ADCARE HEALTH SYSTEMS INC Form 424B5 March 27, 2012

Use these links to rapidly review the document TABLE OF CONTENTS

Table of Contents

The information in this preliminary prospectus supplement and the accompanying prospectus is not complete and may be changed. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities and are not soliciting an offer to buy these securities in any state where the offer or sale thereof is not permitted.

Filed Pursuant to Rule 424(b)(5) Registration No: 333-166488

SUBJECT TO COMPLETION, DATED MARCH 26, 2012

PROSPECTUS SUPPLEMENT (To Prospectus Dated June 27, 2011)

ADCARE HEALTH SYSTEMS, INC.

Shares

Common Stock

\$ per share

Pursuant to this prospectus supplement and the accompanying prospectus, we are offering for sale share par value per share.

shares of our common stock, no

Our common stock is listed on the NYSE Amex Equities under the symbol "ADK." The last reported sale price of our common stock on March 23, 2012 was \$4.00 per share.

Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page S-3 of this prospectus supplement and "Item IA. Risk Factors" of our Annual Report on Form 10-K for the year ended December 31, 2011, which is incorporated by reference into this prospectus supplement and the accompanying prospectus in its entirety. You should carefully read this prospectus supplement and the accompanying prospectus, together with all documents incorporated by reference, before you invest in our common stock.

Per Share

Total

| Public offering price | \$ \$ |
|---|----------|
| Underwriting Discounts and Commissions(1) | \$ \$ |
| Proceeds, before expenses to us(1) | \$ \$ |

(1)

See "Underwriting" beginning on page S-7 of this prospectus supplement for a description of the compensation payable to the underwriters.

Delivery of the shares offered hereby is expected on or about March , 2012. The underwriters may also purchase from us up to an additional shares of our common stock at the public offering price per share, less the underwriting discounts and commissions, to cover over-allotments, if any, within 45 days of the date of this prospectus supplement.

The aggregate market value of our outstanding common stock held by non-affiliates is \$41,645,570, based on 12,202,042 shares of common stock outstanding on March 16, 2012, of which 10,282,857 shares were held by non-affiliates, and a per share price of \$4.05, the closing price of our common stock on March 16, 2012. We have not offered any securities pursuant to General Instruction I.B.6. of Form S-3 during the prior 12 calendar month period that ends on, and includes, the date of this prospectus supplement other than those included in this prospectus supplement.

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

Noble Financial Capital Markets

The date of this prospectus supplement is March $\,$, 2012

Table of Contents

TABLE OF CONTENTS

Prospectus Supplement

| | Page | |
|---|--|--|
| About This Prospectus Supplement | <u>S-ii</u> | |
| Prospectus Supplement Summary | <u>S-1</u> | |
| The Offering | <u>S-2</u> | |
| Risk Factors | <u>S-3</u> | |
| Special Note Regarding Forward-Looking Statements | S-2 S-3 S-4 S-5 S-5 S-6 S-6 S-7 | |
| <u>Use of Proceeds</u> | <u>S-5</u> | |
| <u>Dilution</u> | <u>S-5</u> | |
| <u>Dividend Policy</u> | <u>S-6</u> | |
| <u>Description of Common Stock</u> | <u>S-6</u> | |
| Underwriting | <u>\$-7</u> | |
| Legal Matters | <u>S-9</u> <u>S-9</u> <u>S-9</u> | |
| Experts | <u>\$-9</u> | |
| Where You Can Find More Information | <u>\$-9</u> | |
| Information Incorporated by Reference | <u>S-9</u> | |
| Prospectus | | |
| 1 Tospectus | | |
| • | Page | |
| Prospectus Summary | , | |
| Prospectus Summary Risk Factors | , | |
| Prospectus Summary Risk Factors Special Note Regarding Forward-Looking Statements | , | |
| Prospectus Summary Risk Factors Special Note Regarding Forward-Looking Statements Use of Proceeds | , | |
| Prospectus Summary Risk Factors Special Note Regarding Forward-Looking Statements Use of Proceeds Description of Capital Stock | , | |
| Prospectus Summary Risk Factors Special Note Regarding Forward-Looking Statements Use of Proceeds Description of Capital Stock Plan of Distribution | , | |
| Prospectus Summary Risk Factors Special Note Regarding Forward-Looking Statements Use of Proceeds Description of Capital Stock Plan of Distribution Legal Matters | , | |
| Prospectus Summary Risk Factors Special Note Regarding Forward-Looking Statements Use of Proceeds Description of Capital Stock Plan of Distribution Legal Matters Experts | , | |
| Prospectus Summary Risk Factors Special Note Regarding Forward-Looking Statements Use of Proceeds Description of Capital Stock Plan of Distribution Legal Matters Experts Incorporation of Certain Information by Reference | , | |
| Prospectus Summary Risk Factors Special Note Regarding Forward-Looking Statements Use of Proceeds Description of Capital Stock Plan of Distribution Legal Matters Experts Incorporation of Certain Information by Reference Where You Can Find More Information | , | |
| Prospectus Summary Risk Factors Special Note Regarding Forward-Looking Statements Use of Proceeds Description of Capital Stock Plan of Distribution Legal Matters Experts Incorporation of Certain Information by Reference | 1 3 10 10 11 12 14 14 14 15 15 | |
| Prospectus Summary Risk Factors Special Note Regarding Forward-Looking Statements Use of Proceeds Description of Capital Stock Plan of Distribution Legal Matters Experts Incorporation of Certain Information by Reference Where You Can Find More Information | , | |

Table of Contents

ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus are part of a "shelf" registration statement on Form S-3 (File No. 333-166488) that we filed with the U.S. Securities and Exchange Commission (the "SEC") using a "shelf" registration process. This prospectus supplement describes the specific terms of this offering. The accompanying prospectus, including the documents incorporated by reference, provides more general information.

We urge you to carefully read this prospectus supplement, the accompanying prospectus and the documents incorporated herein and therein, before investing in our common stock being offered hereby and thereby. These documents contain information you should consider when making your investment decision.

You should rely only on the information contained in or incorporated by reference into this prospectus supplement and the accompanying prospectus. We have not authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus supplement may add, update or change information contained in the accompanying prospectus. To the extent any information in this prospectus supplement is inconsistent with the accompanying prospectus, you should rely on the information in this prospectus supplement. The information in this prospectus supplement will be deemed to modify or supersede information in the accompanying prospectus and the documents incorporated by reference therein, except for those documents incorporated by reference therein which we file with the SEC after the date hereof.

You should not assume that the information contained or incorporated by reference into this prospectus supplement and the accompanying prospectus is accurate on any date subsequent to the date set forth on the front cover of this prospectus supplement and the accompanying prospectus or on any date subsequent to the date of the document incorporated by reference, as applicable. Our business, financial condition, results of operations and prospects may have changed since those dates.

We are offering to sell, and seeking offers to buy, our common stock as described in this prospectus supplement and the accompanying prospectus only in jurisdictions where offers and sales are permitted. The distribution of this prospectus supplement and the accompanying prospectus and the offering of our common stock in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus supplement must inform themselves about, and observe any restrictions relating to, the offering of our common stock and the distribution of this prospectus supplement and the accompanying prospectus outside the United States. This prospectus supplement and the accompanying prospectus do not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, our common stock offered by this prospectus supplement and the accompanying prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

We are not making any representation to you regarding the legality of an investment in our common stock by you under applicable law. You should consult with your own legal advisors as to the legal, tax, business, financial and related aspect of a purchase of our common stock.

In this prospectus supplement, unless stated otherwise or the context otherwise requires, the terms "AdCare," the "Company," "we," "us" and "our" refer to AdCare Health Systems, Inc. and its subsidiaries.

Table of Contents

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights selected information about us. This information is not complete and does not contain all the information you should consider before investing in our common stock. You should carefully read this entire prospectus supplement and the entire accompanying prospectus, including "Risk Factors" beginning on page S-3 of this prospectus supplement and the financial statements and the other information incorporated by reference into this prospectus supplement and the accompanying prospectus, before making an investment decision.

Our Company

We are an owner and manager of retirement communities, assisted living facilities and skilled nursing facilities. We deliver skilled nursing and assisted living services through wholly owned separate operating subsidiaries. As of December 31, 2011, we operated 42 facilities, comprised of 33 skilled nursing centers, eight assisted living residences and one independent living/senior housing facility, totaling approximately 3,700 beds/units in operation. Our facilities are located in Arkansas, Alabama, Georgia, Missouri, North Carolina, Ohio and Oklahoma.

