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New Rec: Acadia Healthcare (ACHC: $36.72) September 12, 2018

Position: Source of funds **Potential downside: 30%**

$MM	3Q18e	4Q18e	1Q19e	2Q19e	2018e	2019e
Revs	768.5	771.5	765.5	787.5	3,048	3,132
EPS	157.4	156.0	150.0	163.3	624.2	620.9
Y/Y Gr	3%	2%	3%	-1%	3%	-1%
PE	n/a	n/a	n/a	n/a	10.2	10.2
Cnsns Rev	760.7	770.0	782.4	812.2	3,044	3,220
Cnsns EPS	161.0	164.0	157.0	175.0	635.0	682.0

Shares Out: 87.5M **Market Cap: $3.2B** **FYE Dec**

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Concept:
1. A U.S. psychiatric hospital building boom underway is leading to increased competition for the most profitable managed care and Medicare patients. As a result, ACHC's managed care and Medicare revenue is declining, as are its US margins.
2. Regulatory changes beginning in July 2016 opened ACHC's US acute inpatient psychiatric hospitals (27% of 2017 revenue) to adult Medicaid patients. Medicaid revenue growth has masked declining managed care and Medicare revenue, but Medicaid growth is likely to slow as regulatory changes lap and as more hospitals open.
3. Growth in ACHC's UK behavioral health business (36% of 2017 revenue) is slow, and threatened by NHS funding shortfalls and economic instability from Brexit.
4. Staff shortages in the US and the UK are driving up costs. Increased competition for qualified personnel and limits on immigration in both the US and UK could further pressure margins.

Summary: Acadia Healthcare (ACHC) owns and operates US and UK behavioral health facilities. In 2017, 27% of revenue came from US acute inpatient psychiatric hospitals, 15% was from US residential addiction/eating disorder treatment facilities, 10% was from US medication-assisted and abstinence-based outpatient addiction treatment centers, 10% was from US adolescent residential treatment facilities, and 36% came from UK behavioral health facilities.

ACHC operates 585 behavioral health facilities in 40 US states, Puerto Rico, and throughout the UK. It began operations in 2005. Former employees of Psychiatric Solutions, including the former CEO, the EVP Finance, the COO, the Chief Accounting Officer, and the General Counsel of Psychiatric Solutions joined ACHC In February 2011. Psychiatric Solutions was bought by Universal Health Services in November 2010. We wrote a successful recommendation to sell Psychiatric Solutions (PSYS) shares in July 2008. During this management's tenure at PSYS, there was a DOJ investigation into its executive compensation practices, and there were safety violations in multiple facilities that resulted in states halting admissions, and there was poor financial performance. In November 2011, Acadia merged with a publicly traded behavioral health provider, PHC, a move that allowed Acadia to go public without enduring the harsh light of an IPO roadshow.

From 2011 through mid-2016, ACHC levered up to make a series of behavioral health acquisitions. In the US, it acquired addiction treatment facilities, including Bain Capital's CRC Health in February 2015 for $1.3B (11.3x forward EBITDA), which included the assumption of $970M in CRC debt and the issuance of $365M in ACHC stock. Bain sold all of its ACHC shares by August 2017. In the UK, it acquired numerous facilities, including Advent's Priory Group (UK) in February 2016 for $2.2B (11.2x trailing EBITDA). Acquisitions abruptly stopped in June 2016, with only one small acquisition in Scotland ($21M) in November 2017. Since mid-2016, growth has come from adding beds to existing facilities in

the US and UK and from US de novo acute psychiatric hospitals, sometimes as joint ventures with local hospitals.

At present, the company has $3.1B in debt, and its current Net Debt/EBITDA is 5.1x. About 55% of debt is senior secured loans with floating interest rates of LIBOR plus 2.5% (totaling about 5.3% at present), while the remaining 45% of debt is at fixed interest rate debt at a blended 5.9%. The company has about $500M of availability under its revolving credit facility, which it has promised to deploy for acquisitions since early 2017. Its earliest term loan of $150M is due in 2021, with another $300M due in 2022 and $650M due in 2023.

ACHC's growth strategy has been to grow its US freestanding psychiatric hospital segment by adding beds to existing facilities and opening de novo hospitals, sometimes as JVs with acute care hospitals. A fundamental change in US Medicaid reimbursement policy occurred in July 2016 that we estimate increased the population eligible for admission in psychiatric hospitals like ACHC's by 19.8M people, or 14%. This change was touted as a huge opportunity by ACHC and by its competitor, UHS, who both predicted accelerating US revenue growth and a significant number of new joint ventures with hospital partners to build freestanding hospitals to meet increased demand.

