Sherif Tarek Form 4 May 18, 2012

FORM 4

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

Check this box if no longer subject to Section 16.

Form 4 or

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

Form 5 obligations may continue. See Instruction

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(b).

(Last)

Common

Stock

1. Name and Address of Reporting Person * Sherif Tarek

> (First) (Middle)

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

NEW YORK, NY 10003

(Street)

2. Issuer Name and Ticker or Trading Symbol

Medidata Solutions, Inc. [MDSO]

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

05/16/2012

4. If Amendment, Date Original

Code V

A

Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to

Issuer

(Check all applicable)

OMB

Number:

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Estimated average

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OMB APPROVAL

3235-0287

January 31,

2005

0.5

_X__ Director 10% Owner X_ Officer (give title Other (specify below)

Chairman & CEO

6. Individual or Joint/Group Filing(Check

Applicable Line)

X Form filed by One Reporting Person Form filed by More than One Reporting

(City) (State) (Zip) Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1. Title of 2. Transaction Date 2A. Deemed Security (Month/Day/Year) Execution Date, if (Instr. 3)

05/16/2012

(Month/Day/Year)

3. Transaction(A) or Disposed of Code (D) (Instr. 3, 4 and 5) (Instr. 8)

Amount

48,266

(1)

or

(D)

Securities Beneficially Owned Following (A)

Price

\$0

(2)

4. Securities Acquired 5. Amount of

6. Ownership 7. Nature of Form: Direct Indirect (D) or Beneficial Ownership Indirect (I) (Instr. 4) (Instr. 4)

Reported Transaction(s) (Instr. 3 and 4)

D 935,774

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

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

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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 or 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)	
				Code V	(A) (D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares
Employee Stock Option Right to Buy	\$ 27.97	05/16/2012		A	36,087	(3)	05/16/2022	Common Stock	36,087

Reporting Owners

Reporting Owner Name / Address	Relationships					
•	Director	10% Owner	Officer	Other		
Sherif Tarek						
C/O MEDIDATA SOLUTIONS, INC.	X		Chairman & CEO			
79 FIFTH AVENUE, 8TH FLOOR	Λ		Chaminan & CEO			
NEW YORK, NY 10003						

Signatures

/s/ Michael I. Otner, Attorney-in-Fact 05/18/2012

**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) Represents shares of restricted stock. The restrictions lapse with respect to one-fourth of the shares on each of May 16, 2013, May 16, 2014, May 16, 2015 and May 16, 2016.
- (2) Granted as compensation for services.
- (3) These options vest in 48 equal monthly installments commencing one month after the grant date, subject to continued employment.
- (4) Granted as compensation for services.

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.

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