We have an ownership interest in twenty of the facilities we operate, consisting of 100% ownership of thirteen skilled nursing facilities and seven assisted living facilities. The assisted living facilities that we own operate under the name Hearth & Home, with the tag line "Home is where the hearth is." In addition, we lease twelve of the skilled nursing facilities we operate. We also manage three skilled nursing facilities and one independent living facility for third parties. Furthermore, we are the primary beneficiary in two variable interest entities that own five skilled nursing facilities and one assisted living facility. AdCare and Hearth & Home are our registered trademarks.

We are organized into three main segments: skilled nursing facilities ("SNF"), assisted living facilities ("ALF") and Corporate & Other ("Corporate & Other"). The SNF and ALF segments provide services to individuals needing long-term care in nursing home or assisted living settings and management of those facilities. The Management/Corporate segment engages in the management of facilities and provides accounting and informational technology services.

Recent Developments

As previously disclosed on our Current Report on Form 8-K filed on January 5, 2012, one of our subsidiaries entered into a purchase agreement on December 29, 2012 with certain sellers to acquire certain land, buildings, improvements, furniture, fixtures, operating agreements and equipment comprising: (i) Little Rock Health & Rehab, a 157-bed skilled nursing facility located in Little Rock, Arkansas; (ii) Northridge Healthcare and Rehabilitation Center, a 140-bed skilled nursing facility located in North Little Rock, Arkansas; and (iii) Woodland Hills Healthcare and Rehabilitation, a 140-bed skilled nursing facility located in Little Rock, Arkansas (collectively, the "Arkansas Facilities"), for a purchase price of approximately \$27.3 million, subject to the terms and conditions of such purchase agreement. We expect to close this acquisition effective as of April 1, 2012 and, in connection therewith, to incur: (a) indebtedness of approximately \$22 million secured by a first mortgage on the Arkansas Facilities; and (b) up to an additional \$5.0 million of indebtedness. We make no assurances that we will close this acquisition by such date, if at all, or that, if we do close, the financing for this acquisition described above will not change.

Corporate Information

Our principal executive offices are located at 5057 Troy Road, Springfield, Ohio 45502, and our telephone number is (937) 964-8974. We maintain a website at www.adcarehealth.com. This reference to our website is an inactive textual reference only and is not a hyperlink. The contents of our website are not part of this prospectus supplement, and you should not consider the contents of our website in making an investment decision with respect to our common stock.

Table of Contents

THE OFFERING

The following summary is qualified in its entirety by reference to the more detailed information appearing elsewhere in this prospectus supplement and the accompanying prospectus. For more information concerning our common stock, see "Description of Common Stock" beginning on page S-6 of this prospectus supplement and "Description of Capital Stock" beginning on page 11 of the accompanying prospectus.

Issuer AdCare Health Systems, Inc.

Common stock offered by us

Common stock to be outstanding after this

offering

Use of proceedsWe intend to use the net proceeds from this offering for working capital and other general

shares

shares

corporate purposes. See "Use of Proceeds" beginning on page S-5 of this prospectus

supplement.

Risk factors Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning

on page S-3 of this prospectus supplement and the other information included in and incorporated by reference into this prospectus supplement and the accompanying prospectus for a discussion of risk factors you should carefully consider before deciding to invest in our

common stock.

NYSE Amex Equities symbol ADK

The information above is based on 12,192,669 shares of our common stock outstanding as of December 31, 2011. The information above also excludes, as of that date, the following:

575,277 shares of our common stock issuable upon the exercise of outstanding stock options as of December 31, 2011, at a weighted average exercise price of \$3.90 per share;

778,589 shares of our common stock reserved as of December 31, 2011 for future issuance under our equity incentive plans;

2,879,879 shares of our common stock issuable upon the exercise of warrants outstanding as of December 31, 2011, at a weighted average exercise price of \$3.40 per share;

2,941,776 shares of our common stock issuable upon conversion of our 10% Subordinated Convertible Notes due 2013; and

893,233 shares of our common stock issuable upon the conversion of our 10% Subordinated Convertible Notes due 2014.

Unless otherwise indicated, this prospectus supplement reflects and assumes no exercise by the underwriters of the over-allotment option described under "Underwriting."

Table of Contents

RISK FACTORS

An investment in our securities involves a high degree of risk. You should consider carefully the risks described below and in "Risk Factors" contained in our Annual Report on Form 10-K for the year ended December 31, 2011, as filed with the SEC on March 19, 2012, which is incorporated herein by reference in its entirety, as well as any amendment or update thereto reflected in our subsequent filings with the SEC. If any of these risks actually occurs, our business, operating results, prospects or financial condition could be materially and adversely affected. This could cause the trading price of our common stock to decline and you may lose part or all of your investment. Moreover, the risks described are not the only ones that we face. Additional risks not presently known to us or that we currently deem immaterial also may adversely affect our business, operating results, prospects or financial condition.

Additional Risks Related to this Offering

The price of our common stock may be subject to volatility.

The market price of our common stock has been, and we expect it to continue to be, subject to significant volatility in response to various factors, many of which are beyond our control, including:

variations in our operating results;

changes in the general economy, and more specifically in the economies in which we operate;

the departure of any of our key executive officers and directors;

the level and quality of securities analysts' coverage for our common stock;

announcements by us or our competition of significant acquisitions, strategic partnerships or other transactions; and changes in federal, state, and local health-care regulations to which we are subject.

Management will have immediate and broad discretion as to the use of the proceeds from this offering and may invest or spend the proceeds of this offering in ways in which you may not agree and in ways that may not yield returns to shareholders.

We will retain broad discretion over the use of proceeds from this offering. We intend to use the net proceeds from this offering for working capital and other general corporate purposes. Our shareholders may not agree with the manner in which our management chooses to allocate and spend the net proceeds. Moreover, it is possible that the net proceeds may be used in a way that does not improve our operating results or enhance the value of our common stock.

Sales of a significant number of shares of our common stock in the public markets, or the perception that such sales could occur, could depress the market price of our common stock and impair our ability to raise capital.

Sales of a substantial number of shares of our common stock or other equity-related securities in the public markets, including the issuance of our common stock upon exercise of our options or warrants or conversion of our subordinated convertible notes, could depress the market price of our common stock. Such sales also may impair our ability to raise capital through the sale of additional equity securities in the future at a time and price that our management deems acceptable, if at all.

You will experience immediate and substantial dilution as a result of this offering and may experience dilution in the future.

After giving effect to the sale by us of shares of our common stock offered by us hereby at a price of \$ per share, and after deducting the underwriting discounts and commissions and the

Table of Contents

other estimated offering expenses payable by us, you can expect an immediate dilution of \$ per share, or %, at the public offering price. In addition, in the past we issued options and warrants to acquire shares of our common stock and subordinated convertible notes convertible into shares of our common stock. To the extent these options, warrants and subordinated convertible notes are ultimately exercised or converted, as applicable, new options or other equity awards are issued under our equity incentive plans, or we otherwise issue additional shares of our common stock in the future, there will further dilution to the purchasers. See "Dilution" beginning on page S-5 of this prospectus supplement.

We do not anticipate declaring any cash dividends on our common stock.

We have never declared or paid cash dividends with respect to our common stock. We currently intend to retain any future earnings to fund the operation and growth of our business. We do not anticipate paying cash dividends on our common stock in the foreseeable future.

Takeover defense provisions may adversely affect the market price of our common stock.

Various provisions of Ohio corporation law and of our corporate governance documents may inhibit changes in control not approved by our Board of Directors and may have the effect of depriving our investors of an opportunity to receive a premium over the prevailing market price of our common stock in the event of an attempted hostile takeover. In addition, the existence of these provisions may adversely affect the market price of our common stock. These provisions include:

a requirement that special meetings of stockholders be called by our Board of Directors, the Chairman, the President, or the holders of shares with voting power of at least 25%;

staggered terms among our directors with three classes of directors and only one class to be elected each year;

advance notice requirements for stockholder proposals and nominations; and

availability of "blank check" preferred stock.

