Securities Act, check the following box. \square

П

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

Form S-3

REGISTRATION STATEMENT

UNDER THE SECURITIES ACT OF 1933

MEDPACE HOLDINGS, INC.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization) 32-0434904

(I.R.S. Employer Identification Number)

5375 Medpace Way Cincinnati, Ohio 45227 (513) 579-9911

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

August J. Troendle
President, Chief Executive Officer and Chairman of the Board of Directors President, Chief Executive Onicer and Chairman of the board of Directors
Jesse J. Geiger
Chief Financial Officer and Chief Operating Officer, Laboratory Operations
Medpace Holdings, Inc.
5375 Medpace Way
Cincinnati, Ohio 45227

(513) 579-9911 (Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to: F. Mark Reuter Keating Muething & Klekamp PLL One East Fourth Street, Suite 1400 Cincinnati, Ohio 45202 Telephone: (513) 579-6469 Facsimile: (513) 579-6457

APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC: From time to time after this registration statement becomes effective.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box: \Box

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box: $\ oxdot$

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. \Box

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. $\hfill\Box$

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the

Securities Act, check the following box. ⊠ If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. Accelerated filer

Large accelerated filer |X|

Non-accelerated filer

Smaller reporting company Emerging growth company

П

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of Securities Act. \square

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be registered/proposed maximum offering price per unit/proposed maximum aggregate offering price	Amount of registration fee
Primary Offering:		
Common Stock	(1)(2)(3)(4)	
Preferred Stock	(1)(2)(3)(4)	
Depositary Shares	(1)(3)(4)	
Warrants	(1)(3)(4)	
Subscription Rights	(1)(3)(4)	
Units	(1)(3)(4)	
Secondary Offering:		
Common Stock	481,282	\$6,243(5)
Total Registration Fee	·	\$6,243(5)

- An unspecified number of securities is being registered as may from time to time be offered at unspecified prices.
- An unspecified number of securities is being registered as may from time to time be offered at unspecified prices.

 Includes rights to acquire common stock or preferred stock of the Registrant under any shareholder rights plan then in effect, if applicable under the terms of any such plan.

 No separate consideration will be received for shares of common stock that are issued upon conversion of depositary shares or preferred stock or upon exercise of common stock warrants registered hereunder.

 The Registrant is relying on Rule 456(b) and Rule 457(r) under the Securities Act of 1933, as amended (the "Securities Act"), to defer payment of all of the registration fees except for the previously paid fees described herein. The Registrant has previously registered securities having an aggregate offering price of up to \$75,000,000, offered by means of a Registration Statement on Form S-3, File No. 333-220306, originally filed by the Registrant with the Securities and Exchange Commission on September 1, 2017 (the "Prior Registration Statement"). As of the date of this Registration Statement on Form S-3, File No. 333-220306, originally filed by the Registration of the date of this Registration Statement on Form S-3, File No. 333-220306, originally filed by the Registration for the date of this Registration Statement, for which a filing fee of \$8,692.50 was previously paid and will continue to be applied to such unsold securities.

 With respect to the secondary offering, the registration fee has been calculated in accordance with Rule 457(c) under the Securities Act, based on the average of the high and low prices reported for the Registrant's common stock on February 20, 2020. Pursuant to Rule 415(a)(6) under the Securities Act, the registration Statement 8,102,976 unsold securities that were previously registered on the Prior Registration Statement and \$29,986.58 in registration fees that were previously paid in connection with those securities.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

Prospectus



Common Stock
Preferred Stock
Depositary Shares
Warrants
Subscription Rights
Units

8,584,258 Shares Common Stock Offered by the Selling Securityholders

We may offer and sell an indeterminate amount of the securities described above, and the selling securityholders may offer and sell up to 8,584,258 shares of common stock, in each case from time to time in one or more offerings. We may sell any combination of these securities in one or more offerings.

Each time we or any of the selling securityholders offer and sell securities, we or such selling securityholders will provide a supplement to this prospectus that contains specific information about the offering and, if applicable, the selling securityholders, as well as the amounts, prices and terms of the securities. The supplement may also add, update or change information contained in this prospectus with respect to that offering. You should carefully read this prospectus and the applicable prospectus supplement before you invest in any of our securities. This prospectus may not be used by us to offer and sell our securities unless accompanied by a prospectus supplement describing the method and terms of the offering of those offered securities.

We may offer and sell the securities described in this prospectus and any prospectus supplement to or through one or more underwriters, dealers and agents, or directly to purchasers, or through a combination of these methods. In addition, the selling securityholders may offer and sell shares of our common stock from time to time, together or separately. If any underwriters, dealers or agents are involved in the sale of any of the securities, their names and any applicable purchase price, fee, commission or discount arrangement between or among them will be set forth, or will be calculable from the information set forth, in the applicable prospectus supplement. See the sections of this prospectus entitled "About this Prospectus" and "Plan of Distribution" for more information. No securities may be sold without delivery of this prospectus and any applicable prospectus supplement describing the method and terms of the offering of such securities.

Investing in any of our securities involves risk. Please read carefully the section entitled "Risk Factors" beginning on page 3 of this prospectus.

Our common stock is listed on the NASDAQ Global Select Market under the symbol "MEDP." On February 24, 2020, the last reported sale price of our common stock on the NASDAQ Global Select Market was \$99.02 per share. None of the other securities that we may offer under this prospectus are currently publicly traded.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is February 25, 2020

Table of Contents

	Page
ABOUT THIS PROSPECTUS	1
WHERE YOU CAN FIND MORE INFORMATION; INCORPORATION BY REFERENCE	1
THE COMPANY	2
CORPORATE INFORMATION	3
RISK FACTORS	5
CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS	3
USE OF PROCEEDS	4
DESCRIPTION OF CAPITAL STOCK	4
DESCRIPTION OF DEPOSITARY SHARES	g
DESCRIPTION OF WARRANTS	11
DESCRIPTION OF SUBSCRIPTION RIGHTS	13
DESCRIPTION OF UNITS	13
GLOBAL SECURITIES	14
SELLING SECURITYHOLDERS	17
PLAN OF DISTRIBUTION	19
LEGAL MATTERS	21
<u>EXPERTS</u>	21

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the U.S. Securities and Exchange Commission, or the SEC, using a "shelf" registration process. By using a shelf registration statement, we may sell an indeterminate amount of securities from time to time in one or more offerings and the selling securityholders named herein or to be named in a supplement to this prospectus may, from time to time, sell up to 8,584,258 shares of common stock from time to time in one or more offerings as described in this prospectus. Each time that we offer and sell securities, we will provide a prospectus supplement to this prospectus that contains specific information about the securities being offered and sold and the specific terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. The prospectus supplement or free writing prospectus may also add, update or change information contained in this prospectus with respect to that offering. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement or free writing prospectus, you should rely on the prospectus supplement or free writing prospectus, as applicable. Before purchasing any securities, you should carefully read both this prospectus and the applicable prospectus supplement (and any applicable free writing prospectuses), together with the additional information described under the heading "Where You Can Find More Information; Incorporation by Reference."

Neither we, nor the selling securityholders, have authorized anyone to provide you with any information or to make any representations other than those contained in this prospectus, any applicable prospectus supplement or any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We and the selling security holders take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the selling securityholders will not make an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus and the applicable prospectus supplement to this prospectus is accurate only as of the date on its respective cover, that the information appearing in any applicable free writing prospectus is accurate only as of the date of that free writing prospectus, and that any information incorporated by reference is accurate only as of the date of the document incorporated by reference, unless we indicate otherwise. Our business, financial condition, results of operations and prospects may have changed since those dates. This prospectus incorporates by reference, and any prospectus supplement or free writing prospectus may contain and incorporate by reference, market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. In addition, the market and industry data and forecasts that may be included or incorporated by reference in this prospectus, any prospectus supplement or any applicable free writing prospectus may involve estimates and assumptions and these estimates involve risks and uncertainties and are subject to change based on various factors, including those discussed under the heading "Risk Factors" contained in this prospectus, the applicable prospectus supplement and any applicable free writing prospectus, and under similar headings in other documents that are incorporated by reference into this prospectus. Accordingly, investors should not place undue reliance on this information.

References in this prospectus to the terms "we," "us," "MEDP," "Medpace Holdings," or "the Company" or other similar terms mean Medpace Holdings, Inc. and its consolidated subsidiaries, unless we state otherwise or the context indicates otherwise.

WHERE YOU CAN FIND MORE INFORMATION; INCORPORATION BY REFERENCE

We are subject to the informational reporting requirements of the Securities Exchange Act of 1934, as amended, which we refer to as the "Exchange Act." We file reports, proxy statements and other information with the SEC. Our SEC filings are available over the Internet at the SEC's website at http://www.sec.gov. You may also inspect our SEC reports and other information at our website at http://www.medpace.com. The information

contained on or accessible through our website is not a part of this prospectus, other than the documents that we file with the SEC that are incorporated by reference into this prospectus.

The SEC allows us to "incorporate by reference" into this prospectus the information in documents we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. Any statement contained in any document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in or omitted from this prospectus or any accompanying prospectus supplement, or in any other subsequently filed document that also is or is deemed to be incorporated by reference herein, modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

We incorporate by reference the documents listed below and any future documents that we file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (1) after the date of the initial filing of the registration statement of which this prospectus forms a part prior to the effectiveness of the registration statement and (2) after the date of this prospectus until the offering of the securities is terminated:

- our annual report on Form 10-K for the year ended December 31, 2019; and
- the description of our common stock set forth in our Registration Statement on Form 8-A filed with the SEC on <u>August 9, 2016</u>, and any
 amendments and reports filed for the purpose of updating that description.

