

Douglas Cory  
Form 4  
April 20, 2011

**FORM 4**

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

OMB APPROVAL

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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES**

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person \*  
Douglas Cory

(Last) (First) (Middle)

C/O MEDIDATA SOLUTIONS, INC., 79 FIFTH AVENUE, 8TH FLOOR

(Street)

NEW YORK, NY 10003

(City) (State) (Zip)

2. Issuer Name and Ticker or Trading Symbol  
Medidata Solutions, Inc. [MDSO]

3. Date of Earliest Transaction (Month/Day/Year)  
04/18/2011

4. If Amendment, Date Original Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

Director  10% Owner  
 Officer (give title below)  Other (specify below)  
Controller & Prin. Acct. Off.

6. Individual or Joint/Group Filing(Check Applicable Line)  
 Form filed by One Reporting Person  
 Form filed by More than One Reporting Person

**Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned**

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)	4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)	5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Ownership (Instr. 4)
			Code	V Amount (D) Price			
Common Stock	04/18/2011		M	3,000 (1) A \$ 12.08	11,133	D	
Common Stock	04/18/2011		S	3,000 (1) D \$ 25.639 (2)	8,133	D	

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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(9-02)

**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned**  
(e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)	5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	6. Date Exercisable and Expiration Date (Month/Day/Year)	7. Title and Amount of Underlying Securities (Instr. 3 and 4)	8. Amount or Number of Shares
Stock Option (Right to buy)	\$ 12.08	04/18/2011		M	3,000	<sup>(3)</sup> 11/13/2017	Common Stock	3,000

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Douglas Cory C/O MEDIDATA SOLUTIONS, INC. 79 FIFTH AVENUE, 8TH FLOOR NEW YORK, NY 10003			Controller & Prin. Acct. Off.	

## Signatures

/s/ Michael I. Otner,  
Attorney-in-Fact

04/20/2010

\_\_Signature of Reporting Person

Date

## Explanation of Responses:

- \* If the form is filed by more than one reporting person, see Instruction 4(b)(v).
- \*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations. See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).
- (1) The sale reported was effected pursuant to a Rule 10b5-1 trading plan adopted by the reporting person on March 17, 2011  
Such transaction was executed in multiple trades at prices ranging from \$25.55 to \$25.88. The price reported reflects the weighted average sale price. The reporting person hereby undertakes to provide upon request to the SEC staff, the issuer or a security holder of the issuer full information regarding the number of shares and prices at which the transaction was effected.
- (3) 1/48 of these options vest and become exercisable each month over four years, commencing on November 19, 2007.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.