

NORTHSTAR HEALTHCARE INCOME, INC.
SUPPLEMENT NO. 12 DATED SEPTEMBER 14, 2015
TO THE PROSPECTUS DATED FEBRUARY 6, 2015

This Supplement No. 12 supplements, and should be read in conjunction with, our prospectus dated February 6, 2015, as supplemented by Supplement No. 11 dated August 19, 2015. Defined terms used in this Supplement No. 12 shall have the meaning given to them in the prospectus unless the context otherwise requires. The purpose of this Supplement No. 12 is to disclose:

- the status of our current public offering; and
- the entry into a purchase agreement.

Status of Our Current Public Offering

Following the completion of our \$1.1 billion initial public offering of common stock, we commenced our follow-on public offering of \$700.0 million in shares of common stock on February 6, 2015, of which up to \$500.0 million in shares are being offered pursuant to our primary offering and up to \$200.0 million in shares are being offered pursuant to our distribution reinvestment plan, or DRP. We refer to our primary offering and our DRP collectively as our offering.

As of September 11, 2015, we received and accepted subscriptions in our offering for 30.4 million shares, or \$307.3 million, including 0.28 million shares, or \$2.6 million, sold to NorthStar Realty Finance Corp. As of September 11, 2015, 39.3 million shares remain available for sale pursuant to our offering, including shares offered pursuant to our DRP that may be reallocated to our primary offering. Our primary offering is expected to terminate during the fourth quarter of 2015. However, our board of directors may determine to terminate our primary offering at any time.

Entry into a Purchase Agreement

On September 11, 2015, we, through Trilogy Real Estate Investment Trust, or the purchaser, a wholly-owned subsidiary of a joint venture in which we indirectly hold a 30% ownership interest, or the joint venture, entered into an equity purchase agreement, or the purchase agreement, with Trilogy Investors, LLC, or Trilogy, Trilogy Holdings, LP, Trilogy Holdings LLC, Trilogy Holdings Corporation, and the other sellers party thereto, or collectively, the sellers, all of which are unaffiliated with us, pursuant to which the purchaser proposes to acquire approximately 96% of the outstanding equity interests of Trilogy, or the acquisition, for a purchase price of \$1.125 billion, subject to certain adjustments set forth therein. Pursuant to the purchase agreement, at the closing of the acquisition, certain members of Trilogy's management will retain a portion of the outstanding equity interests of Trilogy currently held by such persons, representing in the aggregate approximately 4% of the outstanding equity interests of Trilogy after the closing of the acquisition. Trilogy currently owns and/or operates 96 facilities, predominantly structured as integrated senior healthcare campuses offering a range of care, with over 10,000 beds across Indiana, Ohio, Kentucky and Michigan, as well as certain ancillary services businesses.

The purchase agreement contemplates that Trilogy will be restructured such that, at the closing of the acquisition, it will be in a structure permitted by the REIT Investment Diversification and Empowerment Act of 2007, which is commonly referred to as a "RIDEA" structure. At the closing of the acquisition, Trilogy's facilities and ancillary services businesses will be managed by an eligible independent contractor owned by certain members of Trilogy's current management, or the EIK, pursuant to management agreements with 20-year terms, subject to certain potential extension options in favor of Trilogy.

Pursuant to the purchase agreement, the closing of the acquisition is subject to customary conditions, including but not limited to (i) the absence of any change, effect, event, occurrence, circumstance, state of facts or development from the

date of the purchase agreement until the closing of the acquisition that has had or would reasonably be expected to have a material adverse effect, (ii) the receipt of certain governmental approvals, lender and other third party consents, (iii) through the closing of the acquisition, the continued and full-time employment by Trilogy of the individual designated to serve as the chief executive officer of the EIK and (iv) no event of default under any loans insured by the U.S. Department of Housing and Urban Development secured by certain Trilogy facilities. Pursuant to the terms of the purchase agreement, the acquisition must be completed prior to June 30, 2016, or the outside date, although there can be no assurance that the acquisition will be completed by the outside date, or at all.

Each party to the purchase agreement has made customary representations and warranties in the purchase agreement. Each party has also made and entered into certain customary covenants and agreements in the purchase agreement, including, without limitation, covenants regarding the conduct of the business of Trilogy prior to the closing of the acquisition. Each party to the purchase agreement has also agreed to customary indemnification obligations in respect of such party's representations, warranties and covenants contained in the purchase agreement, subject to specified limitations on the amount of indemnifiable damages and the survival period.