We will not, however, incorporate by reference in this prospectus any documents or portions thereof that are not deemed "filed" with the SEC, including any information furnished pursuant to Item 2.02 or Item 7.01 of our current reports on Form 8-K unless, and except to the extent, specified in such current reports.

We will provide you with a copy of any of these filings (other than an exhibit to these filings, unless the exhibit is specifically incorporated by reference into the filing requested) at no cost, if you submit a request to us by writing or telephoning us at the following address and telephone number:

Medpace Holdings, Inc.
5375 Medpace Way
Cincinnati, Ohio 45227
Telephone Number: (513) 579-9911
Attention: Stephen P. Ewald, General Counsel

THE COMPANY

We are one of the world's leading clinical contract research organizations, or CROs, by revenue, solely focused on providing scientifically-driven outsourced clinical development services to the biotechnology, pharmaceutical and medical device industries. Our mission is to accelerate the global development of safe and effective medical therapeutics. We differentiate ourselves from our competitors by our disciplined operating model centered on providing full-service Phase I-IV clinical development services and our therapeutic expertise. We believe this combination results in timely and cost-effective delivery of clinical development services for our customers. We believe that we are a partner of choice for small and mid-sized biopharmaceutical companies based on our ability to consistently utilize our full-service, disciplined operating model to deliver timely and high-quality results for our customers. Accordingly, we believe we are well positioned to continue to expand our market share in the growing Phase I-IV CRO market.

CORPORATE INFORMATION

We were incorporated under the laws of the State of Delaware in 2016. Our principal executive offices are located at 5375 Medpace Way, Cincinnati, Ohio 45227. Our telephone number is (513) 579-9911. Our website is http://www.medpace.com. The information contained on or accessible through our website is not part of this prospectus, other than the documents that we file with the SEC that are incorporated by reference into this prospectus.

RISK FACTORS

Investment in any securities offered pursuant to this prospectus and the applicable prospectus supplement involves risks. You should carefully consider the risk factors incorporated by reference to our most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K we file after the date of this prospectus, and all other information contained or incorporated by reference into this prospectus, as updated by our subsequent filings under the Exchange Act, and the risk factors and other information contained in the applicable prospectus supplement and any applicable free writing prospectus before acquiring any of such securities. If any of these risks actually occurs, our business, results of operations and financial condition could suffer. In that case, the trading price of our securities could decline, and you could lose all or a part of your investment.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, any applicable prospectus supplement and the documents that we incorporate by reference in each, contains forward looking statements. We intend such forward-looking statements to be covered by the safe harbor provisions for forward-looking statements contained in Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Exchange Act. All statements other than statements of historical facts contained in this prospectus, any applicable prospectus supplement and the documents that we incorporate by reference in each, including statements regarding our results of operations; financial position and performance; liquidity and our ability to fund our business operations and initiatives; capital expenditure and debt service obligations; business strategies, plans and goals, including those related to marketing, acquisitions and expansion of our business; product approvals and plans; industry trends; expectations regarding consumer behaviors and trends; our culture and operating philosophy; human resource management; arrangements with and delivery of our services to the customers; conversion of backlog; dividend policy; legal proceedings; and our objectives for future operations, are forward-looking statements. The words "expect," "anticipate," "intend," "plan," "believe," "seek," "see," "will," "would," "target," and similar expressions are intended to identify forward-looking statements. Forward-looking statements are based largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy, short-term and long-term business operations and objectives, and financial needs. These forwardlooking statements are subject to inherent uncertainties, risks, changes in circumstances and other important factors that are difficult to predict. Moreover, we operate in a very competitive and rapidly changing environment in which new risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all important factors on our business or the extent to which any factor, or combination of such factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed may not occur and our financial condition and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. We caution you therefore against relying on these forward-looking statements.

Some of the important factors that could cause actual results to differ from our expectations include regional, national or global political, economic, business, competitive, market and regulatory conditions and the

other important factors included in "Item 1A Risk Factors" of our most recent Annual Report on Form 10-K. We qualify all of our forward-looking statements by these cautionary statements. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained in this prospectus, any applicable prospectus supplement or the documents that we incorporate by reference in each, whether as a result of any new information, future events, changed circumstances or otherwise. For a further discussion of the risks relating to our business, see "Item 1A Risk Factors" of our most recent Annual Report on Form 10-K.

These factors and the other risk factors described in this prospectus and any accompanying prospectus supplement, including the documents incorporated by reference, are not necessarily all of the important factors that could cause actual results to differ materially from those expressed in any of our forward-looking statements. Other unknown or unpredictable factors also could harm our results. Consequently, there can be no assurance that the actual results or developments anticipated by us will be realized or, even if substantially realized, that they will have the expected consequences to or effects on us.

USE OF PROCEEDS

We intend to use the net proceeds from the sale of the securities as set forth in the applicable prospectus supplement. We will not receive any of the proceeds from the sale of common stock being offered by any of the selling securityholders.

DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock is not complete and may not contain all the information you should consider before investing in our capital stock. This description is summarized from, and qualified in its entirety by reference to, our amended and restated certificate of incorporation, which has been publicly filed with the SEC. See "Where You Can Find More Information; Incorporation by Reference."

Authorized Capital

Our authorized capital stock consists of:

- 250,000,000 shares of common stock, \$0.01 par value; and
- 5,000,000 shares of preferred stock, \$0.01 par value.

Unless our board of directors, or the Board, determines otherwise, we will issue all shares of our capital stock in uncertificated form.

Common Stock

Voting Rights

Holders of our common stock are entitled to one vote for each share held of record on all matters to which shareholders are entitled to vote generally, including the election or removal of directors. The holders of our common stock do not have cumulative voting rights in the election of directors. Accordingly, a holder or group of holders of a majority of the shares of our common stock are able to elect all of the directors.

Dividends

Subject to preferences that may be applicable to any then outstanding preferred stock, holders of our common stock are entitled to receive dividends, if any, as may be declared from time to time by our Board out of legally available funds.

Liquidation

Upon our liquidation, dissolution or winding up and after payment in full of all amounts required to be paid to creditors and to the holders of preferred stock having liquidation preferences, if any, the holders of our common stock will be entitled to receive pro rata our remaining assets available for distribution.

Rights and Preferences

Holders of our common stock do not have preemptive, subscription, redemption or conversion rights. The common stock is not subject to further calls or assessment by us. There are no redemption or sinking fund provisions applicable to the common stock. All shares of our common stock that are outstanding are fully paid and non-assessable. The rights, powers, preferences and privileges of holders of our common stock are subject to and may be adversely affected by the rights of the holders of any shares of our preferred stock we may authorize and issue in the future.

Preferred Stock

Our amended and restated certificate of incorporation provides that our Board has the authority, without action by the shareholders, to designate and issue up to 5,000,000 shares of preferred stock in one or more classes or series and to fix the powers, rights, preferences, and privileges of each class or series of preferred stock, including dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences and the number of shares constituting any class or series, which may be greater than the rights of the holders of the common stock. There are no shares of preferred stock outstanding.

The purpose of authorizing our Board to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a shareholder vote on specific issuances. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions, future financings and other corporate purposes, could have the effect of making it more difficult for a third party to acquire, or could discourage a third party from seeking to acquire, a majority of our outstanding voting stock. Additionally, the issuance of preferred stock may adversely affect the holders of our common stock by restricting dividends on our common stock, diluting the voting power of our common stock or subordinating the liquidation rights of our common stock. As a result of these or other factors, the issuance of preferred stock could have an adverse impact on the market price of our common stock.

Exclusive Venue

Our amended and restated certificate of incorporation, requires, to the fullest extent permitted by law, that (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our shareholders, (iii) any action asserting a claim against us arising pursuant to any provision of the General Corporation Law of the State of Delaware, or the DGCL, or our amended and restated certificate of incorporation or our amended and restated bylaws or (iv) any action asserting a claim against us governed by the internal affairs doctrine will have to be brought only in the Court of Chancery in the State of Delaware. Although we believe this provision benefits us by providing increased consistency in the application of Delaware law in the types of lawsuits to which it applies, the provision may have the effect of discouraging lawsuits against our directors and officers. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and consented to the forum provisions in our amended and restated certificate of incorporation. However, the enforceability of similar forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could find these types of provisions to be unenforceable.

Anti-Takeover Effects of Our Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws and Certain Provisions of Delaware Law

Our amended and restated certificate of incorporation, amended and restated bylaws and the DGCL, which are summarized in the following paragraphs, contain provisions that are intended to enhance the likelihood of continuity and stability in the composition of our Board. These provisions are intended to avoid costly takeover battles, reduce our vulnerability to a hostile change of control and enhance the ability of our Board to maximize shareholder value in connection with any unsolicited offer to acquire us. However, these provisions may have an anti-takeover effect and may delay, deter or prevent a merger or acquisition of our company by means of a tender offer, a proxy contest or other takeover attempt that a shareholder might consider in its best interest, including those attempts that might result in a premium over the prevailing market price for the shares of common stock held by shareholders.

Authorized but Unissued Capital Stock

The authorized but unissued shares of common stock and preferred stock are available for future issuance without shareholder approval, subject to any limitations imposed by the listing standards of the NASDAQ Global Select Market. These additional shares may be used for a variety of corporate finance transactions, acquisitions and employee benefit plans. The existence of authorized but unissued and unreserved common stock and preferred stock could make more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

Classified Board

Our amended and restated certificate of incorporation provides that our Board is divided into three classes of directors, with the classes to be as nearly equal in number as possible, and with the directors serving three-year terms. As a result, approximately one-third of our Board is elected each year. In addition, our amended and restated certificate of incorporation provides that directors may only be removed from our Board for cause by the affirmative vote of at least a majority of our common stock. The classification of directors has the effect of making it more difficult for shareholders to change the composition of our Board. Our amended and restated certificate of incorporation and amended and restated bylaws provide that, subject to any rights of holders of preferred stock to elect additional directors under specified circumstances, the number of directors are fixed from time to time exclusively pursuant to a resolution adopted by the Board.