Of course, other players also recognized the new opportunity created by the change in reimbursement. Indeed, as we describe below in detail, the reimbursement change is creating a significant increase in the number of total acute inpatient psychiatric beds available in the US. Multiple players have rushed to build new beds, prompting a boom in construction of new freestanding acute inpatient psychiatric hospitals. Few of these are JVs with ACHC. HCA is building its own psychiatric hospitals, not-for-profits are choosing private equity-backed partners, and some psychiatrists are working with healthcare real estate investors to build independent psychiatric hospitals to which they can direct the most lucrative referrals.

At the same time, acute care hospitals are shifting the mix of patients in their psychiatric units, and some are adding new beds to these units. Acute psychiatric patient referrals most commonly come from hospital emergency rooms. Since freestanding psychiatric hospitals can now accept Medicaid managed care patients, hospitals appear to be using their referral power to send these patients out, freeing their own beds for more profitable commercial managed care and Medicare patients. If a hospital's own acute facility is full, we think it is more likely to send commercially insured patients to the newest facilities in its area, which may have relationships with its top psychiatrists. As a result, older freestanding facilities, such as many owned by ACHC, are then left with a higher mix of less profitable Medicaid managed care patients.

The impact of these changes seems evident in ACHC's reported revenue by payor. In 1H18, managed care revenue (30% of US revenue) declined -1.4% y-y, while Medicare revenue (14% of US revenue) declined -1.9% y-y. In contrast, Medicaid revenue (46% of US revenue) increased 13% y-y in 1H18. US EBITDA growth is decelerating, and US EBITDA margin declined 51 bp y-y in 1H18.

The large number of new beds being added in the US acute psychiatric market requires staffing by psychiatrists, psychiatric nurses, and other healthcare workers. Psychiatrists are generally not employed by ACHC, and as independent contractors they can follow the patients (and the money) to newer facilities with better patient mix and reimbursement. Nursing and other healthcare staff shortages are driving up costs and slowing the addition of new staffed beds. To keep costs under control, it appears that ACHC may be increasingly understaffing its facilities. Since the beginning of 2018, serious problems at ACHC facilities have been reported by local media outlets in Michigan, Ohio, Indiana, Virginia, and Florida. We are reminded that similar quality problems arose for Psychiatric Solutions, culminating in extensive exposés by the *Los Angeles Times* and *ProPublica* in November 2008.

Competition is also increasing for the company's outpatient and residential addiction treatment centers. Newer medication-assisted therapy (MAT) start-ups are locating new facilities near ACHC's existing centers, many of which were originally methadone clinics. For example, private equity backed CleanSlate Centers is taking advantage of increased public acceptance of opioid addiction as a disease to place its centers in desirable locations such as office buildings or on or near medical campuses. The older centers ACHC acquired from Bain Capital are often in undesirable parts of the same towns, remnants of a time when no one wanted to see or live near a methadone clinic and its unsavory customers.

ACHC's residential addiction treatment centers also face increasing competition, as evidenced by recent crackdowns on rehab patient brokering by Google and state regulators. Moreover, increased acceptance of MAT outpatient therapy may reduce the number of patients who seek much more expensive, often ineffective residential addiction treatment in ACHC's facilities.

ACHC's UK business has faced challenges since the February 2016 acquisition of Priory Group. Antitrust concerns forced divestments of higher margin facilities at a loss of $175M. The NHS, which funds most of the care provided by ACHC in the UK, appears to be cutting funding for behavioral health, and shortages of nurses and other healthcare workers are intensifying, driving up labor costs. UK constant currency revenue growth was 4.5% y-y in 1H18, while

EBITDA declined 130 bp y-y. Total constant currency UK EBITDA was flat y-y in 1H18.

The "street" expects $3.04B in revenue in 2018 and $3.22B in 2019, with EBITDA of $635M and $682M, and EPS of $2.53 and $2.76, respectively. We model $3.05B in revenue in 2018 and $3.13B in 2019, with EBITDA of $624M and $621M, and EPS of $2.42 and $2.21, respectively. Our $25.80 future fair value estimate is based on an EV/EBITDA multiple of 8.7x our 2019 EBITDA of $621M, a premium to UHS (8.5x) and HCA (8.6x).