The purchase agreement may be terminated, among other reasons, upon mutual written consent of the parties thereto, or by either party (i) if a law, rule, regulation or other restriction or requirement of any governmental entity shall have been enacted, entered into or promulgated, or any governmental entity shall have issued a final and non-appealable order, decree or ruling, in each case, permanently restraining, enjoining or otherwise prohibiting the transactions contemplated by the purchase agreement, (ii) in the event of an uncured breach by the other party that results in a failure to satisfy any of the closing conditions described above, subject to customary cure provisions or (iii) if the acquisition is not consummated by the outside date. If Trilogy terminates the purchase agreement due to certain uncured and material breaches by the purchaser or because the purchaser fails to consummate the acquisition when required under the purchase agreement, the purchaser will be required to pay Trilogy a termination fee of \$45.0 million.

In connection with the acquisition, we, through NorthStar Healthcare Income Operating Partnership, LP, our operating partnership, entered into (i) an equity commitment letter, dated September 11, 2015, or the ECL, with the purchaser, pursuant to which we agreed to invest, directly or indirectly, up to \$194.1 million, in exchange for equity in the purchaser, solely for the purpose of funding 30% of the amount payable by the purchaser to the sellers pursuant to the purchase agreement and related costs and expenses, and (ii) a limited guarantee, dated as of September 11, 2015, or the limited guarantee, in favor of Trilogy pursuant to which we agreed to guarantee 30% of the purchaser's obligations, the guaranteed obligations, under the purchase agreement with respect to, among other items, the termination fee and certain indemnification and expense reimbursement obligations relating to the purchaser's obtaining sufficient debt financing to complete the acquisition; provided that our maximum liability under the limited guarantee is limited to \$13.5 million and provided further that we will not be liable for amounts in excess of 30% of the guaranteed obligations.

The joint venture through which we will hold our interest in Trilogy was created concurrently with the purchaser's entry into the purchase agreement when we, through a wholly-owned subsidiary of our operating partnership, and Griffin-American Healthcare REIT III, Inc. through a wholly-owned subsidiary of Griffin-American Healthcare REIT III Holdings, LP, its operating partnership, or collectively, GAHR, entered into a limited liability company agreement of the joint venture entity, Trilogy REIT Holdings, LLC, or the JV agreement. We are the indirect owner of a 30% interest in the joint venture. GAHR will serve as the manager of the joint venture and is the indirect owner of a 70% interest in the joint venture. The joint venture is the holder of all of the common shares of the purchaser and serves as the purchaser's sole trustee. The JV agreement contemplates that the purchaser intends to qualify and remain qualified as a real estate investment trust as defined in Section 856 of the Internal Revenue Code of 1986, as amended.

The JV agreement governs the relationship among the parties thereto with respect to the purchase agreement and matters relating thereto, and with respect to the oversight and operation of Trilogy's business following the closing of the acquisition. The JV agreement provides that GAHR, as the manager of the joint venture, is generally responsible for the day-to-day affairs of the joint venture, subject to certain limitations or exceptions therein, including our right to consent to certain significant decisions. The JV agreement also contains provisions relating to GAHR's and our obligations and rights with

respect to funding the joint venture, and customary forced sale and other liquidity rights. Distributions of capital or other proceeds generally will be made pro rata in proportion to each member's respective ownership interest in the joint venture. GAHR is sponsored by American Healthcare Investors, LLC, an entity in which our sponsor and vice chairman own an approximate 43% interest and 12% interest, respectively.

We and GAHR also entered into a senior secured revolving credit facility financing commitment letter, or the senior facility letter, pursuant to which KeyBank National Association, or KeyBank, has agreed to provide, subject to the terms and conditions of the senior facility letter, a \$345.0 million revolving credit facility to certain subsidiaries of the purchaser. KeyBank's obligation to make the initial funding under the senior facility letter is subject to a number of conditions precedent, some of which must be completed by December 31, 2015 and others of which must be completed by the outside date. In addition, as of July 31, 2015, Trilogy had approximately \$520.4 million of debt outstanding, excluding capital leases, of which approximately \$205.1 million is expected to be assumed by the purchaser in connection with the acquisition and the balance of \$315.3 million is to be repaid. Trilogy is expected to incur additional debt in conjunction with certain on-going development projects which will either be assumed or repaid by the purchaser at the closing of the acquisition.