Business Combinations

We are subject to Section 203 of the DGCL. Subject to certain exceptions, Section 203 prevents a publicly held Delaware corporation from engaging in a "business combination" with any "interested stockholder" for three years following the date that the person became an interested stockholder, unless the interested stockholder attained such status with the approval of our board of directors or unless the business combination is approved in a prescribed manner. A "business combination" includes, among other things, a merger or consolidation involving us and the "interested stockholder" and the sale of more than 10% of our assets. In general, an "interested stockholder" is any entity or person beneficially owning 15% or more of our outstanding voting stock and any entity or person affiliated with or controlling or controlled by such entity or person.

No Cumulative Voting

Under Delaware law, the right to vote cumulatively does not exist unless the certificate of incorporation specifically authorizes cumulative voting. Our amended and restated certificate of incorporation does not authorize cumulative voting. Accordingly, a holder or group of holders of a majority of the shares of our common stock are able to elect all of the directors.

Requirements for Advance Notification of Shareholder Meetings, Director Nominations and Shareholder Proposals

Our amended and restated certificate of incorporation provides that shareholders at an annual meeting may only consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of our Board or by a qualified shareholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has delivered timely written notice in proper form to our secretary of the shareholder's intention to bring such business before the meeting. Our amended and restated certificate of incorporation provides that, subject to applicable law, special meetings of the shareholders may be called only by a resolution adopted by the affirmative vote of the majority of the directors then in office. Our amended and restated bylaws prohibit the conduct of any business at a special meeting other than as specified in the notice for such meeting. In addition, any shareholder who wishes to bring business before an annual meeting or nominate directors must comply with the advance notice and duration of ownership requirements set forth in our amended and restated bylaws and provide us with certain information. These provisions may have the effect of deferring, delaying or discouraging hostile takeovers or changes in control of us or our management.

Our amended and restated bylaws establish advance notice procedures with respect to shareholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of the Board or a committee of the Board. In order for any matter to be "properly brought" before a meeting, a shareholder will have to comply with advance notice requirements and provide us with certain information. Our amended and restated bylaws allow the chairman of the meeting at a meeting of the shareholders to adopt rules and regulations for the conduct of meetings which may have the effect of precluding the conduct of certain business at a meeting if the rules and regulations are not followed. These provisions may also defer, delay or discourage a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to influence or obtain control of our company.

Shareholder Action by Written Consent

Pursuant to Section 228 of the DGCL, any action required to be taken at any annual or special meeting of the shareholders may be taken without a meeting, without prior notice and without a vote if a consent or consents in writing, setting forth the action so taken, is signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares of our stock entitled to vote thereon were present and voted, unless our amended and restated certificate of incorporation provides otherwise. Our amended and restated certificate of incorporation provides that shareholder action by written consent is permitted only if the action to be effected by such written consent and the taking of such action by such written consent have been previously approved by the board of directors.

Amendment of Amended and Restated Certificate of Incorporation or Amended and Restated Bylaws

The DGCL provides generally that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation's certificate of incorporation or bylaws, unless a corporation's certificate of incorporation or bylaws, as the case may be, requires a greater percentage. Our amended and restated bylaws may be amended or repealed by a majority vote of our Board or by the affirmative vote of the holders of at least 66-2/3% of the votes which all our shareholders would be entitled to cast in any annual election of directors. In addition, the affirmative vote of the holders of at least 66-2/3% of the votes which all our shareholders would be entitled to cast in any election of directors will be required to amend or repeal or to adopt any provisions inconsistent with any of the provisions of our certificate described above.

The foregoing provisions of our amended and restated certificate of incorporation and amended and restated bylaws could discourage potential acquisition proposals and could delay or prevent a change in control. These provisions are intended to enhance the likelihood of continuity and stability in the composition of our Board and in the policies formulated by our Board and to discourage certain types of transactions that may involve an actual

or threatened change of control. These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal. The provisions also are intended to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for shares of our common stock and, as a consequence, they also may inhibit fluctuations in the market price of our common stock that could result from actual or rumored takeover attempts. Such provisions also may have the effect of preventing changes in our management or delaying or preventing a transaction that might benefit you or other minority shareholders.

Dissenters' Rights of Appraisal and Payment

Under the DGCL, with certain exceptions, our shareholders have appraisal rights in connection with a merger or consolidation of us. Pursuant to the DGCL, shareholders who properly request and perfect appraisal rights in connection with such merger or consolidation will have the right to receive payment of the fair value of their shares as determined by the Delaware Court of Chancery.

Shareholders' Derivative Actions

Under the DGCL, any of our shareholders may bring an action in our name to procure a judgment in our favor, also known as a derivative action, provided that the shareholder bringing the action is a holder of shares of our common stock at the time of the transaction to which the action relates or such shareholder's stock thereafter devolved by operation of law and such suit is brought in the Court of Chancery in the State of Delaware. See "— Exclusive Venue" above.

Conflicts of Interest

Delaware law permits corporations to adopt provisions renouncing any interest or expectancy in certain opportunities that are presented to the corporation or its officers, directors or shareholders. Our amended and restated certificate of incorporation, to the maximum extent permitted from time to time by Delaware law, renounces any interest or expectancy that we have in, or right to be offered an opportunity to participate in, specified business opportunities that are from time to time presented to our officers, directors or shareholders or their respective affiliates, other than those officers, directors, shareholders or affiliates who are our or our subsidiaries' employees. Our amended and restated certificate of incorporation provides that, to the fullest extent permitted by law, each of investment funds managed by Cinven Capital Management (V) General Partner Limited, or Cinven, or any of its affiliates or any director who is not employed by us (including any non-employee director who serves as one of our officers in both his director and officer capacities) or his or her affiliates has no duty to refrain from (i) engaging in a corporate opportunity in the same or similar lines of business in which we or our affiliates now engage or propose to engage or (ii) otherwise competing with us or our affiliates. In addition, to the fullest extent permitted by law, in the event that Cinven or any non-employee director acquires knowledge of a potential transaction or other business opportunity which may be a corporate opportunity for itself or himself or its or his affiliates or for us or our affiliates, such person will have no duty to communicate or offer such transaction or business opportunity to us or any of our affiliates and they may take any such opportunity for themselves or offer it to another person or entity. Our amended and restated certificate of incorporation does not renounce our interest in any business opportunity that is expressly offered to a non-employee director solely in his or her capacity as a director or officer of the Company. To the fullest extent permitted by law, no business opportunity will be deemed to be a potential corporate opportunity for us unless we would be permitted to undertake the opportunity under our amended and restated certificate of incorporation, we have sufficient financial resources to undertake the opportunity and the opportunity would be in line with our business.

Limitations on Liability and Indemnification of Officers and Directors

Our amended and restated certificate of incorporation and amended and restated bylaws provide indemnification for our directors and officers to the fullest extent permitted by the DGCL. We have entered into

indemnification agreements with each of our directors that may, in some cases, be broader than the specific indemnification provisions contained under Delaware law. In addition, as permitted by Delaware law, our amended and restated certificate of incorporation includes provisions that eliminate the personal liability of our directors for monetary damages resulting from breaches of certain fiduciary duties as a director. The effect of this provision is to restrict our rights and the rights of our shareholders in derivative suits to recover monetary damages against a director for breach of fiduciary duties as a director, except that a director will be personally liable for:

- · any breach of his duty of loyalty to us or our shareholders;
- · acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;
- any transaction from which the director derived an improper personal benefit; or
- improper distributions to shareholders.

These provisions may be held not to be enforceable for violations of the federal securities laws of the United States.

Registration Rights Agreement

In connection with our initial public offering, we entered into a registration rights agreement, or the Registration Rights Agreement, with investment funds managed by Cinven Capital Management (V) General Partner Limited (together with certain Cinven managed entities, collectively, "Cinven") and August J. Troendle, our President, Chief Executive Officer and Chairman of the Board of Directors, pursuant to which such holders have specified rights to require us to register all or any portion of their shares under the Securities Act. In 2018 Cinven sold the last of its remaining shares of common stock. As a result of such sale, Cinven no longer has any rights to require us to register any shares.

Transfer Agent and Registrar; Listing

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC. Our common stock is listed on the NASDAQ Global Select Market under the symbol "MEDP."

DESCRIPTION OF DEPOSITARY SHARES

General

We may offer depositary shares representing fractional shares of our preferred stock of any series. The following description sets forth certain general terms and provisions of the depositary shares that we may offer pursuant to this prospectus. The particular terms of the depositary shares, including the fraction of a preferred share that such depositary share will represent, and the extent, if any, to which the general terms and provisions may apply to the depositary shares so offered, will be described in the applicable prospectus supplement.

The shares of preferred stock represented by depositary shares will be deposited under a depositary agreement between us and a bank or trust company that meets certain requirements and is selected by us, which we refer to as the bank depositary. Each owner of a depositary share will be entitled to all the rights and preferences of the shares of preferred stock represented by the depositary share. The depositary shares will be evidenced by depositary receipts issued pursuant to the depositary agreement. Depositary receipts will be distributed to those persons purchasing the fractional shares of preferred stock in accordance with the terms of the offering. The deposit agreement will also contain provisions relating to the manner in which any subscription or similar rights we offer to holders of the preferred stock will be made available to the holders of depositary shares.

The following description is a general summary of some common provisions of a depositary agreement and the related depositary receipts. The description below and in any prospectus supplement does not include all of the terms of the depositary agreement and the related depositary receipts. Copies of the form of depositary agreement and the depositary receipts relating to any particular issue of depositary shares will be filed with the SEC each time we issue depositary shares, and you should read those documents for provisions that may be important to you. For more information on how you can obtain copies of the forms of the depositary agreement and the related depositary receipts, see "Where You Can Find More Information."