SPECIAL NOTE REGARDING FORWARD LOOKING STATEMENTS

This prospectus supplement and the information incorporated by reference into this prospectus supplement include "forward-looking statements" within the meaning of U.S. securities law. These statements are based on current expectations, estimates, forecasts and projections about the industry in which we operate and the beliefs and assumptions of our management, and as such are inherently uncertain. Words such as "expects," "anticipates," "targets," "goals," "projects," "intends" "plans," "believes," "seeks," "estimates," "continues" and "may" and variations of such words and similar expressions are intended to identify such forward-looking statements. These forward-looking statements, which are subject to risks, uncertainties and assumptions about us, may include projections of our future financial performance, which in some cases may be based on our growth strategies and anticipated trends in our business. These statements are only predictions based at the time they are made on our expectations and projections about future events. There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from those expressed or implied by the forward-looking statements. In particular, you should consider the risks outlined in "Risk Factors" beginning on page S-3 of this prospectus supplement and the risk factors and cautionary statements described in the other documents we file from time to time with the SEC, including under "Item 1A. Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2011. We undertake no obligation to revise or update any forward-looking statements, except to the extent required by law.

Table of Contents

USE OF PROCEEDS

We estimate that the net proceeds to us from this offering will be up to approximately \$\), or approximately \$\) if the underwriters exercise in full their over-allotment option to purchase additional shares of common stock, after deducting underwriter discounts and commissions and the estimated offering expenses payable by us.

We intend to use the net proceeds from this offering for working capital and other general corporate purposes. We cannot specify with certainty all of the particular uses of the proceeds from this offering or the timing and amount of actual expenditures. Accordingly, we will retain broad discretion over the use of such proceeds. Pending the use of the net proceeds from this offering as described above, we intend to invest the net proceeds in short-term, interest-bearing, investment-grade securities.

DILUTION

This offering will result in a decrease in the net tangible book value per share of our common stock. Our net tangible book value as of December 31, 2011 was \$4,938,338, or \$0.41 per share of our common stock. Net tangible book value per share represents our total tangible assets (which excludes goodwill and other intangible assets), less our total liabilities, divided by the aggregate number of shares of our common stock outstanding as of December 31, 2011.

After giving effect to the sale of shares of our common stock offered by us hereby at a price of \$ per share, and after deducting the underwriting discounts and commissions and the other estimated offering expenses payable by us, our as adjusted net tangible book value as of December 31, 2011 would have been approximately \$, or \$ per share of our common stock. This amount represents an immediate decrease in net tangible book value of \$ per share of our common stock as a result of this offering. The following table illustrates this decrease in our net tangible book value per share of our common stock:

| Offering price per share | \$ |
|--|---------|
| Net tangible book value per share as of December 31, 2011 | \$ 0.41 |
| Decrease per share attributable to investors purchasing in this offering | \$ |
| As adjusted net tangible book value per share after this offering | \$ |

The above table is based on 12,192,669 shares of our common stock outstanding as of December 31, 2011 (as adjusted for common stock to be issued in this offering) and excludes, as of that date:

575,277 shares of our common stock issuable upon the exercise of outstanding stock options as of December 31, 2011, at a weighted average exercise price of \$3.90 per share;

778,589 shares of our common stock reserved as of December 31, 2011 for future issuance under our equity incentive plans;

2,879,879 shares of our common stock issuable upon the exercise of warrants outstanding as of December 31, 2011, at a weighted average exercise price of \$3.40 per share;

2,941,776 shares of our common stock issuable upon conversion of our 10% Subordinated Convertible Notes due 2013; and

893,233 shares of our common stock issuable upon the conversion of our 10% Subordinated Convertible Notes due 2014.

If the underwriters exercise in full the over-allotment option to purchase shares of common stock offered in this offering at the public offering price of \$ per share, the as adjusted net tangible book value after this offering would be \$ per share, representing an immediate dilution in

Table of Contents

net tangible book value of \$ per share to investors purchasing our common stock in this offering at the public offering price.

To the extent that any outstanding options or warrants are exercised, new options or other equity awards are issued under our equity compensation plan or otherwise, any of our subordinated convertible notes are converted into shares of our common stock, or we otherwise issue additional shares of our common stock in the future, there will be further dilution to the purchasers.

DIVIDEND POLICY

We have never declared or paid any cash dividends with respect to our common stock. Our ability to pay dividends will depend upon our future earnings and net worth. We are restricted by Ohio law from paying dividends on any of our common stock while insolvent or if such payment would result in a reduction of our stated capital below the required amount. We currently intend to retain any future earnings to fund the operation and growth of our business. We do not anticipate paying cash dividends on our common stock in the foreseeable future.

DESCRIPTION OF COMMON STOCK

A description of our common stock is set forth under "Description of Capital Stock" beginning on page 11 of the accompanying prospectus. As of March 14, 2012, we were authorized to issue 29,000,000 shares of our common stock, no par value per share, of which 12,202,042 shares were outstanding.

S-6

Table of Contents

UNDERWRITING

The underwriters named below have severally agreed, subject to the terms and conditions set forth in the underwriting agreement by and between us and Noble Financial Capital Markets, as representative of the underwriters, to purchase from us the respective number of shares of common stock set forth opposite each underwriter's name in the table below. Noble Financial Capital Markets is acting as managing underwriter for this offering.

| Underwriter | Number of Shares |
|---------------------------------|------------------|
| Noble Financial Capital Markets | |
| Total | |

This offering will be underwritten on a firm commitment basis. In the underwriting agreement, the underwriters have agreed, subject to the terms and conditions set forth therein, to purchase the shares of common stock being sold pursuant to this prospectus supplement at a price per share equal to the public offering price less the underwriting discount specified on the cover page of this prospectus supplement. According to the terms of the underwriting agreement, the underwriters either will purchase all of the shares or none of them. In the event of default by any underwriter, in certain circumstances, the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated.

The underwriters have an option to buy up to additional shares of common stock from us to cover sales of shares by the underwriters which exceed the number of shares specified in the table above. The underwriters may exercise this option at any time and from time to time during the 45-day period from the date of this prospectus supplement. If any additional shares of common stock are purchased, the underwriters will offer the additional shares of common stock on the same terms as those on which the shares are being offered.

The underwriting agreement provides that the obligations of the underwriters are subject to certain conditions precedent, including our closing of a debt financing with a minimum of \$3 million in net proceeds on terms and conditions satisfactory to the managing underwriter in its sole discretion, as well as the absence of any material adverse change in our business and the receipt of customary legal opinions, letters and certificates. We have also agreed that for a period of sixty days from the initial closing date of this offering, we will not issue any additional equity securities without the prior consent of the managing underwriter, subject to certain exceptions as specified in the underwriting agreement.

The representative of the underwriters has advised us that the underwriters propose to offer our common stock to the public initially at the public offering price set forth on the cover page of this prospectus supplement. The underwriters will offer the shares subject to prior sale and subject to receipt and acceptance of the shares by the underwriters. The underwriters may reject any order to purchase shares in whole or in part. The underwriters expect that we will deliver the shares to the underwriters through the facilities of The Depository Trust Company in New York, New York on or about March , 2012. At that time, the underwriters will pay us for the shares in immediately available funds. After commencement of the public offering, the representatives may change the public offering price and other selling terms.

The following table summarizes the compensation to be paid by us to the underwriters.

| | Per Share | Total |
|--|-----------|-------|
| Public offering price | \$ | \$ |
| Underwriting discounts and commissions | \$ | \$ |
| Proceeds before expenses | \$ | \$ |
| | | S-7 |

Table of Contents

The expenses of the offering, not including the underwriting discounts and commissions, payable by us are estimated to be \$, which includes a \$50,000 nonaccountable expense reimbursement that we have agreed to reimburse the underwriters for certain fees and legal expenses incurred by them in connection with this offering.

We have agreed to indemnify the underwriters and their controlling persons against certain liabilities for misstatements in the registration statement of which this prospectus supplement forms a part, including liabilities under the Securities Act of 1933, as amended (the "Securities Act"), or to contribute to payments the underwriters may be required to make in respect thereof.

The representative has informed us that the underwriters intend to deliver all copies of this prospectus supplement via electronic means, via hand delivery or through mail or courier services.

In connection with this offering, the underwriters and other persons participating in this offering may engage in transactions which affect the market price of the common stock. These may include stabilizing transactions. Stabilizing transactions consist of bids or purchases for the purpose of pegging, fixing or maintaining the price of the common stock. These transactions, which may be effected on the NYSE Amex or otherwise, may stabilize, maintain or otherwise affect the market price of our common stock and could cause the price to be higher than it would be without these transactions. The underwriters and other participants in this offering are not required to engage in any of these activities and may discontinue any of these activities at any time without notice.

