

OMB APPROVAL	
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**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP**

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

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person* <u>Larsen Jill</u>  (Last) (First) (Middle) <u>C/O MEDIDATA SOLUTIONS, INC.</u> <u>350 HUDSON STREET, 9TH FLOOR</u>  (Street) <u>NEW YORK NY 10014</u>  (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>Medidata Solutions, Inc. [ MDSO ]</u>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable)  Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <u>EVP, Human Resources</u>
	3. Date of Earliest Transaction (Month/Day/Year) <u>04/23/2018</u>	
4. If Amendment, Date of Original Filed (Month/Day/Year)		

**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 Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	04/23/2018		A		27,582 <sup>(1)</sup>	A	\$0	27,596	D	

**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 Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)	
				Code	V	(A)	(D)	Date Exercisable	Expiration Date						Title
Restricted Stock Units (Performance-Related)	\$0.0	04/23/2018		A		10,343		(2)	(2)	Common Stock	(2)	\$0	10,343	D	
Stock Options (right to buy)	\$72.51	04/23/2018		A		17,200		(3)	04/23/2028	Common Stock	17,200	\$0 <sup>(4)</sup>	17,200	D	

**Explanation of Responses:**

- Award of shares of restricted stock under the issuer's 2017 Long-Term Incentive Plan (the "2017 LTIP"). The restrictions will lapse with respect to one-fourth of the shares on each of April 23, 2019, April 23, 2020, April 23, 2021, and April 23, 2022.
- Award of PBRsUs under the 2017 LTIP on April 23, 2018. The number of PBRsUs represents a target amount. Each PBRsU represents a contingent right to receive 0-200% of that target number of shares of the issuer's common stock, (i) 50% based on the issuer's TSR as compared to the TSR of companies in the Russell 2000 Index for the three years ending December 31, 2020, and (ii) 50% based on the Company's GAAP Net Income attainment for the three years ending December 31, 2020. The shares will vest immediately upon being earned.
- The options vested as to 25% of the shares on April 23, 2019 and 1/36th of the remaining options will become exercisable each month thereafter for the next 36 months.
- Granted as compensation for services.

**Remarks:**

/s/ Michael I. Otner, Attorney-in-Fact 04/25/2018

\*\* Signature of Reporting Person Date

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

\* 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).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

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