Dividends and Other Distributions

If we pay a cash distribution or dividend on a series of preferred stock represented by depositary shares, the bank depositary will distribute these dividends to the record holders of these depositary shares. If the distributions are in property other than cash, the bank depositary will distribute the property to the record holders of the depositary shares. However, if the bank depositary determines that it is not feasible to make the distribution of property, the bank depositary may, with our approval, sell this property and distribute the net proceeds from this sale to the record holders of the depositary shares.

Redemption of Depositary Shares

If we redeem a series of preferred stock represented by depositary shares, the bank depositary will redeem the depositary shares from the proceeds received by the bank depositary in connection with the redemption. The redemption price per depositary share will equal the applicable fraction of the redemption price per share of the preferred stock. If fewer than all the depositary shares are redeemed, the depositary shares to be redeemed will be selected by lot or pro rata as the bank depositary may determine.

Voting the Preferred Stock

Upon receipt of notice of any meeting at which the holders of the preferred stock represented by depositary shares are entitled to vote, the bank depositary will mail the notice to the record holders of the depositary shares relating to the preferred stock. Each record holder of these depositary shares on the record date (which will be the same date as the record date for the preferred stock) may instruct the bank depositary as to how to vote the preferred stock represented by this holder's depositary shares. The bank depositary will endeavor, insofar as practicable, to vote the amount of the preferred stock represented by such depositary shares in accordance with these instructions, and we will take all action which the bank depositary deems necessary in order to enable the bank depositary to do so. The bank depositary will abstain from voting shares of the preferred stock to the extent it does not receive specific instructions from the holders of depositary shares representing this preferred stock.

Amendment and Termination of the Depositary Agreement

The form of depositary receipt evidencing the depositary shares and any provision of the depositary agreement may be amended by agreement between the bank depositary and us. However, any amendment that materially and adversely alters the rights of the holders of depositary shares will not be effective unless this amendment has been approved by the holders of at least a majority of the depositary shares then outstanding. The depositary agreement may be terminated by the bank depositary or us only if:

- all outstanding depositary shares have been redeemed; or
- there has been a final distribution in respect of the preferred stock in connection with any liquidation, dissolution or winding up of the Company and this distribution has been distributed to the holders of depositary receipts.

Charges of Bank Depositary

We will pay all transfer and other taxes and governmental charges arising solely from the existence of the depositary arrangements. We will pay charges of the bank depositary in connection with the initial deposit of the preferred stock and any redemption of the preferred stock. Holders of depositary receipts will pay other transfer and other taxes and governmental charges and any other charges, including a fee for the withdrawal of shares of preferred stock upon surrender of depositary receipts, as are expressly provided in the depositary agreement to be for their accounts.

Withdrawal of Preferred Stock

Except as may be provided otherwise in the applicable prospectus supplement, upon surrender of depositary receipts at the principal office of the bank depositary, subject to the terms of the depositary agreement, the owner of the depositary shares may demand delivery of the number of whole shares of preferred stock and all money and other property, if any, represented by those depositary shares. Fractional shares of preferred stock will not be issued. If the depositary receipts delivered by the holder evidence a number of depositary shares in excess of the number of depositary shares representing the number of whole shares of preferred stock to be withdrawn, the bank depositary will deliver to this holder at the same time a new depositary receipt evidencing the excess number of depositary shares. Holders of preferred stock thus withdrawn may not thereafter deposit those shares under the depositary agreement or receive depositary receipts evidencing depositary shares therefor.

Miscellaneous

The bank depositary will forward to holders of depositary receipts all reports and communications from us that are delivered to the bank depositary and that we are required to furnish to the holders of preferred stock.

Neither the bank depositary nor we will be liable if we are prevented or delayed by law or any circumstance beyond our control in performing our obligations under the depositary agreement. The obligations of the bank depositary and us under the depositary agreement will be limited to performance in good faith of our duties thereunder, and we will not be obligated to prosecute or defend any legal proceeding in respect of any depositary shares or shares of preferred stock unless satisfactory indemnity is furnished. We may rely upon written advice of counsel or accountants, or upon information provided by persons presenting shares of preferred stock for deposit, holders of depositary receipts or other persons believed to be competent and on documents believed to be genuine.

Resignation and Removal of Bank Depositary

The bank depositary may resign at any time by delivering to us notice of its election to do so, and we may at any time remove the bank depositary. Any such resignation or removal will take effect upon the appointment of a successor bank depositary and the successor's acceptance of this appointment. The successor bank depositary must be appointed within 60 days after delivery of the notice of resignation or removal and must be a bank or trust company meeting the requirements of the depositary agreement.

DESCRIPTION OF WARRANTS

General

We may issue warrants for the purchase of common stock, preferred stock, or depositary shares. The following description sets forth certain general terms and provisions of the warrants that we may offer pursuant to this prospectus. The particular terms of the warrants and the extent, if any, to which the general terms and provisions may apply to the warrants so offered will be described in the applicable prospectus supplement.

Warrants may be issued independently or together with other securities and may be attached to or separate from any offered securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a bank or trust company, as warrant agent. The warrant agent will act solely as our agent in connection with the warrants and will not have any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants.

A copy of the forms of the warrant agreement and the warrant certificate relating to any particular issue of warrants will be filed with the SEC each time we issue warrants, and you should read those documents for provisions that may be important to you. For more information on how you can obtain copies of the forms of the warrant agreement and the related warrant certificate, see "Where You Can Find More Information."

Stock Warrants

The prospectus supplement relating to a particular issue of warrants to issue common stock, preferred stock or depositary shares will describe the terms of the common stock warrants and preferred stock warrants, including the following:

- the title of the warrants;
- the offering price for the warrants, if any;
- · the aggregate number of the warrants;
- the designation and terms of the common stock, preferred stock or depositary shares that may be purchased upon exercise of the warrants:
- if applicable, the designation and terms of the securities that the warrants are issued with and the number of warrants issued with each security;
- if applicable, the date from and after which the warrants and any securities issued with the warrants will be separately transferable;
- the number of shares of common stock or preferred stock or depositary shares that may be purchased upon exercise of a warrant and the price at which the shares may be purchased upon exercise;
- the dates on which the right to exercise the warrants commence and expire;
- if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;
- the currency or currency units in which the offering price, if any, and the exercise price are payable;
- if applicable, a discussion of material United States federal income tax considerations;
- anti-dilution provisions of the warrants, if any;
- redemption or call provisions, if any, applicable to the warrants;
- any additional terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants; and
- any other information we think is important about the warrants.

Exercise of Warrants

Each warrant will entitle the holder of the warrant to purchase at the exercise price set forth in the applicable prospectus supplement the number of shares of common stock, preferred stock or depositary shares being offered. Holders may exercise warrants at any time up to the close of business on the expiration date set forth in

the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants are void. Holders may exercise warrants as set forth in the prospectus supplement relating to the warrants being offered.

Until a holder exercises the warrants to purchase our common stock, preferred stock, or depositary shares, the holder will not have any rights as a holder of our common stock, preferred stock, or depositary shares, as the case may be, by virtue of ownership of warrants.

DESCRIPTION OF SUBSCRIPTION RIGHTS

We may issue to our shareholders subscription rights to purchase our common stock, preferred stock, or depositary shares. The following description sets forth certain general terms and provisions of the subscription rights that we may offer pursuant to this prospectus. The particular terms of the subscription rights and the extent, if any, to which the general terms and provisions may apply to the subscription rights so offered will be described in the applicable prospectus supplement.

Subscription rights may be issued independently or together with any other security offered by this prospectus and may or may not be transferable by the shareholder receiving the rights in the rights offering. In connection with any rights offering, we may enter into a standby underwriting agreement with one or more underwriters pursuant to which the underwriter will purchase any securities that remain unsubscribed for upon completion of the rights offering, or offer these securities to other parties who are not our shareholders. A copy of the form of subscription rights certificate will be filed with the SEC each time we issue subscription rights, and you should read that document for provisions that may be important to you. For more information on how you can obtain a copy of any subscription rights certificate, see "Where You Can Find More Information."

The applicable prospectus supplement relating to any subscription rights will describe the terms of the offered subscription rights, including, where applicable, the following:

- the exercise price for the subscription rights;
- the number of subscription rights issued to each shareholder;
- the extent to which the subscription rights are transferable;
- any other terms of the subscription rights, including terms, procedures and limitations relating to the exchange and exercise of the subscription rights;
- · the date on which the right to exercise the subscription rights will commence and the date on which the right will expire;
- · the extent to which the subscription rights include an over-subscription privilege with respect to unsubscribed securities; and
- the material terms of any standby underwriting arrangement entered into by us in connection with the subscription rights offering,

DESCRIPTION OF UNITS

We may issue units comprising one or more securities described in this prospectus in any combination. The following description sets forth certain general terms and provisions of the units that we may offer pursuant to this prospectus. The particular terms of the units and the extent, if any, to which the general terms and provisions may apply to the units so offered will be described in the applicable prospectus supplement.

Each unit will be issued so that the holder of the unit also is the holder of each security included in the unit. Thus, the unit will have the rights and obligations of a holder of each included security. Units will be issued pursuant to the terms of a unit agreement, which may provide that the securities included in the unit may not be held or transferred separately at any time or at any time before a specified date. A copy of the forms of the unit agreement and the unit certificate relating to any particular issue of units will be filed with the SEC each time we issue units, and you should read those documents for provisions that may be important to you. For more information on how you can obtain copies of the forms of the unit agreement and the related unit certificate, see "Where You Can Find More Information."