The underwriting syndicate may also reclaim selling concessions allowed to an underwriter or a dealer for distributing our common stock in this offering if the underwriting syndicate repurchases previously distributed common stock to cover syndicate short positions or to stabilize the price of our common stock.

The foregoing transactions, if commenced, may raise or maintain the market price of our common stock above independent market levels or prevent or retard a decline in the market price of our common stock. Neither we nor any of the underwriters makes any representation that the underwriters will engage in any of these transactions and these transactions, if commenced, may be discontinued at any time without notice. Neither we nor any of the underwriters makes any representation or prediction as to the direction or magnitude of the effect that the transactions described above, if commenced, may have on the market price of our common stock.

This prospectus supplement and the accompanying prospectus may be made available in electronic format on websites or through other online services maintained by the underwriters. Other than this prospectus supplement and the accompanying prospectus in electronic format, the information on the underwriters' website and any information contained in any other websites maintained by the underwriters is not part of this prospectus supplement or the accompanying prospectus or the registration statement of which this prospectus supplement and the accompanying prospectus forms a part.

The foregoing does not purport to be a complete statement of the terms and conditions of the underwriting agreement. A copy of the underwriting agreement will be included as an exhibit to our Current Report on Form 8-K that will be filed with the SEC and incorporated by reference into the Registration Statement of which this prospectus supplement forms a part. See "Where You Can Find More Information" beginning on page S-9 of this prospectus supplement.

The underwriters and their respective affiliates may provide various investment banking, financial advisory and other services to us and our affiliates for which services they have received, and may in the future receive, customary fees. In the course of their businesses, the underwriters and their respective affiliates may actively trade our securities or loans for their own account or for the accounts of customers, and, accordingly, the underwriters and their respective affiliates may at any time hold long or short positions in such securities or loans.

Table of Contents

LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for us by Carlile Patchen & Murphy LLP, Columbus, Ohio. Attorneys at Carlile Patchen & Murphy LLP beneficially own 11,000 shares of our common stock. Greenberg Traurig P.A., Boca Raton, Florida, has acted as counsel for the underwriters in connection with certain legal matters relating to this offering.

EXPERTS

The financial statements of AdCare Health Systems, Inc. as of December 31, 2011 and 2010, and for each of the two years in the period ended December 31, 2011, incorporated by reference into this prospectus supplement and the accompanying prospectus, have been audited by Battelle & Battelle LLP, an independent registered public accounting firm, as stated in their report which is also incorporated by reference herein and therein. Such financial statements have been incorporated in reliance upon the report of such firm given their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-3 under the Securities Act, of which this prospectus supplement forms a part. The rules and regulations of the SEC allow us to omit from this prospectus supplement and the accompanying prospectus certain information included in the registration statement. For further information about us and our common stock we are offering under this prospectus supplement and the accompanying prospectus, you should refer to the registration statement and the exhibits and schedules filed as part of the registration statement. With respect to the statements contained in this prospectus supplement and the accompanying prospectus regarding the contents of any agreement or any other document, in each instance, the statement is qualified in all respects by the complete text of the agreement or document, a copy of which has been filed as an exhibit to the registration statement or to a document incorporated by reference into the registration statement.

We file reports, proxy statements and other information with the SEC under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). You may read and copy this information from the Public Reference Room of the SEC, 100 F Street, N.E., Room 1580, Washington, D.C. 20549, at prescribed rates. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet website that contains reports, proxy statements and other information about issuers, like us, that file electronically with the SEC. The address of that website is www.sec.gov.

INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to "incorporate by reference" the information we file with them, which means that we can disclose important information to you by referring you to those documents instead of having to repeat the information in this prospectus supplement and the accompanying prospectus. The information incorporated by reference is considered to be part of this prospectus supplement.

Information contained in this prospectus supplement and information that we file with the SEC in the future and incorporate by reference into this prospectus supplement automatically modifies and supersedes previously filed information, including information in previously filed documents or reports that have been incorporated by reference in this prospectus supplement, to the extent the new information differs from or is inconsistent with the previously filed information. Any information so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus supplement.

Table of Contents

The following documents filed by us with the SEC (in each case, SEC File No. 001-33135) are incorporated by reference in this prospectus supplement (excluding any portion of such documents that have been "furnished" but not "filed" for purposes of the Exchange Act):

our Annual Report on Form 10-K for the year ended December 31, 2011, filed with the SEC on March 19, 2012;

our Current Reports on Form 8-K filed with the SEC on January 5, 2012, January 6, 2012, January 9, 2012, January 23, 2012, February 7, 2012, March 9, 2012 and March 15,2012; and

the description of our common stock contained in our Exchange Act Registration Statement on Form 8-A12B, filed with the SEC on November 7, 2006, incorporating the description contained in our Registration Statement on Form SB-2, File No. 333-131542, as originally filed with the SEC on February 23, 2006, including all amendments or reports filed for the purpose of updating such description.

We are also incorporating by reference any future filings we make with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act until this offering is completed, except for information furnished under Item 2.02 or Item 7.01 and certain exhibits furnished pursuant to Item 9.01 of our Current Reports on Form 8-K which are not deemed to be filed and not incorporated by reference herein.

We will provide without charge upon written or oral request to each person, including any beneficial owner, to whom this prospectus supplement and the accompanying prospectus is delivered, a copy of any and all of the documents which are incorporated by reference into this prospectus supplement or the accompanying prospectus but not delivered with this prospectus supplement and the accompanying prospectus (other than exhibits unless such exhibits are specifically incorporated by reference in such documents).

You may request a copy of these documents by writing or telephoning us at:

AdCare Health Systems, Inc. 5057 Troy Road Springfield, Ohio 45502 Attention: Investor Relations Telephone: (937) 964-8974

S-10

PROSPECTUS

ADCARE HEALTH SYSTEMS, INC.

\$20,000,000 of Common Stock

This prospectus is part of a registration statement on Form S-3 that we filed with the United States Securities and Exchange Commission (the "SEC") utilizing a "shelf" registration process. Under this shelf registration process, we may offer to sell shares of common stock up to a maximum aggregate offering price of \$20,000,000, of which \$6,788,901 has already been sold. This prospectus provides you with a general description of our common stock.

We may offer our common stock through agents, underwriters or dealers or directly to investors. Each time we use this prospectus to offer securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering, including the specific amounts, process and terms of the offered securities. The prospectus supplement may also add, update or change the information contained in this prospectus. We will set forth the names of any underwriters or agents in the accompanying prospective supplement, as well as the net proceeds we expect to receive from such sale. In addition, the underwriters, if any may over-allot a portion of the securities.

Our common stock is traded on the NYSE AMEX under the symbol "ADK." On June 16, 2011, the last reported sale of our common stock on the NYSE AMEX was \$5.32 per share.

As of June 16, 2011, the aggregate market value of our outstanding common stock held by non-affiliates was approximately \$37,630,153. The aggregate market value of securities sold by or on our behalf pursuant to General Instruction I.B.6 of Form S-3 during the 12 calendar months prior to, and including, the date of this prospectus is not greater than one-third of the aggregate market value of our common stock held by our non-affiliates.

You should read carefully both this prospectus and any prospectus supplement together with the additional information described below under the heading "Where You Can Find Additional Information."

Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page 3 for certain risks and uncertainties that you should consider.

Neither the SEC nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

Prospectus dated June 27, 2011

TABLE OF CONTENTS

| | Page |
|--|-----------|
| PROSPECTUS SUMMARY | <u>1</u> |
| RISK FACTORS | 3 |
| SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS | <u>10</u> |
| USE OF PROCEEDS | <u>10</u> |
| DESCRIPTION OF CAPITAL STOCK | <u>11</u> |
| PLAN OF DISTRIBUTION | <u>12</u> |
| LEGAL MATTERS | <u>14</u> |
| <u>EXPERTS</u> | <u>14</u> |
| INCORPORATION OF CERTAIN INFORMATION BY REFERENCE | <u>14</u> |
| WHERE YOU CAN FIND ADDITIONAL INFORMATION | <u>15</u> |
| DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION | <u>15</u> |
| | |

You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with information that is different from that contained in this prospectus. This prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted. The information on this prospectus is complete and accurate only as of the date of the front cover regardless of the time delivery of this prospectus or of any sale of shares. Except where the context requires otherwise, in this prospectus, the words "Company," "AdCare," "we," "us" and "our" refer to AdCare Health Systems, Inc., an Ohio corporation.

