

| OMB APPROVAL | |
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INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

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

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|--|---|--|---|
| 1. Name and Address of Reporting Person* <u>Larsen Jill</u> (Last) (First) (Middle) C/O MEDIDATA SOLUTIONS, INC. 350 HUDSON STREET, 9TH FLOOR (Street) NEW YORK NY 10014 (City) (State) (Zip) | 2. Date of Event Requiring Statement (Month/Day/Year) 04/23/2018 | 3. Issuer Name and Ticker or Trading Symbol <u>Medidata Solutions, Inc. [MDSO]</u> | |
| | | 4. 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> | 5. If Amendment, Date of Original Filed (Month/Day/Year) 6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person |

Table I - Non-Derivative Securities Beneficially Owned

| 1. Title of Security (Instr. 4) | 2. Amount of Securities Beneficially Owned (Instr. 4) | 3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5) | 4. Nature of Indirect Beneficial Ownership (Instr. 5) |
|---------------------------------|---|--|---|
| Common Stock | 14 | D | |

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

| 1. Title of Derivative Security (Instr. 4) | 2. Date Exercisable and Expiration Date (Month/Day/Year) | | 3. Title and Amount of Securities Underlying Derivative Security (Instr. 4) | 4. Conversion or Exercise Price of Derivative Security | 5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5) | 6. Nature of Indirect Beneficial Ownership (Instr. 5) |
|--|--|-----------------|---|--|--|---|
| | Date Exercisable | Expiration Date | | | | |
| | | | | | | |

Explanation of Responses:

Remarks:

/s/ Michael I. Oter, 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 5 (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.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.

POWER OF ATTORNEY

Know all by these presents, that the undersigned, as a Section 16 reporting person of

Medidata Solutions, Inc. (the Company), hereby constitutes and appoints each of Michael I. Otner, Brandon E. Ziegler and Richard S. Goldstein, signing singly, the undersigned true and lawful attorney-in-fact to:

- (1) prepare, execute in the undersigned's name and on the undersigned's behalf, and submit to the U.S. Securities and Exchange Commission (the SEC) amendments to Form 10 and any other documents necessary or appropriate to obtain
 - (2) execute for and on behalf of the undersigned, as a Section 16 reporting person of the Company, Forms 3, 4, and 5 in accordance with Section 16(a) of the Securities Exchange Act of 1934 and the rules thereunder, and any other
 - (3) do and perform any and all acts for and on behalf of the undersigned which may be necessary or desirable to complete, execute and timely file such Company Securities Transaction Filings with the SEC and any stock exchange
 - (4) take any other action of any type whatsoever in connection with the foregoing which, in the opinion of such attorney-in-fact, may be of benefit to, in the best interest of, or legally required by, the undersigned, it being
- The undersigned hereby grants to each such attorney-in-fact full power and authority to do and perform any and every act and thing whatsoever requisite, necessary, or proper to be done in the exercise of any of the rights hereinabove set forth.
- This Power of Attorney shall remain in full force and effect until the undersigned is no longer required to file Forms 3, 4, and 5 with respect to the undersigned's holdings of and transactions in securities issued by the Company.

[signature page to follow]

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of this 23rd day of April, 2018.

Signature: /s/ Jill Larsen
Print Name: Jill Larsen