The prospectus supplement relating to any particular issuance of units will describe the terms of those units, including, to the extent applicable, the following:

- the designation and terms of the units and the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- · any provision for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units; and
- whether the units will be issued in fully registered or global form.

GLOBAL SECURITIES

Book-Entry, Delivery and Form

Unless we indicate differently in a prospectus supplement or free writing prospectus, the securities initially will be issued in book-entry form and represented by one or more global securities, or, collectively, global securities. The global securities will be deposited with, or on behalf of, The Depository Trust Company, New York, New York, as depositary, or DTC, and registered in the name of Cede & Co., the nominee of DTC. Unless and until it is exchanged for individual certificates evidencing securities under the limited circumstances described below, a global security may not be transferred, except as a whole by the depositary to its nominee or by the nominee to the depositary, or by the depositary or its nominee to a successor depositary or to a nominee of the successor depositary.

DTC has advised us that it is:

- a limited-purpose trust company organized under the New York Banking Law;
- a "banking organization" within the meaning of the New York Banking Law;
- a member of the Federal Reserve System;
- · a "clearing corporation" within the meaning of the New York Uniform Commercial Code; and
- a "clearing agency" registered pursuant to the provisions of Section 17A of the Exchange Act.

DTC holds securities that its participants deposit with DTC. DTC also facilitates the settlement among its participants of securities transactions, such as transfers and pledges, in deposited securities through electronic computerized book-entry changes in participants' accounts, thereby eliminating the need for physical movement of securities certificates. "Direct participants" in DTC include securities brokers and dealers, including underwriters, banks, trust companies, clearing corporations and other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation, or DTCC. DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others, which we sometimes refer to as indirect participants, that clear through or maintain a custodial relationship with a direct participant, either directly or indirectly. The rules applicable to DTC and its participants are on file with the SEC.

Purchases of securities under the DTC system must be made by or through direct participants, which will receive a credit for the securities on DTC's records. The ownership interest of the actual purchaser of a security, which we sometimes refer to as a beneficial owner, is in turn recorded on the direct and indirect participants' records. Beneficial owners of securities will not receive written confirmation from DTC of their purchases. However, beneficial owners are expected to receive written confirmations providing details of their transactions, as well as periodic statements of their holdings, from the direct or indirect participants through which they purchased securities. Transfers of ownership interests in global securities are to be accomplished by entries made on the books of participants acting on behalf of beneficial owners. Beneficial owners will not receive certificates representing their ownership interests in the global securities, except under the limited circumstances described below.

To facilitate subsequent transfers, all global securities deposited by direct participants with DTC will be registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of securities with DTC and their registration in the name of Cede & Co. or such other nominee will not change the beneficial ownership of the securities. DTC has no knowledge of the actual beneficial owners of the securities. DTC's records reflect only the identity of the direct participants to whose accounts the securities are credited, which may or may not be the beneficial owners. The participants are responsible for keeping account of their holdings on behalf of their customers.

So long as the securities are in book-entry form, you will receive payments and may transfer securities only through the facilities of the depositary and its direct and indirect participants. We will maintain an office or agency in the location specified in the prospectus supplement for the applicable securities, where notices and demands in respect of the securities and the indenture may be delivered to us and where certificated securities may be surrendered for payment, registration of transfer or exchange.

Conveyance of notices and other communications by DTC to direct participants, by direct participants to indirect participants and by direct participants and indirect participants to beneficial owners will be governed by arrangements among them, subject to any legal requirements in effect from time to time.

Redemption notices will be sent to DTC. If less than all of the securities of a particular series are being redeemed, DTC's practice is to determine by lot the amount of the interest of each direct participant in the securities of such series to be redeemed.

Neither DTC nor Cede & Co. (or such other DTC nominee) will consent or vote with respect to the securities. Under its usual procedures, DTC will mail an omnibus proxy to us as soon as possible after the record date. The omnibus proxy assigns the consenting or voting rights of Cede & Co. to those direct participants to whose accounts the securities of such series are credited on the record date, identified in a listing attached to the omnibus proxy.

So long as securities are in book-entry form, we will make payments on those securities to the depositary or its nominee, as the registered owner of such securities, by wire transfer of immediately available funds. If securities are issued in definitive certificated form under the limited circumstances described below, we will have the option of making payments by check mailed to the addresses of the persons entitled to payment or by wire transfer to bank accounts in the United States designated in writing to the applicable trustee or other designated party at least 15 days before the applicable payment date by the persons entitled to payment, unless a shorter period is satisfactory to the applicable trustee or other designated party.

Redemption proceeds, distributions and dividend payments on the securities will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit direct participants' accounts upon DTC's receipt of funds and corresponding detail information from us on the payment date in accordance with their respective holdings shown on DTC records. Payments by participants to beneficial owners will be governed by standing instructions and customary practices, as is the case with

securities held for the account of customers in bearer form or registered in "street name." Those payments will be the responsibility of participants and not of DTC or us, subject to any statutory or regulatory requirements in effect from time to time. Payment of redemption proceeds, distributions and dividend payments to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC, is our responsibility, disbursement of payments to direct participants is the responsibility of DTC, and disbursement of payments to the beneficial owners is the responsibility of direct and indirect participants.

Except under the limited circumstances described below, purchasers of securities will not be entitled to have securities registered in their names and will not receive physical delivery of securities. Accordingly, each beneficial owner must rely on the procedures of DTC and its participants to exercise any rights under the securities and the indenture.

The laws of some jurisdictions may require that some purchasers of securities take physical delivery of securities in definitive form. Those laws may impair the ability to transfer or pledge beneficial interests in securities.

DTC may discontinue providing its services as securities depositary with respect to the securities at any time by giving reasonable notice to us. Under such circumstances, in the event that a successor depositary is not obtained, securities certificates are required to be printed and delivered.

As noted above, beneficial owners of a particular series of securities generally will not receive certificates representing their ownership interests in those securities. However, if:

- DTC notifies us that it is unwilling or unable to continue as a depositary for the global security or securities representing such series of securities or if DTC ceases to be a clearing agency registered under the Exchange Act at a time when it is required to be registered and a successor depositary is not appointed within 90 days of the notification to us or of our becoming aware of DTC's ceasing to be so registered, as the case may be;
- · we determine, in our sole discretion, not to have such securities represented by one or more global securities; or
- an Event of Default has occurred and is continuing with respect to such series of securities

we will prepare and deliver certificates for such securities in exchange for beneficial interests in the global securities. Any beneficial interest in a global security that is exchangeable under the circumstances described in the preceding sentence will be exchangeable for securities in definitive certificated form registered in the names that the depositary directs. It is expected that these directions will be based upon directions received by the depositary from its participants with respect to ownership of beneficial interests in the global securities.

Euroclear and Clearstream

If so provided in the applicable prospectus supplement, you may hold interests in a global security through Clearstream Banking S.A., which we refer to as "Clearstream," or Euroclear Bank S.A./N.V., as operator of the Euroclear System, which we refer to as "Euroclear," either directly if you are a participant in Clearstream or Euroclear or indirectly through organizations which are participants in Clearstream or Euroclear. Clearstream and Euroclear will hold interests on behalf of their respective participants through customers' securities accounts in the names of Clearstream and Euroclear, respectively, on the books of their respective U.S. depositaries, which in turn will hold such interests in customers' securities accounts in such depositaries' names on DTC's books.

Clearstream and Euroclear are securities clearance systems in Europe. Clearstream and Euroclear hold securities for their respective participating organizations and facilitate the clearance and settlement of securities transactions between those participants through electronic book-entry changes in their accounts, thereby eliminating the need for physical movement of certificates.

Payments, deliveries, transfers, exchanges, notices and other matters relating to beneficial interests in global securities owned through Euroclear or Clearstream must comply with the rules and procedures of those systems. Transactions between participants in Euroclear or Clearstream, on one hand, and other participants in DTC, on the other hand, are also subject to DTC's rules and procedures.

Investors will be able to make and receive through Euroclear and Clearstream payments, deliveries, transfers and other transactions involving any beneficial interests in global securities held through those systems only on days when those systems are open for business. Those systems may not be open for business on days when banks, brokers and other institutions are open for business in the United States. Cross-market transfers between participants in DTC, on the one hand, and participants in Euroclear or Clearstream, on the other hand, will be effected through DTC in accordance with the DTC's rules on behalf of Euroclear or Clearstream, as the case may be, by their respective U.S. depositaries; however, such cross-market transactions will require delivery of instructions to Euroclear or Clearstream, as the case may be, by the counterparty in such system in accordance with the rules and procedures and within the established deadlines (European time) of such system. Euroclear or Clearstream, as the case may be, will, if the transaction meets its settlement requirements, deliver instructions to its U.S. depositary to take action to effect final settlement on its behalf by delivering or receiving interests in the global securities through DTC, and making or receiving payment in accordance with normal procedures for same-day fund settlement. Participants in Euroclear or Clearstream may not deliver instructions directly to their respective U.S. depositaries.

Due to time zone differences, the securities accounts of a participant in Euroclear or Clearstream purchasing an interest in a global security from a direct participant in DTC will be credited, and any such crediting will be reported to the relevant participant in Euroclear or Clearstream, during the securities settlement processing day (which must be a business day for Euroclear or Clearstream) immediately following the settlement date of DTC. Cash received in Euroclear or Clearstream as a result of sales of interests in a global security by or through a participant in Euroclear or Clearstream to a direct participant in DTC will be received with value on the settlement date of DTC but will be available in the relevant Euroclear or Clearstream cash account only as of the business day for Euroclear or Clearstream following DTC's settlement date.