PROSPECTUS SUMMARY

This summary highlights selected information from this prospectus. It does not contain all of the information that is important to you. We encourage you to carefully read this entire prospectus and the documents to which we refer you. The following summary is qualified in its entirety by reference to the detailed information appearing elsewhere in this prospectus.

Our Company

We are a Springfield, Ohio based developer, owner and manager of retirement communities, assisted living facilities, nursing homes, and provide home health care services. As of March 31, 2011, we operate twenty-eight facilities, comprised of twenty skilled nursing centers, seven assisted living residences and one independent living/senior housing facility, totaling approximately 2,600 units. Our communities are located in Ohio, Georgia, Alabama and North Carolina. Subsequent to March 31, 2011, we became the owner and operator of two additional skilled nursing centers with an aggregate of 235 units.

We have an ownership interest in eleven of the facilities we operate, comprised of 100% ownership of five of the skilled nursing centers and six assisted living facilities. We have lease agreements on eleven skilled nursing facilities. The assisted living facilities that we own operate under the name Hearth & Home, with the tag line "Home is where the hearth is." We also maintain a development/consulting initiative which provides potential management opportunities to our core long-term care business. AdCare Health Systems, Inc. and Hearth & Home are registered trademarks.

Our business operates in two segments: (1) management and facility-based care and (2) home-based care. In our management and facility-based care segment, we derive revenues from three primary sources. We operate and have ownership interests in eight facilities for which we collect fees from the residents of those facilities. Profits/losses are generated to the extent that the monthly patient fees exceed the costs associated with operating those facilities. We also manage assisted living facilities and nursing homes owned by third parties. With respect to these facilities, we receive a management fee based on the revenue generated by the facilities. Within our management facility-based care segment, we provide development, consulting and accounting service to third parties. In these instances, we receive a fee for providing those services. These fees vary from project to project, with the development fee in most cases being based on a percentage of the total cost to develop the project.

Corporate Information

Our principal executive offices are located at 5057 Troy Road, Springfield, Ohio 45502, and our telephone number is (937) 964-8974. We maintain a website at www.adcarehealth.com. This reference to our website is an inactive textual reference only and is not a hyperlink. The contents of our website are not part of this prospectus, and you should not consider the contents of our website in making an investment decision with respect to our securities.

1

Summary of the Offering

Shares of common stock, no par value, being

registered hereunder

Shares of common stock outstanding as of

June 6, 2011

Use of Proceeds

Risk Factors

Stock Exchange Symbol

Use of Proceeds

An indeterminate number of shares of common stock are being offered up to a maximum aggregate offering price of 20,000,000, of which 6,788,901 has already been sold.

8,407,798 shares of common stock

We will retain broad discretion over the use of net proceeds to us from any sale of our common stock under this prospectus. We intend to use the net proceeds from the sale of the securities for general corporate purposes, including, but not limited, to repaying, redeeming, or repurchasing existing debt, and for working capital, capital expenditures, and acquisitions.

An investment in our securities involves a high degree of risk and could result in a loss of your entire investment. Prior to making an investment decision, you should carefully consider all of the information in this prospectus and, in particular, you should evaluate the risk factors set

forth under the caption "Risk Factors" beginning on page 3.

Out common stock is traded on the NYSE Amex under the symbol "ADK."

2

RISK FACTORS

The following are certain risk factors that could affect our business, operations and financial condition. These risk factors should be considered in connection with evaluating the forward-looking statements contained in this prospectus because these factors could cause the actual results and conditions to differ materially from those projected in forward-looking statements. This section does not describe all risks applicable to our business, and we intend it only as a summary of certain material factors. If any of the following risks actually occur, our business, financial condition or results of operations could be negatively affected. In that case, the trading price of our common stock could decline.

We intend to expand our business into new areas of operation.

Our business model calls for seeking to acquire existing cash flowing operations and to expand our operations by pursuing an acquisition merger and acquisition growth strategy to acquire and lease long term care facilities, primarily nursing homes. Our success will largely depend on our ability to finance the new acquisitions and implement and integrate the new acquisitions into our management systems. As a result, we expect to experience all of the risks that generally occur with rapid expansion such as:

adapting our management systems and personnel into the new acquisition;

integrating the new acquisition and businesses into our structure;

acquisition and operation of new acquisitions and businesses in the Southeastern United States, a geographic region in which

obtaining adequate financing under acceptable terms;

we have not historically operated;

retention of key personnel, customers and vendors of the acquired business and the hiring of new personnel;

impairments of goodwill and other intangible assets; and

contingent and latent risks associated with the past operations of, and other unanticipated costs and problems arising in, an acquired business.

If we are unable to successfully integrate the operations of an acquired property or business into our operations, we could be required to undertake unanticipated changes. These changes could have a material adverse effect on our business. Since we went public in November, 2006, we have not expanded into new areas of business.

We may need additional financing to complete our long-term acquisition and expansion plans, and we do not have commitments for additional financing.

To achieve our growth objectives, we will need to obtain sufficient financial resources to fund our expansion, development and acquisition activities. We believe we may need to secure debt financing in order to help us leverage our equity resources and make further acquisitions. As of March 31, 2011, we had an accumulated deficit of \$13,314,166 and working capital of approximately \$1,746,000. Our cumulative losses have, in the past, made it difficult for us to borrow adequate funds on what management believed to be commercially reasonable terms. There can be no assurance that adequate financing will be available on terms that are acceptable to us, if at all. In addition, our Board of Directors may elect to use our stock as "currency" in acquiring additional businesses. If so, our stockholders may experience dilution.

We currently have lines of credit in place which may be insufficient to satisfy short-term cash needs.

In March of 2010, we increased our available line of credit with Huntington National Bank to \$200,000 in order to assist with cash flow. As of December 31, 2010, approximately \$187,000 was used

in operation of the Company. We have also established a \$191,000 line of credit using funds from our non-qualified deferred compensation plan. Members of this plan, which is only available to senior management, authorized the transfer of funds to establish the line of credit with interest accruing at 8%. The funds are presently used in the operation of the Company. Additionally, on October 29, 2010, AdCare subsidiaries ADK Powder Springs Operator, LLC, ADK Lumber City Operator, LLC, ADK Jeffersonville Operator, LLC, ADK LaGrange Operator, LLC, and ADK Thomasville Operator, LLC (collectively, the "Borrowers") entered into a Credit Agreement with lender, Gemino Healthcare Finance, LLC (the "Lender"), to provide a credit facility in the maximum amount of \$5,000,000. The initial term of the Credit Facility will expire on October 29, 2013. Borrowing under the Credit Facility is not limited to use by the Borrowers and may be used for various business purposes. Conditions of the Credit Agreement require the Borrowers to pay interest on a minimum balance of \$1,000,000. Subsequently, on February 25, 2011, we joined five additional AdCare subsidiaries: ADK Thunderbolt Operator, LLC, ADK Savannah Beach Operator, LLC, ADK Oceanside Operator, LLC, Attalla Nursing ADK, LLC, and Coosa Nursing ADK, LLC as additional borrowers in the Credit Agreement. The additional borrowers increased the amount of credit available to us and the maximum amount of the credit facility increased to \$7,500,000. As of March 31, 2011, approximately \$1,763,000 of the credit facility was used in the operations of the business.

Businesses typically use lines of credit to finance short-term and unexpected cash needs. There can be no assurances that these lines of credit will be sufficient in the event of an acute cash deficit. Therefore, we intend to secure additional lines of credit or increases in our existing lines but we can provide no assurance that it will be available on acceptable terms, if at all, or that the amount of any line of credit obtained will be sufficient to handle future cash needs as they arise.

Our business depends on reimbursement under federal and state programs, and legislation or regulatory action may reduce or otherwise adversely affect the amount of reimbursements.

Our revenues are heavily dependent on payments administered under the Medicare and Medicaid programs. The economic downturn has caused many states to institute freezes on or reductions in Medicaid reimbursements to address state budget concerns. Moreover, for the 2010 federal fiscal year, the Federal Centers for Medicare and Medical Services ("CMS") effectively reduced our Medicare reimbursement rates; for the 2011 federal fiscal year, CMS has implemented changes to the Resource Utilization Group classification system, which may impact our Medicare revenues adversely.

