Medpace Holdings, Inc.

This free writing prospectus relates only to, and should be read together with, the preliminary prospectus dated November 27, 2017 (the "Preliminary Prospectus") relating to the public offering of the common stock of Medpace Holdings, Inc. (the "Company") by the selling shareholder named in the Preliminary Prospectus. This free writing prospectus updates and supplements the Preliminary Prospectus and the Issuer Free Writing Prospectus dated November 30, 2017 filed with the SEC on November 30, 2017, and should be read together with the Preliminary Prospectus and such Issuer Free Writing Prospectus, including the section entitled "Risk Factors" beginning on page S-14 of the Preliminary Prospectus. Capitalized terms used, but not defined, herein have the meanings set forth in the Preliminary Prospectus.

Common stock offered by the selling shareholder: 4,000,000

Option to purchase additional shares of common stock: The underwriters have the option to purchase an additional 600,000 shares of common stock from

the selling shareholder. The underwriters can exercise this option at any time within 30 days from

the date of this free writing prospectus.

Common stock to be outstanding after this

offering and the share repurchase: 35,429,686 shares

Share repurchase: Subject to the completion of this offering, the Company has agreed to repurchase 2,000,000

shares of its common stock that are subject to this offering from the underwriters at a price per share equal to the price paid by the underwriters to the selling shareholder in this offering. The Company intends to fund the share repurchase with \$60.3 million of borrowings under its Senior Secured Revolving Credit Facility. The closing of the share repurchase is contingent on the closing of this offering. The share repurchase was approved by the disinterested directors on the

Company's board of directors.

Public offering price: \$31.50

Joint book-running managers: Jefferies LLC

Credit Suisse Securities (USA) LLC

Co-managers: Morgan Stanley & Co. LLC

UBS Securities LLC

Conforming changes will be deemed made wherever applicable in the Preliminary Prospectus to reflect the changes described above. Such conforming changes will be reflected in the final prospectus relating to the offering.

A registration statement on Form S-3 (including a prospectus) relating to the securities being sold in the offering to which this free writing prospectus relates has been declared effective by the Securities and Exchange Commission (the "SEC"). The Company has filed a prospectus supplement with the SEC for the offering to which this free writing prospectus relates. Before you invest, you should read the registration statement, prospectus, prospectus supplement and other documents the Company has filed with the SEC for more complete information about the Company and this offering. You may get these documents for free by visiting EDGAR on the SEC website at www.sec.gov. Alternatively, the Company, any underwriter or any dealer participating in the offering will arrange to send you the prospectus supplement if you request it from Jefferies LLC, Attention: Equity Syndicate Prospectus Department, 520 Madison Avenue, 2nd Floor, New York, NY 10022, via telephone: 1-877-821-7388, or via email: Prospectus_Department@Jefferies.com; or Credit Suisse Securities (USA) LLC, Attention: Prospectus Department, One Madison Avenue, New York, NY 10010, via telephone: 1-800-221-1037, or via email: newyork.prospectus@credit-suisse.com.