Other

The information in this section of this prospectus concerning DTC, Clearstream, Euroclear and their respective book-entry systems has been obtained from sources that we believe to be reliable, but we do not take responsibility for this information. This information has been provided solely as a matter of convenience. The rules and procedures of DTC, Clearstream and Euroclear are solely within the control of those organizations and could change at any time. Neither we nor the trustee nor any agent of ours or of the trustee has any control over those entities and none of us takes any responsibility for their activities. You are urged to contact DTC, Clearstream and Euroclear or their respective participants directly to discuss those matters. In addition, although we expect that DTC, Clearstream and Euroclear will perform the foregoing procedures, none of them is under any obligation to perform or continue to perform such procedures and such procedures may be discontinued at any time. Neither we nor any agent of ours will have any responsibility for the performance or nonperformance by DTC, Clearstream and Euroclear or their respective participants of these or any other rules or procedures governing their respective operations.

SELLING SECURITYHOLDERS

This prospectus also relates to the possible resale by certain of our stockholders, who we refer to in this prospectus as the "selling securityholders," of up to 8,584,258 shares of our common stock that were issued and outstanding, or that are issuable upon exercise of options to acquire common stock that were issued and outstanding, prior to the original date of filing of the registration statement of which this prospectus forms a part. The selling securityholders originally acquired the shares of our common stock included in this prospectus

(1) with respect to certain of the shares of common stock held by Medpace Investors, LLC, certain employees of the Company, through Medpace Investors, LLC, agreed to contribute shares held in Medpace IntermediateCo in exchange for a percentage stake in Medpace Holdings, Inc., and Medpace Investors, LLC acquired options to purchase shares of common stock in a tender offer it conducted in 2019, (2) pursuant to previously issued awards under a compensatory plan or arrangement with us, (3) pursuant to a distribution of shares of common stock in-kind to holders of incentive units in Medpace Investors, LLC which occurred in September 2018 or (4) with respect to certain of the shares of common stock held by August J. Troendle, our President, Chief Executive Officer and Chairman of the Board of Directors, granted prior to our initial public offering.

In connection with our initial public offering, we entered into a registration rights agreement with Mr. Troendle pursuant to which such he has specified rights to require us to register all or any portion of his shares under the Securities Act. These shares are being registered by this registration statement.

The table below sets forth information regarding the beneficial ownership of our common stock by the selling securityholders. The information regarding the selling securityholders' beneficial ownership after the sales made pursuant to this prospectus assumes that all of the common stock subject to sale pursuant to this prospectus will have been sold and that the selling securityholders do not acquire any additional shares. Information in the table below, with respect to beneficial ownership, has been furnished by the selling securityholders.

Information concerning the selling securityholders may change from time to time and any changed information will be set forth in supplements to this prospectus, if and when necessary. The selling securityholders may offer all, some or none of our common stock. We cannot advise you as to whether the selling securityholders will in fact sell any or all of such shares of common stock. In addition, the selling securityholders listed in the table below may have sold, transferred or otherwise disposed of, or may sell, transfer or otherwise dispose of, at any time and from time to time, shares of our common stock in transactions exempt from the registration requirements of the Securities Act, after the date on which they provided the information set forth in the table below.

To our knowledge, each person named in the table has sole voting and investment power with respect to all of the securities shown as beneficially owned by such person, except as otherwise set forth in the notes to the table. The number of securities shown represents the number of securities the person "beneficially owns," as determined by the rules of the SEC. The SEC has defined "beneficial" ownership of a security to mean the possession, directly or indirectly, of voting power and/or investment power. A security holder is also deemed to be, as of any date, the beneficial owner of all securities that such security holder has the right to acquire within 60 days after that date through (1) the exercise of any option, warrant or right, (2) the conversion of a security, (3) the power to revoke a trust, discretionary account or similar arrangement, or (4) the automatic termination of a trust, discretionary account or similar arrangement.

The percentages in the table below reflect beneficial ownership immediately prior to the date of this prospectus and immediately after the resale of all shares subject to resale pursuant to this prospectus as determined in accordance with Rule 13d-3 under the Exchange Act and are based on 36,387,497 shares of our common stock outstanding as of February 21, 2020.

	<u> </u>	Amount and Nature of Beneficial Ownership			
	·			Immediate	
				Resale of Al	
	v 11 . 1	n	Number of Shares	Subject to	
	Immediately		Subject to Resale	Pursuant	
Selling Securityholders	this Pros Shares Owned	Percentage	Pursuant to this Prospectus	Prospec Shares Owned	Percentage
				Silates Owned	
Medpace Investors, LLC(1)	7,980,556	21.9%	7,980,556	_	—%
August J. Troendle(2)	8,584,258	23.6%	8,584,258	_	%

- * Assumes that the selling securityholders will sell all of their common stock subject to resale pursuant to this prospectus. There is no assurance that the selling securityholders will resell all or any of their common stock. After the completion of this offering none of the selling securityholders will hold one percent or more of our common stock assuming that all of the selling securityholders resell all of their common shares subject to resale pursuant to this prospectus.
- (1) Includes 193,308 shares issuable upon the exercise of stock options beneficially owned by Medpace Investors, LLC, or MPI. August J. Troendle, as the sole manager of MPI, has sole voting and investment power with respect to these shares. The principal business address for MPI is c/o Medpace Holdings, Inc. at 5375 Medpace Way, Cincinnati, Ohio 45227.
- (2) Consists of 603,702 shares of common stock directly held by the August J. Troendle Revocable Trust and 7,980,556 shares of common stock directly held by MPI. Mr. Troendle is the sole trustee, sole beneficiary and settlor of the August J. Troendle Revocable Trust and has sole voting and investment power over the shares held by such trust. Mr. Troendle, as the sole manager of MPI, has sole voting and dispositive power with respect to the shares beneficially owned by MPI. Does not include 411,676 shares issuable upon the exercise of stock options issued under the Medpace Holdings, Inc. 2016 Incentive Award Plan and does not include 10,000 shares of common stock beneficially owned by Mr. Troendle's son. These 411,676 shares and 10,000 shares, respectively, are not subject to this registration statement and are not included in the ownership information provided herein. The principal business address for August J. Troendle is c/o Medpace Holdings, Inc. at 5375 Medpace Way, Cincinnati, Ohio 45227.

PLAN OF DISTRIBUTION

We or the selling securityholders may sell the offered securities in and outside the United States:

- · through underwriters or dealers;
- · directly to purchasers;
- in a rights offering;
- in "at the market" offerings, within the meaning of Rule 415(a)(4) of the Securities Act, to or through a market maker or into an existing trading market on an exchange or otherwise;
- · through agents; or
- through a combination of any of these methods.

Any prospectus supplement will include the following information:

- the terms of the offering;
- the names of any underwriters or agents;
- the name or names of any managing underwriter or underwriters;
- the purchase price or initial public offering price of the securities;
- · the net proceeds from the sale of the securities;
- · any delayed delivery arrangements;
- any underwriting discounts, commissions and other items constituting underwriters' compensation;
- any discounts or concessions allowed or reallowed or paid to dealers; and
- · any commissions paid to agents.

Sale through Underwriters or Dealers

If underwriters are used in the sale, the underwriters will acquire the securities for their own account. The underwriters may resell the securities from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. Underwriters may offer securities to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more firms acting as underwriters. Unless we inform you otherwise in the prospectus supplement, the obligations of the underwriters to purchase the securities will be subject to certain conditions, and the underwriters will be obligated to purchase all the offered securities if they purchase any of them. The underwriters may change from time to time any initial public offering price and any discounts or concessions allowed or reallowed or paid to dealers.

If we offer securities in a subscription rights offering to our existing security holders, we may enter into a standby underwriting agreement with dealers, acting as standby underwriters. We may pay the standby underwriters a commitment fee for the securities they commit to purchase on a standby basis. If we do not enter into a standby underwriting agreement, we may retain a dealer-manager to manage a subscription rights offering for us.

During and after an offering through underwriters, the underwriters may purchase and sell the securities in the open market. These transactions may include overallotment and stabilizing transactions and purchases to cover syndicate short positions created in connection with the offering. The underwriters may also impose a penalty bid, which means that selling concessions allowed to syndicate members or other broker-dealers for the offered securities sold for their account may be reclaimed by the syndicate if the offered securities are repurchased by the syndicate in stabilizing or covering transactions. These activities may stabilize, maintain or otherwise affect the market price of the offered securities, which may be higher than the price that might otherwise prevail in the open market. If commenced, the underwriters may discontinue these activities at any time.

Some or all of the securities that we offer though this prospectus may be new issues of securities with no established trading market. Any underwriters to whom we sell our securities for public offering and sale may make a market in those securities, but they will not be obligated to do so and they may discontinue any market making at any time without notice. Accordingly, we cannot assure you of the liquidity of, or continued trading markets for, any securities that we offer.

If dealers are used in the sale of securities, we will sell the securities to them as principals. They may then resell those securities to the public at varying prices determined by the dealers at the time of resale. We will include in the prospectus supplement the names of the dealers and the terms of the transaction.

Direct Sales and Sales through Agents

We may sell the securities directly. In this case, no underwriters or agents would be involved. We may also sell the securities through agents designated from time to time at fixed prices or at varying prices determined at the time of sale. In the prospectus supplement, we will name any agent involved in the offer or sale of the offered securities, and we will describe any commissions payable to the agent. Unless we inform you otherwise in the prospectus supplement, any agent will agree to use its reasonable best efforts to solicit purchases for the period of its appointment.

We may sell the securities directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act with respect to any sale of those securities. We will describe the terms of any sales of these securities in the prospectus supplement.

Remarketing Arrangements

Offered securities may also be offered and sold, if so indicated in the applicable prospectus supplement, in connection with a remarketing upon their purchase, in accordance with a redemption or repayment pursuant to their terms, or otherwise, by one or more remarketing firms, acting as principals for their own accounts or as agents for us. Any remarketing firm will be identified and the terms of its agreements, if any, with us and its compensation will be described in the applicable prospectus supplement.