In addition to these reductions, there have been numerous initiatives on the federal and state levels for comprehensive reforms affecting the payment for and availability of healthcare services. Aspects of certain of these initiatives, such as further reductions in funding of the Medicare and Medicaid programs, additional changes in reimbursement regulations by CMS, enhanced pressure to contain healthcare costs by Medicare, Medicaid and other payers, and additional operational requirements, could adversely affect us.

We have a history of operating losses and may incur losses in the future as we expand.

For the year ended December 31, 2010, for amounts attributable to the Company, we had a net loss of \$2,743,621 compared to a net income of \$440,283 for the year ended December 31, 2009. For the three months ended March 31, 2011, for amounts distributable to the Company, we had net income of \$357,291 compared to a net loss of \$113,886 for the three months ended March 31, 2010. There can be no assurance that we will be able to operate profitably as we expand. As of March 31, 2011, we had working capital of approximately \$1,746,000.

Management's plans with the objective of improving liquidity and profitability in future years encompass the following:

refinancing debt where possible to obtain more favorable terms.

increase facility occupancy, improve the occupancy mix by increasing Medicare patients.

add additional management contracts.

Acquire additional long term care facilities with existing cash flowing operations to expand our operations.

Management believes that the actions that will be taken by the Company provide the opportunity for the Company to improve liquidity and achieve profitability. However, there can be no assurance that such events will occur.

Assisted living and skilled nursing facility financial stability could be negatively impacted by the current economic conditions.

Approximately 8% of our skilled nursing occupants and nearly all the occupants of our assisted living facilities rely on their personal investments and wealth to pay for their stay in our facilities. Recent declines in market values of investments could limit their ability to pay for services or shorten the period of time for which they can pay privately for their stay. The declining market for the sale of homes could limit their ability to sell their personal assets further reducing their ability to remain in our facilities. Furthermore, adult children who have recently become unemployed may decide to care for their parent at home so that their parent's income may help offset some of their own financial burdens. During 2010, we have experienced lower occupancy in our assisted living facilities and believe it may be due in part to our potential customers' response to the current economic conditions. We do not believe lower occupancy in our assisted living facilities represents a trend.

We are engaged in an evolving and highly-regulated industry, which increases the cost of doing business and may require us to change the way our business is conducted.

Health care is an area of extensive and frequent regulatory change. Changes in the laws or new interpretations of existing laws can have a significant effect on methods of doing business, cost of doing business, and amounts of reimbursements from the government and other payers. Our assisted living residences and nursing homes are subject to regulation and licensing by state and local health and social service agencies and other regulatory authorities. We are and will continue to be subject to varying degrees of regulation and licensing by health or social service agencies. A failure to comply with applicable requirements could cause us to be fined or could cause the cessation of our business, which would have a material adverse effect on our company.

The manner and the extent to which assisted living is regulated at the federal and state level is evolving. Changes in the laws or new interpretations of existing laws may have a significant effect on our methods and costs of doing business. Our success will depend partially on our ability to satisfy the applicable regulations and requirements and to procure and maintain required licenses. Our operations could also be adversely affected by, among other things, regulatory developments such as mandatory increases in the scope and quality of care given to the residents and revisions in licensing and certification standards. We believe that our operations do not presently violate any existing federal or state laws. But there can be no assurance that federal, state, or local laws or regulatory procedures which might adversely affect our business, financial condition, and results of operations for prospects will not be expanded or imposed.

State and federal regulatory changes also affect our business.

Because of the nature of our business, changes to both state and federal regulations may impact the pricing for our services and the methods of reimbursement. Changes which reduce the amount which we can charge for our services or delay or reduce the amount of our reimbursement could have a material adverse effect upon our business.

An expanded Federal program is underway to recover Medicare overpayments.

The Medicare Modernization Act of 2003 established a three year demonstration project to recover overpayments and identify underpayments on Medicare claims from hospitals, skilled nursing facilities and home health agencies through a review of claims previously paid by Medicare beginning in October, 2007. Medicare contracted nationwide with third parties known as Recovery Audit Contractors ("RAC") to conduct these reviews commonly referred to as RAC Audits. Due to the success of the program, the Tax Relief and Healthcare Act of 2006 made the program permanent and mandated its expansion to all 50 states in 2010. As of March 31, 2011, we have not received notification that any of our claims are subject to RAC Audits however, we can make no assurances that our claims will not be selected for RAC Audits in the future and if they are the extent to which these audits may reduce our revenue or otherwise hinder cash flow.

State Certificate of Need laws and other regulations could negatively impact our ability to grow our nursing home business.

Many states in which we could expand, have adopted Certificate of Need or similar laws that generally require that a state agency approve certain nursing home acquisitions and determine the need for certain nursing home bed additions, new services, capital expenditures, or other changes prior to the acquisition or addition of beds or services, the implementation of other changes, or expenditure of capital. State approvals are generally issued for specified maximum expenditures and require implementation of the proposal within a specified period of time. Failure to obtain the necessary state approval can result in the inability to provide the service, to operate the centers, to complete the acquisition, addition, or other change, and can also result in sanctions or adverse action on the center's license and adverse reimbursement action. There can be no assurance that we will be able to obtain Certificate of Need approval for all future projects requiring the approval, or that approvals will be timely.

Due to the high-risk circumstances in which we conduct business, we may encounter liability claims in excess of insurance coverage.

The provision of health care services entails an inherent risk of liability. In recent years, participants in the long-term care industry have become subject to an increasing number of lawsuits alleging malpractice or related legal theories, many of which involve large claims and significant defense costs. We currently maintain \$1,000,000 in liability insurance for any one exposure. This insurance is intended to cover malpractice and other lawsuits. Although we believe that it is in keeping with industry standards, there can be no assurance that claims in excess of our limits will not arise. Any such successful claims could have a material adverse effect upon our financial condition and results of operations. Claims against us, regardless of their merit or eventual outcome, may also have a material adverse effect upon our ability to attract and retain business. In addition, our insurance policies must be renewed annually and there can be no assurance that we will be able to retain coverage in the future or, if coverage is available, that it will be available on acceptable terms.

We encounter intense competition from competitors, many of whom have greater resources than AdCare.

The long-term care industry is highly competitive and we believe that it will become even more competitive in the future. Our assisted living facilities and nursing homes compete with numerous companies providing similar long-term care alternatives, such as home health care agencies, community-based service programs, retirement communities and convalescent centers, and other assisted living providers. We compete with national companies such as HCR Manor Care, Alterra and Extended Care with respect to both our nursing home and assisted living facilities. We also compete with locally owned entities as well as Health Care Facilities HCF on a regional basis. Historically, we have found that the

entry of one or more of these competitors into one of our established markets can reduce both our occupancy and the rates we are able to charge to our customers. In the past, we have found national publicly traded competitors who are willing to enter into a market already served by us. When these competitors experienced lower than expected occupancies, they relied on their greater financial resources to reduce their rates in order to increase occupancy. This resulted in our occupancies decreasing below expected levels. Eventually, demographics improved and rates stabilized. However, there can be no assurance that similar events will not occur in the future which could limit our ability to attract residents or expand our business and that could have a negative effect on our financial condition, results of operations, and prospects. We can provide no assurance that competitive pressures will not have a material adverse effect on us.

The home health care business is also highly competitive. Since we first acquired Assured Health Care in 2005, its operations remain relatively centralized in the Dayton, Ohio area. However, in that area, Assured faces competition from several sources including, without limitation, Fidelity Nursing Home Systems, Kettering Network Home Care, GEM City Home Care, Greene Memorial Hospital Home Care, and Community Springfield.

Our business is very labor intensive, we operate in smaller markets with limited personnel resources, and our success is tied to our ability to attract and retain qualified employees.

