

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

September 7, 2012

<u>Via Facsimile</u>
Cory Douglas
Chief Financial Officer
Medidata Solutions, Inc.
79 Fifth Avenue, 8th Floor
New York, NY 10003

Re: Medidata Solutions, Inc.

Form 10-K for the Fiscal Year Ended December 31, 2011

Filed March 13, 2012 File No. 001-34387

Dear Mr. Douglas:

We have reviewed your filing and have the following comments. Please note that we have limited our review to only your financial statements and related disclosures. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Item 8. Financial Statements and Supplementary Data

Note 2. Summary of Significant Accounting Policies

Revenue Recognition

Application Services, page F-7

1. We note your disclosure that application services include the sale of software licenses and hosting and other support services to be provided over a specified term and that revenue is recognized over the term of the arrangement taking into account whether optional renewal periods are likely to be exercised. In your response letter dated May 15, 2009 related to our prior comment 8, we note that the license represents a non-refundable

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up-front fee that has no standalone value to the customer and as a result, it is included with other deliverables in the arrangement as a combined unit of accounting. For arrangements where optional renewal periods are likely to be exercised, please clarify whether the combined unit of accounting that includes the non-refundable up-front fee and hosting and other services is recognized ratably over the extended term of the arrangement and if so, please tell us your consideration for recognizing only the non-refundable up-front fee over the extended term of the arrangement. As part of your response, please provide an example transaction that includes these features and how you are accounting for it. Refer to SAB Topic 13.A.3.f.

Multiple-Element Arrangements, page F-8

2. We note that you adopted ASU No. 2009-13 on January 1, 2011. As part of your disclosures concerning adoption of this guidance, you indicate that professional services were determined to have standalone value because those services are sold separately by other vendors. However, in connection with your disclosures regarding why you do not utilize third-party evidence of selling price, you indicate that your services are incompatible with other vendors. This appears to suggest that your professional services are different from the services offered by other vendors. Please clarify and, in view of the foregoing, provide us with additional details regarding your determination that professional services have standalone value on the basis that those services are sold separately by other vendors.

Note 12. Earnings Per Share, page F-26

3. Please clarify whether the holders of nonvested restricted stock awards have nonforfeitable rights to dividends or dividend equivalents. In this regard, tell us whether you consider these awards to be participating securities that should be included in your computation of earnings per share under the two-class method. Refer to ASC 260-10-45-61A.

Note 13. Income Taxes, page F-27

4. Please tell us whether you have undistributed earnings from foreign subsidiaries with no related tax liability and if so, tell us what consideration was given to providing the disclosures required under ASC 740-30-50.

Note 14. Commitments and Contingencies

Legal Matters, page F-31

5. We note that you paid \$6.3 million to Datasci in December 2011 in connection with the settlement agreement. We further note the disclosures you provide here and in your

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Form 10-Q for the quarterly period ended September 30, 2011 as to why you did not previously record a liability in connection with this matter. Please note that if there is at least a reasonable possibility that a loss exceeding amounts already recognized, in your case zero, may have been incurred, you must either disclose an estimate of the additional loss or range of loss, or state that such an estimate cannot be made or, if true, state that the estimate is immaterial with respect to your financial statements as a whole. Refer to ASC 450-20-50. Please confirm that you will revise your disclosures in future filings accordingly.

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 the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. 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.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

You may contact Jennifer Fugario, Staff Accountant, at (202) 551-3482 if you have questions regarding comments on the financial statements and related matters. Please contact me at (202) 551-3406 with any other questions.

Sincerely,

/s/ Patrick Gilmore

Patrick Gilmore Accounting Branch Chief