Borrow information: ACHC

Supply Quantity	Short Interest	Available to Borrow	Date
36.9M	12.5M	15.0M	9.12.2018

Source: OWS/Prime Brokers Estimates

Background:

ACHC was founded in 2005 by private equity firm Waud Capital Partners. It became a public company after its November 2011 merger with publicly traded PHC. Waud exited its ACHC investment in 2017. In the US, ACHC operates 211 facilities, including about 37 acute inpatient hospitals, 42 US residential recovery centers (addiction/eating disorders), 117 comprehensive treatment centers (outpatient addiction facilities), and 13 residential treatment centers for children/adolescents. In the UK, it operates 373 facilities, ranging from acute psychiatric hospitals to long-term care homes for children, adults, and the elderly. The revenue mix for 2017 by type of facility is presented on the table below.

Table 1: ACHC 2017 Revenue Mix ($M)

	2017	% Total Revenue
US acute inpatient	$778	27%
Residential Addiction/Eating Disorders	$434	15%
CTCs (Outpatient Addiction)	$290	10%
Adolescent/Child Residential (RTCs)	$272	10%
Outpatient Community	$36	2%
Total US Revenue	$1,810	64%
UK Healthcare	$565	20%
UK Education/Children's	$175	6%
UK Adult/Elderly Care	$287	10%
UK Revenue	$1,027	36%
Total Revenue	$2,836	100%

Source: ACHC earnings releases

ACHC's US markets are very fragmented. Its single largest competitor in the freestanding behavioral health facility market Universal Health Services

(UHS), which operates 213 behavioral health facilities in the US, and 110 in the UK. An underappreciated class of competitors in the US market is psychiatric units in US acute care hospitals. As shown on the table below, data from the National Association of State Mental Health Program Directors suggests that at the end of 2014, 48% of acute psychiatric inpatients were being treated in acute care hospital psychiatric units, more than the 39% who were being treated in private psychiatric hospitals. Acute hospitals also treat an unknown number of psychiatric patients in "scatter beds" in their general wards.

Table 2: Number of Psychiatric Inpatients on December 31, 2014

	Patients	% of Total
Private Psychiatric Hospitals	24,804	39%
Acute Care Hospitals with Psych Units	30,864	48%
VA Medical Centers	3,124	5%
Residential Treatment Centers	1,851	3%
Other	3,499	5%
Total	58,492	100%

https://www.nri-inc.org/media/1319/tac-paper-10-psychiatric-inpatient-capacity-final-09-05-2017.pdf
*We exclude state/county psychiatric hospitals, which have a significantly longer length of stay

ACHC's payor mix varies significantly by type of facility. Until recently, services delivered in its US acute inpatient facilities were reimbursed only by commercial insurance and Medicare. Similarly, its US residential recovery services are paid for almost entirely by commercial insurance and self-pay by patients and their families. Its outpatient addiction services are paid by a mix of commercial insurance, Medicaid, and self-pay, while its residential treatment centers for children/adolescents are paid primarily by Medicaid. In the UK, the NHS and other public sources pay for most services. Across all US facilities, in 2017 32% of US revenue came from commercial payors, 16% came from Medicare, 44% came from Medicaid, and 9% came from self-pay (net of doubtful accounts). The US payor mix is shifting away from higher margin commercial/Medicare/self-pay towards Medicaid, for reasons we discuss below.

Under CMS rules established with the creation of Medicaid in 1965, Medicaid funds could not be used to treat adult Medicaid patients (aged 19-64) in acute inpatient psychiatric facilities with more than 16 psychiatric beds. CMS defines these facilities as Institutions of Mental Disease (IMDs), which were to be funded directly by the states (i.e. state asylums). Adult Medicaid patients were therefore typically treated in hospital EDs until a bed could be found in small hospital psychiatric units, or in "scatter beds" in hospitals without dedicated psychiatric unites, or at state mental hospitals with acute care facilities. ACHC's

freestanding psychiatric hospitals, which usually have 80 or more beds, could not be reimbursed for treating Medicaid patients, and so did not admit them.

CMS' policy benefited ACHC in two ways. First, it was a boon to its margins, since its acute psychiatric hospitals admitted only more profitable commercially-insured and Medicare patients. Second, it restrained competition, since acute care hospitals could not have more than 16 beds psychiatric beds without risking being defined as an IMD and losing reimbursement for psychiatric services to Medicaid patients. An exception was academic hospitals in urban areas, which often have large psychiatric units that are paid for with federal funding provided to hospitals that serve large numbers of indigent patients.