We compete with other providers of home health care, nursing home care, and assisted living with respect to attracting and retaining qualified personnel. We depend on the availability of Registered Nurses and Licensed Practical Nurses to provide skilled care to our nursing home residents. According to the Ohio Hospital Association, the supply of nurses nationwide is predicted to be 800,000 short of demand by 2020. Another study conducted by Dr. David I. Auerbach for the journal *Health Affairs* estimated the shortage to increase to 340,000 by 2020. According to the Bureau of Labor Statistics, "employment of registered nurses is expected to grow 23 percent [or 587,000 jobs] from 2006 to 2016, much faster than the average for all occupations". The Bureau of Labor Statistics also reports "employment of LPNs is expected to grow 14 percent [or 105,000 jobs] between 2006 and 2016, faster than the average for all occupations, in response to the long-term care needs of an increasing elderly population and the general increase in demand for health care services". While the experts may not agree on the size of the shortage, they all appear to agree that there is and will continue to be a shortage. Because of the small markets in which we operate, shortages of nurses and/or trained personnel may require us to enhance our wage and benefit package in order to compete and lure qualified employees from more metropolitan areas. To date, we have been able to adequately staff all of our operations. However, we can provide no assurance that our labor costs will not increase, or that, if they do increase, they can be matched by corresponding increases in revenues.

We are dependent on our management team and the loss of any of these individuals would harm our business.

Our future success depends largely upon the management experience, skill, and contacts of our officers and directors, in particular, David A. Tenwick, Chairman, Christopher Brogdon, Vice-Chairman and Chief Acquisitions Officer, Gary L. Wade, co-CEO and President, Boyd Gentry, co-CEO, and Martin D. Brew, Chief Financial Officer. Mr. Tenwick has signed an employment agreement that is effective through September 2011. Mr. Gentry has also entered into an employment agreement with us. Mr. Wade is retiring and has resigned from AdCare effective June 30, 2011. Neither Messrs. Brew nor Brogdon have agreed to be employed by us for any specified term. Loss of the services of any or all of these officers could be materially detrimental to our operations. In addition, due to the location of our corporate headquarters in a smaller urban region, we may experience difficulty attracting senior managers in the future.

We own multiple parcels of real estate and could be subject to environmental liability for hazardous substances found on any of those parcels, whether or not we caused the contamination.

While we are not aware of any potential problems at this time, we own multiple parcels of real estate, each of which is subject to various federal, state, and local environmental laws, ordinances, and regulations. Many of these laws and regulations provide that a current or previous owner of real property may be held liable for the cost of removing hazardous or toxic substances, including materials containing asbestos that would be located on, in, or under the property. These laws and regulations often impose liability whether or not the owner or operator knew, or was responsible for, the presence of the hazardous or toxic substances. The cost of the removal is generally not limited under the laws and regulations and could exceed the property's value and the aggregate assets of the owner or operator. The presence of these substances or failure to remediate such substances properly may also adversely affect the owner's ability to sell or rent the property or to borrow using the property as collateral. If any of our properties were found to have environmental issues, we may be required to expend significant amounts to rehabilitate the property and we may be subject to significant liability.

The price of our securities may be subject to fluctuation.

The market price of our common stock and warrants will likely be highly volatile and subject to wide fluctuations in response to various factors, many of which are beyond our control. These factors include:

variations in our operating results;

changes in the general economy, and more specifically the Ohio economy or in the local economies in which we operate;

the financial markets; the state and length of the present bull market and when the market may revert to a bear market;

the departure of any of our key executive officers and directors;

the level and quality of securities analysts' coverage for our common stock;

announcements by us or our competition of significant acquisitions, strategic partnerships, joint ventures or capital commitments;

changes in federal, state, and local health-care regulations to which we are subject; and

For these reasons, comparing our operating results on a period-to-period basis may not be meaningful, and you should not rely on past results as an indication of future performance.

Our management substantially controls all major decisions.

future sales of our common stock.

Our directors and officers beneficially own approximately 31.8% of our outstanding common shares, options and warrants. Therefore, our directors and officers will be able to influence major corporate actions required to be voted on by stockholders, such as the election of directors, the amendment of our charter documents, and the approval of significant corporate transactions such as mergers, reorganizations, sales of substantially all of our assets, and liquidation. Furthermore, our directors will be able to make decisions affecting our capital structure, including decisions to issue additional capital stock, implement stock repurchase programs and incur indebtedness. This control may have the effect of deterring hostile takeovers, delaying or preventing changes in control or changes in management, or limiting the ability of our other stockholders to approve transactions that they may deem to be in their best interest.

As we expand our operations, we may open or manage facilities that are geographically near other facilities that we operate or manage.

While the facilities that we own and manage are sufficiently well-spaced so that they do not currently compete for business, there can be no assurance in the future, as we grow, that circumstances will not arise where facilities which we own and/or manage will compete with each other for patients. If this were to occur, it may damage our relationships with facilities that we manage that could result in the termination of our management agreements.

The requirements of being a public company may strain our resources and distract our management.

As a public company, we are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act"). These requirements may place a strain on our systems and resources. The Exchange Act requires that we file annual, quarterly and current reports with respect to our business and financial condition. The Sarbanes-Oxley Act requires that we maintain effective disclosure controls and procedures and internal controls for financial reporting. We are required to document and test our internal control procedures in order to satisfy the requirements of Section 404 of the Sarbanes-Oxley Act, which requires annual management assessments of the effectiveness of our internal controls over financial reporting. In addition, if we fail to achieve and maintain the adequacy of our internal controls, as such standards are modified, supplemented or amended from time to time, we may not be able to ensure that we can conclude on an ongoing basis that we have effective internal controls over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act.

In order to maintain and improve the effectiveness of our disclosure controls and procedures and internal control over financial reporting, significant resources and management oversight is required. This may divert management's attention from other business concerns, which could have a material adverse effect on our business, financial condition, results of operations and cash flows. In addition, we may need to hire additional accounting and financial staff with appropriate public company experience and technical accounting knowledge, and we cannot assure you that we will be able to do so in a timely fashion.

Takeover defense provisions may adversely affect the market price of our common stock.

Various provisions of Ohio corporation law and of our corporate governance documents may inhibit changes in control not approved by our Board of Directors and may have the effect of depriving our investors of an opportunity to receive a premium over the prevailing market price of our common stock in the event of an attempted hostile takeover. In addition, the existence of these provisions may adversely affect the market price of our common stock and warrants. These provisions include:

a requirement that special meetings of stockholders be called by our Board of Directors, the Chairman, the President, or the holders of shares with voting power of at least 25%;

staggered terms among our directors with these classes of directors and only one class to be elected each year;

advance notice requirements for stockholder proposals and nominations; and

availability of "blank check" preferred stock.

Provisions in our bylaws provide for indemnification of officers and directors, which could require us to direct funds away from our business and future products.

Our Articles of Incorporation and Code of Regulations provide for the indemnification of our officers and directors. We may be required to advance costs incurred by an officer or director and to pay judgments, fines and expenses incurred by an officer or director, including reasonable attorneys' fees, as a result of actions or proceedings in which our officers and directors are involved by reason of being or having been an officer or director of our company. Funds paid in satisfaction of judgments, fines and expenses may be funds we need for the operation of our business and the development of our product candidates, thereby affecting our ability to attain or maintain profitability.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. Forward-looking statements provide our current expectations or forecasts of future events. Forward-looking statements include statements about our expectations, beliefs, plans, objectives, intentions, assumptions and other statements that are not historical facts. Words or phrases such as "anticipate," "believe," "continue," "ongoing," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project" or similar words or phrases, or the negatives of those words or phrases, may identify forward-looking statements, but the absence of these words does not necessarily mean that a statement is not forward-looking.

The risk factors referred to in this prospectus could materially and adversely affect our business, financial conditions and results of operations and cause actual results or outcomes to differ materially from those expressed in any forward-looking statements made by us, and you should not place undue reliance on any such forward-looking statements. The risks and uncertainties described in this prospectus are not the only ones we face. New factors emerge from time to time, and it is not possible for us to predict which will arise. There may be additional risks not presently known to us or that we current believe are immaterial to our business. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. If any such risks occur, our business, operating results, liquidity and financial condition could be materially affected in an adverse manner. Under such circumstances, you may lose all or part of your investment.

The industry and market data contained in this prospectus are based either on our management's own estimates or, where indicated, independent industry publications, reports by governmental agencies or market research firms or other published independent sources and, in each case, are believed by our management to be reasonable estimates. However, industry and market data is subject to change and cannot always be verified with complete certainty due to limits on the availability and reliability of raw data, the voluntary nature of the data gathering process and other limitations and uncertainties inherent in any statistical survey of market shares. We have not independently verified market and industry data from third-party sources. In addition, consumption patterns and customer preferences can and do change. As a result, you should be aware that market share, ranking and other similar data set forth herein, and estimates and beliefs based on such data, may not be verifiable or reliable.