Delayed Delivery Contracts

If we so indicate in the prospectus supplement, we may authorize agents, underwriters or dealers to solicit offers from certain types of institutions to purchase securities from us at the public offering price under delayed delivery contracts. These contracts would provide for payment and delivery on a specified date in the future. The contracts would be subject only to those conditions described in the prospectus supplement. The prospectus supplement will describe the commission payable for solicitation of those contracts.

General Information

We may have agreements with the agents, dealers, underwriters and remarketing firms to indemnify them against certain civil liabilities, including liabilities under the Securities Act, or to contribute with respect to payments that the agents, dealers, underwriters or remarketing firms may be required to make. Agents, dealers, underwriters and remarketing firms may be customers of, engage in transactions with or perform services for us in the ordinary course of their businesses.

LEGAL MATTERS

Keating Muething & Klekamp PLL will pass upon certain legal matters relating to the issuance and sale of the securities offered hereby on behalf of Medpace Holdings, Inc. Additional legal matters may be passed upon for us, the selling securityholders or any underwriters, dealers or agents, by counsel that we will name in the applicable prospectus supplement.

EXPERTS

The consolidated financial statements incorporated in this Prospectus by reference from Medpace Holdings, Inc. (the "Company") Annual Report on Form 10-K and the effectiveness of Company's internal control over financial reporting have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their reports which are incorporated herein by reference (which reports (1) expresses an unqualified opinion on the consolidated financial statements and includes an explanatory paragraph related to the Company's change in method of accounting for leases in fiscal year 2019 and (2) expresses an unqualified opinion on the effectiveness of internal control over financial reporting). Such financial statements have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following are the estimated expenses of the issuance and distribution of the securities being registered, all of which are payable by us. All of the items below, except for the registration fee, are estimates.

Securities and Exchange Commission registration fee	\$ <u>6,243</u>
Trustee's fees and expenses	*
Transfer agent and registrar fees	*
Printing expenses	*
Accountant's fees and expenses	*
Legal fees and expenses	*
Miscellaneous	*
Total	\$*

^{*} Estimated expenses are presently not known and cannot be estimated.

Item 15. Indemnification of Directors and Officers.

Subsection (a) of Section 145 of the General Corporation Law of the State of Delaware, or the DGCL, empowers a corporation to indemnify any person who was or is a party or who is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the person's conduct was unlawful.

Subsection (b) of Section 145 empowers a corporation to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that the person acted in any of the capacities set forth above, against expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with the defense or settlement of such action or suit if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Section 145 further provides that to the extent a director or officer of a corporation has been successful on the merits or otherwise in the defense of any action, suit or proceeding referred to in subsections (a) and (b) of Section 145, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith; that indemnification provided for by Section 145 shall not be deemed exclusive of any other rights to which the indemnified party may be entitled; and the indemnification provided for by Section 145 shall, unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director, officer, employee

or agent and shall inure to the benefit of such person's heirs, executors and administrators. Section 145 also empowers the corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of his status as such, whether or not the corporation would have the power to indemnify such person against such liabilities under Section 145.

Section 102(b)(7) of the DGCL provides that a corporation's certificate of incorporation may contain a provision eliminating or limiting the personal liability of a director to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, provided that such provision shall not eliminate or limit the liability of a director (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the DGCL, or (iv) for any transaction from which the director derived an improper personal benefit. Our amended and restated certificate of incorporation provides that no director of Medpace Holdings, Inc. shall be personally liable to it or its shareholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability, except to the extent that the DGCL prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

Any underwriting agreement or distribution agreement that the registrant enters into with any underwriters or agents involved in the offering or sale of any securities registered hereby may require such underwriters or dealers to indemnify the registrant, some or all of its directors and officers and its controlling persons, if any, for specified liabilities, which may include liabilities under the Securities Act of 1933, as amended.

Our amended and restated certificate of incorporation and amended and restated bylaws provide indemnification for our directors and officers to the fullest extent permitted by the DGCL. We will indemnify each person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding (other than an action by or in the right of us) by reason of the fact that he or she is or was, or has agreed to become, a director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (all such persons being referred to as an "Indemnitee"), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding and any appeal therefrom, if such Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, and, with respect to any criminal action or proceeding, he or she had no reasonable cause to believe his or her conduct was unlawful. Our amended and restated certificate of incorporation and amended and restated bylaws provide that we will indemnify any Indemnitee who was or is a party to an action or suit by or in the right of us to procure a judgment in our favor by reason of the fact that the Indemnitee is or was, or has agreed to become, a director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise, or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees) and, to the extent permitted by law, amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding, and any appeal therefrom, if the Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, except that no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to us, unless a court determines that, despite such adjudication but in view of all of the circumstances, he or she is entitled to indemnification of such expenses. Notwithstanding the foregoing, to the extent that any Indemnitee has been successful, on the merits or otherwise, he or she will be indemnified by us against all expenses (including attorneys' fees) actually and reasonably incurred in connection therewith. Expenses must be advanced to an Indemnitee under certain circumstances.

In connection with our initial public offering, we entered into separate indemnification agreements with each of our directors and certain officers. Each indemnification agreement provides, among other things, for indemnification to the fullest extent permitted by law and our amended and restated certificate of incorporation and amended and restated bylaws against any and all expenses, judgments, fines, penalties and amounts paid in settlement of any claim. The indemnification agreements provide for the advancement or payment of all expenses to the indemnitee and for the reimbursement to us if it is found that such indemnitee is not entitled to such indemnification under applicable law and our amended and restated certificate of incorporation and amended and restated bylaws.

We maintain a general liability insurance policy that covers certain liabilities of directors and officers of our corporation arising out of claims based on acts or omissions in their capacities as directors or officers.

Item 16. Exhibits.

Tabibis

The following documents are exhibits to the registration statement:

Exhibit <u>Number</u>	Description
1.1*	Form of Underwriting Agreement.
3.1	Amended and Restated Certificate of Incorporation of Medpace Holdings, Inc. (incorporated by reference from the Company's Current Report on Form 8-K filed with the SEC on August 16, 2016) (File No. 001-37856).
3.2	Amended and Restated Bylaws of Medpace Holdings, Inc. (incorporated by reference from the Company's Current Report on Form 8-K filed with the SEC on August 16, 2016) (File No. 001-37856).
4.1	Form of Specimen Certificate Representing Common Stock (incorporated by reference from Exhibit 4.1 of Amendment No. 1 to the Company's Registration Statement on Form S-1, filed with the Securities and Exchange Commission on July 26, 2016 (Registration No. 333-212236)).
4.2	Description of Securities (incorporated by reference from Exhibit 4.1 of the Company's Annual Report on Form 10-K filed with the SEC on February 25, 2020) (File No. 001-37856).
4.3*	Preferred Stock Certificate of Amendment.
4.4*	Form of Warrant Agreement.
4.5*	Form of Warrant Certificate.
4.6*	Form of Depositary Agreement.
4.7*	Form of Depositary Receipt.
4.8*	Form of Subscription Rights Certificate.
4.9*	Form of Unit Agreement.
4.10*	Form of Unit Certificate.
5.1	Opinion of Keating Muething & Klekamp PLL.
23.1	Consent of Independent Registered Public Accounting Firm.
23.2	Consent of Keating Muething & Klekamp PLL (included in Exhibit 5.1).
24.1	Powers of Attorney (incorporated by reference to the signature page hereto)

^{*} To be filed either by amendment or as an exhibit to a report filed under the Securities Exchange Act of 1934, and incorporated herein by reference.

Item 17. Undertakings.

- (a) The undersigned registrant hereby undertakes:
 - (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that the undertakings set forth in paragraphs (1)(i), (1)(ii) and (1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in this registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of this registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
 - (5) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:
 - (A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
 - (B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is a part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the

registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(6) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities:

The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
- (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
- (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in this registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (h) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cincinnati, State of Ohio, on February 25, 2020.

MEDPACE HOLDINGS, INC.

BY: /s/ August J. Troendle

August J. Troendle

President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints August J. Troendle and Jesse J. Geiger, and each of them acting individually, his or her true and lawful attorney-in-fact and agent, each with full power of substitution, for him/her and in his/her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement and to sign any and all registration statements relating to the same offering of securities as this Registration Statement that are filed pursuant to Rule 462(b) promulgated under the Securities Act of 1933, as amended, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission and any other regulatory authority, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof. Pursuant to the requirements of the Securities Act of 1933, this registration statement on Form S-3 has been signed below by the following persons in the capacities indicated as of February 25, 2020.

<u>Signatures</u>	<u>Title</u>
/s/ August J. Troendle August J. Troendle	President, Chief Executive Officer and Chairman of the Board of Directors (Principal Executive Officer)
/s/ Jesse J. Geiger Jesse J. Geiger	Chief Financial Officer, and Chief Operating Officer, Laboratory Operations (Principal Financial and Accounting Officer)
/s/ Brian T. Carley Brian T. Carley	Director
/s/ Robert O. Kraft Robert O. Kraft	Director
/s/ Fred B. Davenport Jr. Fred B. Davenport Jr.	Director
/s/ Cornelius P. McCarthy III	Director
Cornelius P. McCarthy III /s/ Ashley M. Keating Ashley M. Keating	Director
/s/ Thomas C. King Thomas C. King	Director





February 25, 2020

Medpace Holdings, Inc. 5375 Medpace Way Cincinnati, Ohio 45227

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to Medpace Holdings, Inc., a Delaware corporation (the "Company"), in connection with its filing on the date hereof with the Securities and Exchange Commission (the "Commission") of a registration statement on Form S-3 (as amended, the "Registration Statement"), including a base prospectus (the "Base Prospectus"), which provides that it will be supplemented by one or more prospectus supplements (each such prospectus supplement, together with the Base Prospectus, a "Prospectus"), under the Securities Act of 1933, as amended (the "Act"), relating to the registration (a) for issue and sale by the Company of an indeterminate amount or offering price of (i) shares of the Company's common stock, \$0.01 par value per share ("Common Stock"), (ii) shares of one or more series of the Company's preferred stock, \$0.01 par value per share ("Preferred Stock"), (iii) depositary shares ("Depositary Shares"), (iv) warrants ("Warrants"), (v) subscription rights ("Subscription Rights"), and (vi) units ("Units") and (b) of up to 8,584,258 shares of Common Stock to be resold from time to time by certain stockholders of the Company (the "Selling Stockholder Shares, plus any additional Common Stock, Preferred Stock, Depositary Shares, Warrants, Subscription Rights, Units and Selling Stockholder Shares that may be registered pursuant to any subsequent registration statement that the Company may hereafter file with the Commission pursuant to Rule 462(b) under the Act in connection with the offering by the Company contemplated by the Registration Statement, are referred to herein collectively as the "Securities."

