that revenue increased during the period and you had begun discussions with underwriters with regard to a 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. This should include a discussion of your business activities during this period.

Results of Operations, page 53

3. We note that you changed your previous disclosure attributing changes to price increases to now also attribute those same changes to product mix. Please clearly indicate the extent of which changes are due to price changes. See Regulation S-K Item 303(a)(3)(iii).

Contractual Obligations, page 63

4. Refer to your added disclosure regarding Curtis Amplatz. Please tell us when the discussions began and what hurdles remain to completion. Also tell us what initiated the need for the discussions and the magnitude of potential additional obligations.

Corporate History, page 75

5. It is unclear how investors could determine from your disclosure regarding your agreement for distribution in China that the agreement is immaterial as you mention in your response to prior comment 15. Please revise or advise.

Compensation Discussion and Analysis, page 107

6. We reissue prior comment 23 in part. Please discuss how the elements of compensation reflected in exhibit 10.6 were determined.

Compensation Determination Process, page 108

7. Please expand your response to prior comment 19 to tell us when the consultant submitted the report, when the compensation committee first reviewed it, what hurdles remain until action based on the report is taken and when you will include a discussion of the report in your Compensation Discussion and Analysis.

Annual Cash Incentive Payments, page 111

8. Regarding your response to prior comment 21:
- Where you have quantitative targets, you should disclose them 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).
 - It appears that you continue to disclose only a subset of your objectives because you provide lists of what the ten objectives include but then disclose fewer than ten items. Please provide complete disclosure.
 - Your current disclosure essentially describes a general process that is applied each year without specific information regarding how that process resulted in the specific compensation decisions for the applicable period. It remains unclear what objectives were met in 2007 that generated a bonus, which were not achieved, which of the disclosed potential qualitative factors were actually considered during 2007 and how those factors affected bonus decisions. Please revise to provide specific disclosure.

Review, Approval or Ratification..., page 128

9. We note your revised disclosure in response to comment 27; however, we reissue the comment as your disclosure does not specify the standards that the audit committee will apply to the review and approval of the transactions.

Principal and Selling Stockholders, page 129

10. You disclose, in the first paragraph, that the table gives effect to the reverse stock split to occur immediately before this offering. Please reconcile this disclosure with the final sentence of the second paragraph, where you indicate that the table does not give effect to the reverse stock split.
11. We note your response to prior comment 28. However, given the shareholders agreement and the representatives on the board, it remains unclear why your group disclosure in the last row of the table does not include the shares held in the name of Welsh Carson. Please advise or revise.
12. We are unable to agree with your response to comment 28 that no individual beneficially owns the shares because investment and voting power are vested in more than three individual members, especially given that Rule 13d-3 includes as

a beneficial owner any person who *shares* voting or investment power. Please revise your disclosure accordingly.

13. Please identify the individuals who have or share, directly or indirectly, investment power over the shares held in the name of Select Global Investors L.P.
14. Please reconcile the numbers in clause E of footnote 1 with the shares identified by footnotes 8 through 11.

Stock Options, page 134

15. Please quantify the commitments to issue options mentioned at the bottom of page 52. Also, with a view toward disclosure, please tell us the extent to which the commitments are to related parties.

Underwriting, page 144

16. Please show us how your 10% calculation in response to prior comment 31 reflects the amount to be paid to Banc of America as mentioned in the last full paragraph on page 150.

Exhibits

17. We reissue the first sentence of prior comment 44; please file complete exhibits with all attachments, exact as provided in Regulation S-K Item 601(b)(2) for exhibits filed under Item 601(b)(2). For example, we note:
 - exhibit 4.4 makes reference to an attached exhibit B, as well as various schedules that are not included in your filing;
 - references to "Address Omitted" in exhibit 4.9;
 - exhibit A is missing from exhibit 10.18; and
 - blanks in exhibit 10.19.

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.

John R. Barr
Aga Medical Holdings, Inc.
September 25, 2008
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You may contact Jeanne Bennett at (202) 551-3606 or Brian Cascio at (202) 551-3676 if you have questions regarding comments on the financial statements and related matters. Please contact Gabriel Eckstein at (202)551-3286 or me at (202) 551-3617 with any other questions.

Sincerely,

Russell Mancuso
Branch Chief

cc: John B. Tehan, Esq.
Simpson Thacher & Bartlett LLP