USE OF PROCEEDS

We will retain broad discretion over the use of net proceeds to us from any sale of our common stock under this prospectus. We intend to use the net proceeds from the sale of the securities for general corporate purposes, including, but not limited, to repaying, redeeming, or repurchasing existing debt, and for working capital, capital expenditures, and acquisitions.

DESCRIPTION OF CAPITAL STOCK

As of the date of this prospectus, we are authorized to issue 14,500,000 shares of common stock, no par value, and 500,000 shares of serial preferred stock, no par value. As of June 6, 2011, we had issued 8,407,798 shares of common stock. There are no serial preference shares currently outstanding.

Common Stock

This section describes the general terms and provisions of our common stock. For more detailed information, you should refer to our Articles of Incorporation and Code of Regulations, copies of which have been filed with the SEC. These documents are also incorporated by reference into the registration statement of which this prospectus forms a part.

Subject to the rights of any holders of serial preferred stock, each outstanding share of common stock is entitled to such dividends as may be declared from time to time by our Board of Directors. Each outstanding share of common stock is entitled to one vote on all matters submitted to a vote of shareholders. Pursuant to our Articles of Incorporation, holders of our common stock do not have the right to cumulative voting; therefore, the holders of a majority of the shares voting for the election of our Board of Directors can elect all the directors standing for election, if they so choose. In the event of liquidation, dissolution or winding up of AdCare, holders of our common stock are entitled to receive, on a pro rata basis, any assets remaining after provision for payment of creditors and any holders of our serial preferred stock. No holder of our common stock has any preemptive or preferential right to purchase or subscribe to any class of AdCare capital stock.

Serial Preferred Stock

This section describes the general terms and provisions of our serial preferred stock. For more detailed information, you should refer to our Articles of Incorporation and Code of Regulations, copies of which have been filed with the SEC. These documents are also incorporated by reference into the registration statement of which this prospectus forms a part.

Our Articles of Incorporation authorize our Board of Directors to issue the serial preferred stock as serial stock of any series and in connection with the creation of such series to fix by the resolution or resolutions providing for the issue of shares the voting powers and designations, preferences and relative, participating, optional or other special rights, and qualifications, limitations or restrictions of such series, to the fullest extent permitted by law of the State of Ohio. As of the date of this prospectus, our Board of Directors has no plans, agreements or understandings for the issuance of any shares of preferred stock.

Listing

Our common stock is traded on the NYSE AMEX under the symbol "ADK."

11

PLAN OF DISTRIBUTION

We 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 of 1933, as amended (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. |
| The applicable | e 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 the 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 applicable

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 of 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 by dealers.

During and after an offering through underwriters, the underwriters may purchase and sell the securities in the open market. These transactions may include over-allotment 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 through 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 the securities, we will sell the securities to them as principals. They may then resell the securities to the public at varying prices determined by the dealers at the time of resale. We will include in the applicable prospectus supplement the names of the dealers and the terms of the transaction.

The aggregate maximum compensation that underwriters, dealers or agents will receive in connection with the sale of any securities under this prospectus and the registration statement of which it forms a part will not exceed any applicable limitations of the Financial Industry Regulatory Authority.

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. In the applicable prospectus supplement, we will name any agent involved in the offer or sale of the offered securities, and we will disclose any commissions payable to the agent. Unless we inform you otherwise in the applicable 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 applicable 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 marketing 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 applicable prospect 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 applicable prospectus supplement. The applicable 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 business.

LEGAL MATTERS

Unless otherwise indicated in the applicable prospectus supplement, certain legal matters will be passed upon for us by Carlile Patchen & Murphy LLP, Columbus, Ohio. Attorneys at Carlile Patchen & Murphy LLP beneficially own 11,000 shares of our common stock. Counsel to the underwriters will be named in the applicable prospectus supplement.

EXPERTS

Battelle & Battelle LLP, an independent registered public accounting firm, audited our consolidated financial statements included in our 2010 Annual Report on Form 10-K for the year ended December 31, 2010, as set forth in their report which has been incorporated herein by reference, and is included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

SEC rules allow us to "incorporate by reference" into this prospectus much of the information we file with the SEC, which means that we can disclose important information to you by referring to those publicly available documents. The information that we incorporate by reference in this prospectus is considered to be part of this prospectus. The following documents filed with the SEC are hereby incorporated by reference in this prospectus:

Our Annual Report on Form 10-K for the fiscal year ended December 31, 2010, filed with the SEC on March 31, 2011.

Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2011, filed with the SEC on May 16, 2011.

Our Current Reports on Form 8-K filed with the SEC (excluding any portions of such reports that have been "furnished" but not "filed" for purposes of the Exchange Act) on January 6, 2011, January 14, 2011, March 29, 2011, April 6, 2011, May 5, 2011, May 13, 2011, June 6, 2011, June 9, 2011 and June 16, 2011.

Our Current Reports on Form 8-K/A filed with the SEC (excluding any portions of such reports that have been "furnished" but not "filed" for purposes of the Exchange Act) on January 6, 2011 and April 1, 2011.

Our Proxy Statement on Schedule 14A, filed with the SEC on April 22, 2011.

The description of our common stock contained in our Exchange Act Registration Statement on Form 8-A12B filed with the SEC on November 7, 2006 incorporating the description contained in our Registration Statement on Form SB-2, File No. 333-131542, as originally filed with the SEC on February 23, 2006 and as subsequently amended.

AdCare hereby undertakes to provide without charge to each person, including any beneficial owner, to whom a copy of this prospectus is delivered, upon written or oral request, a copy of any and all of the information that has been or may be incorporated by reference in this prospectus. Request for such copies should be directed to AdCare Health Systems, Inc., at 614-628-0788 or 5057 Troy Road, Springfield, Ohio 45502-9032, Attention: Martin D. Brew, Chief Financial Officer.

We also incorporate by reference into this prospectus additional documents that we may file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the completion or termination of the offering, including all such documents we may file with the SEC after the date of the registration statement of which this prospectus forms a part and prior to the effectiveness of the registration statement, but excluding any information deemed furnished and not filed with the SEC.

Any statement contained in a document incorporated by reference or deemed incorporation by reference in this prospectus or any prospectus supplement shall be deemed modified, superseded or replaced for purposes of this prospectus and such prospectus supplement to the extent that a statement contained in this prospectus, any prospectus supplement or in any subsequently filed document that also is or is deemed to be incorporated by reference modified, supersedes or replaces such statement. Any statement so modified, superseded or replaced shall not be deemed, except as so modified, superseded or replaced, to constitute a part of this prospectus or any prospectus supplement.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-3, including the exhibits, schedules, and amendments to this registration statement, under the Securities Act with respect to the shares of common stock to be sold in this offering. This prospectus, which is part of the registration statement, does not contain all the information set forth in the registration statement. For further information with respect to us and the shares of common stock to be sold in this offering, we make reference to the registration statement. Although this prospectus contains all material information regarding us, statements contained in this prospectus as to the contents of any contract, agreement or other document referred to are not necessarily complete, and in each instance we make reference to the copy of such contract, agreement, or other document filed as an exhibit to the registration statement, each such statement being qualified in all respects by such reference. You may read and copy all or any portion of the registration statement or any other information, which we file at the SEC's public reference room at 100 F Street, N.E., Washington, DC 20549. We also file periodic reports and other information with the SEC. You can request copies of these documents, upon payment of a duplicating fee, by writing to the SEC. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference rooms. Our SEC filings, including the registration statement, are also available to you on the SEC's website, www.sec.gov.

You should rely only on the information contained or incorporated by reference in this prospectus and in any accompanying prospectus supplement. We have not authorized anyone to provide you with information different from that contained in this prospectus. The shares of common stock offered under this prospectus are offered only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of the shares of common stock.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

While indemnification for liabilities under the Securities Act is permitted to our directors, officers, and controlling people, we have been advised that, in the opinion of the SEC, indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim of indemnification against such liabilities (other than our payment of expenses incurred or paid by one of our directors, officers, or controlling people in a successful defense of any action, suit, or proceeding) is asserted by such director, officer, or controlling person in connection with our securities, we will, unless in the opinion of our counsel the matter has been settled by controlling precedent, ask a court of appropriate jurisdiction to decide whether or not such indemnification is against public policy as expressed in the Securities Act. We will be governed by the final adjudication of the issue.

Shares

Common Stock

PROSPECTUS SUPPLEMENT

March , 2012

Noble Financial Capital Markets