This opinion is being furnished in connection with the requirements of Item 601(b)(5) of Regulation S-K under the Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement or related applicable Prospectus, other than as expressly stated herein with respect to the issue of the Securities.

As such counsel, we have examined such matters of fact and questions of law as we have considered appropriate for purposes of this letter. With your consent, we have relied upon certificates and other assurances of officers of the Company and others as to factual matters without having independently verified such factual matters. We are opining herein as to the General Corporation Law of the State of Delaware, and with respect to the opinions set forth in paragraphs 3 through 7 below, the internal laws of the State of New York, and we express no opinion with respect to the applicability thereto, or the effect thereon, of the laws of any other

Keating Muething & Klekamp PLL
Attorneys at Law
One East Fourth Street | Suite 1400 | Cincinnati, Ohio 45202
P: 513.579.6400 | F: 513.579.6457 | kmklaw.com

jurisdiction or, in the case of Delaware, any other laws, or as to any matters of municipal law or the laws of any local agencies within any state.

Subject to the foregoing and the other matters set forth herein, it is our opinion that, as of the date hereof:

- 1. When an issuance of Common Stock has been duly authorized by all necessary corporate action of the Company, upon issuance, delivery and payment therefor in an amount not less than the par value thereof in the manner contemplated by the applicable Prospectus and by such corporate action, and in total amounts and numbers of shares that do not exceed the respective total amounts and numbers of shares (a) available under the Company's Certificate of Incorporation, and (b) authorized by the board of directors in connection with the offering contemplated by the applicable Prospectus, such shares of Common Stock will be validly issued, fully paid and nonassessable. In rendering the foregoing opinion, we have assumed that the Company will comply with all applicable notice requirements regarding uncertificated shares provided in the General Corporation Law of the State of Delaware.
- 2. When a series of Preferred Stock has been duly established in accordance with the terms of the Company's Certificate of Incorporation and authorized by all necessary corporate action of the Company, upon issuance, delivery and payment therefor in an amount not less than the par value thereof in the manner contemplated by the applicable Prospectus and by such corporate action, and in total amounts and numbers of shares that do not exceed the respective total amounts and numbers of shares (a) available under the Company's Certificate of Incorporation, and (b) authorized by the board of directors in connection with the offering contemplated by the applicable Prospectus, such shares of such series of Preferred Stock will be validly issued, fully paid and nonassessable. In rendering the foregoing opinion, we have assumed that the Company will comply with all applicable notice requirements regarding uncertificated shares provided in the General Corporation Law of the State of Delaware.
- 3. When the applicable deposit agreement has been duly authorized, executed and delivered by all necessary corporate action of the Company, and when the specific terms of a particular issuance of Depositary Shares have been duly established in accordance with the terms of the applicable deposit agreement and authorized by all necessary corporate action of the Company, and such Depositary Shares have been duly executed, authenticated, issued and delivered against payment therefor in accordance with the terms of the applicable deposit agreement and in the manner contemplated by the applicable Prospectus and by such corporate action (assuming the underlying securities have been validly issued and deposited with the depositary), such Depositary Shares will be the legally valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.
- 4. When the applicable warrant agreement has been duly authorized, executed and delivered by all necessary corporate action of the Company, and when the specific terms of a particular issuance of Warrants have been duly established in accordance with the terms of the applicable warrant agreement and authorized by all necessary corporate action of the Company, and such Warrants have been duly executed, authenticated, issued and delivered against payment therefor in accordance with the terms of the applicable warrant agreement and in the manner contemplated by the applicable Prospectus and by such corporate action (assuming the securities issuable upon exercise of such Warrants have been duly authorized and reserved for issuance by

all necessary corporate action), such Warrants will be the legally valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

- 5. When the applicable subscription rights agreement has been duly authorized, executed and delivered by all necessary corporate action of the Company, and when the specific terms of a particular issue of Subscription Rights have been duly authorized in accordance with the terms of the applicable subscription rights agreement and authorized by all necessary corporate action of the Company, and such Subscription Rights have been duly executed, authenticated, issued and delivered against payment therefor in accordance with the terms of the applicable subscription rights agreement and in the manner contemplated by the applicable Prospectus and by such corporate action (assuming the securities issuable under such Subscription Rights have been duly authorized and reserved for issuance by all necessary corporate action), such Subscription Rights will be the legally valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.
- 6. When the applicable unit agreement has been duly authorized, executed and delivered by all necessary corporate action of the Company, and when the specific terms of a particular issuance of Units have been duly authorized in accordance with the terms of the applicable unit agreement and authorized by all necessary corporate action of the Company, and such Units have been duly executed, authenticated, issued and delivered against payment therefor in accordance with the terms of the applicable unit agreement and in the manner contemplated by the applicable Prospectus and by such corporate action (assuming the securities issuable upon exercise of such Units have been duly authorized and reserved for issuance by all necessary corporate action), such Units will be the legally valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.
- 7. The Selling Stockholder Shares have been duly authorized by all necessary corporate action of the Company and are validly issued, fully paid and nonassessable.

Our opinions are subject to: (i) the effect of bankruptcy, insolvency, reorganization, preference, fraudulent transfer, moratorium or other similar laws relating to or affecting the rights and remedies of creditors; (ii) the effect of general principles of equity, whether considered in a proceeding in equity or at law (including the possible unavailability of specific performance or injunctive relief), concepts of materiality, reasonableness, good faith and fair dealing, and the discretion of the court before which a proceeding is brought; (iii) the invalidity under certain circumstances under law or court decisions of provisions providing for the indemnification of or contribution to a party with respect to a liability where such indemnification or contribution is contrary to public policy; and (iv) we express no opinion as to (a) any provision for liquidated damages, default interest, late charges, monetary penalties, make-whole premiums or other economic remedies to the extent such provisions are deemed to constitute a penalty, (b) consents to, or restrictions upon, governing law, jurisdiction, venue, arbitration, remedies, or judicial relief, (c) waivers of rights or defenses, (d) any provision requiring the payment of attorneys' fees, where such payment is contrary to law or public policy, (e) the creation, validity, attachment, perfection, or priority of any lien or security interest, (f) advance waivers of claims, defenses, rights granted by law, or notice, opportunity for hearing, evidentiary requirements, statutes of limitation, trial by jury or at law, or other procedural rights, (g) waivers of broadly or vaguely stated rights, (h) provisions for exclusivity, election or

cumulation of rights or remedies, (i) provisions authorizing or validating conclusive or discretionary determinations, (j) grants of setoff rights, (k) proxies, powers and trusts, (l) provisions prohibiting, restricting, or requiring consent to assignment or transfer of any right or property, (m) any provision to the extent it requires that a claim with respect to a security denominated in other than U.S. dollars (or a judgment in respect of such a claim) be converted into U.S. dollars at a rate of exchange at a particular date, to the extent applicable law otherwise provides, and (n) the severability, if invalid, of provisions to the foregoing effect.

With your consent, we have assumed (a) that each of the Depositary Shares, Warrants, Subscription Rights and Units and the deposit agreements, warrant agreements, subscription rights agreements and unit agreements governing such Securities (collectively, the "*Documents*") will be governed by the internal laws of the State of New York, (b) that each of the Documents has been or will be duly authorized, executed and delivered by the parties thereto, (c) that each of the Documents constitutes or will constitute legally valid and binding obligations of the parties thereto other than the Company, enforceable against each of them in accordance with their respective terms, and (d) that the status of each of the Documents as legally valid and binding obligations of the parties will not be affected by any (i) breaches of, or defaults under, agreements or instruments, (ii) violations of statutes, rules, regulations or court or governmental orders, or (iii) failures to obtain required consents, approvals or authorizations from, or to make required registrations, declarations or filings with, governmental authorities.

This opinion is for your benefit in connection with the Registration Statement and may be relied upon by you and by persons entitled to rely upon it pursuant to the applicable provisions of the Act. We consent to your filing this opinion as an exhibit to the Registration Statement and to the reference to our firm contained in the Prospectus under the heading "Legal Matters." We further consent to the incorporation by reference of this letter and consent into any registration statement or post-effective amendment to the Registration Statement filed pursuant to Rule 462(b) under the Act with respect to the Securities. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission thereunder.

Very truly yours,

/s/ Keating Muething & Klekamp PLL

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-3 of our reports dated February 25, 2020, relating to the consolidated financial statements of Medpace Holdings, Inc. (the "Company") (which report expresses an unqualified opinion and includes an explanatory paragraph related to the Company's change in method of accounting for leases in fiscal year 2019) and the effectiveness of the Company's internal control over financial reporting, appearing in the Annual Report on Form 10-K of Medpace Holdings, Inc. for the year ended December 31, 2019. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ DELOITTE & TOUCHE LLP

Cincinnati, Ohio February 25, 2020