In July 2016, CMS changed the rule, allowing Medicaid managed care programs to pay for up to 15 days per month of acute inpatient psychiatric care and substance abuse disorders (SUDs) in acute psychiatric facilities with more than 16 beds. Medicaid fee-for-service patients still cannot be treated in these facilities, but more than 67% of adults on Medicaid are enrolled in Medicaid managed care. As shown on the table below, we estimate this rule change increased the number of patients aged 19-64 eligible to be admitted to these facilities from 140.5M before the change to 160.3M after the change, a 14% increase.

Table 3: 2016 US Adult Pop Eligible for treatment in IMDs (Psychiatric Facilities >16 beds)

	Pre July 2016	Post July 2016
Population Eligible for IMDs		
Employer Insurance	114.5M	114.5M
Non-Group Insurance	17.0M	17.0M
Veterans, Dual Eligibles	9.0M	9.0M
Medicaid Managed Care	---	19.8M
Total	140.5M	160.3M
% Change	--	14%
Population Not Eligible for IMDs		
Medicaid FFS	9.4M	9.4M
Medicaid Managed Care	19.8M	---
Uninsured	23.3M	23.3M
Total	52.5M	32.7M
% Change	--	(38%)

Source: OWS estimate based on https://www.kff.org/other/state-indicator/adults-19-64/?dataView=1¤tTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D and https://www.medicaid.gov/medicaid/managed-care/downloads/enrollment/2016-medicaid-managed-care-enrollment-report.pdf.

The potential of this new market was not lost on ACHC's competitors. Since April 2016, there has been a dramatic increase in the construction of new 40-

100 bed freestanding psychiatric hospitals across the US. These facilities are backed by private equity, real estate investors, or by hospitals themselves. There are also significant expansions of existing facilities, both freestanding and those within acute care hospitals. Moreover, acute care hospitals appear to be keeping more, higher paying commercially insured and Medicare patients in their own beds, and referring Medicaid patients to ACHC's facilities, pulling down ACHC US margins.

As we discuss below, ACHC faces significant challenges to its near term growth. The US acute inpatient segment is facing increased competition and patient mix shifts, growth is slowing in its residential recovery segment, and competition is intensifying for its CTC segment. Its UK segment is being hurt by NHS budget cuts. Wages in both the US and in the UK are rising. Growth from additional sizable acquisitions may be thwarted by its already high debt and rising interest rates. As shown on the table below, we think these challenges should lead to lower revenue, EBITDA, and EPS than the "street" expects.

Table 4: "Street" vs. OWS Estimates 2018-2019

	"Street" 2018e	OWS 2018e	"Street" 2019e	OWS 2019e
Total Revenue	3,040	3,048	3,220	3,132
Adj EBITDA*	635	624	682	621
Adj EPS	2.53	2.42	2.76	2.21

*Excludes stock comp and transaction expenses, in line with most "street" models

	"Street" 2018e	OWS 2018e	"Street" 2019e	OWS 2019e
Total Revenue	7.2%	7.5%	5.9%	2.8%
EBITDA	5.0%	3.2%	7.4%	-0.5%
EBITDA Margin	20.9%	20.5%	21.2%	20.0%
EPS	10.0%	5.2%	9.1%	-8.7%

Discussion:

1. A recent boom in construction of freestanding psychiatric hospitals is creating more competition for ACHC.

When CMS changed the rules and allowed Medicaid managed care patients access to freestanding psychiatric hospitals, ACHC predicted acute care hospitals would want to partner with ACHC in JVs to take advantage of the opportunity. In December 2016, the CEO said there were 12 ongoing discussions for JVs with large nonprofit systems. The number jumped to 16 discussions in February 2017, and to 20 in April 2017. Despite the optimism, more than two years after the change, only six JVs have opened or are in development. JVs with Erlanger (TN)

and Ochsner (LA) have opened, while those with Tower Health (PA) and Mount Carmel (OH) are under construction. Two more have been announced and are in early development (St. Thomas, University of Miami).

Our research suggests that after an initial surge in activity in 2017, hospitals are no longer choosing to partner with ACHC, UHS, or with other behavioral health operators such as SUN Behavioral Health and US Healthvest. As shown below, we found two such deals announced in 2015, four in 2016, eight in 2017, but only one so far in 2018.

Table 5: Hospital/Behavioral Health Operator JVs Announced 2014-present

Announced	Hospital	Partner	State	Beds	Opening
Aug 2014	Southcoast	ACHC	MA	120	Aug 2015
March 2015	St Elizabeth's	SUN Behavioral	KY	197	Early 2018
Oct 2015	St Francis/Baptist/ACHC (Crestwyn)	ACHC	TN	60	May 2016
March 2016	Erlanger	ACHC	TN	88	mid 2018
June 2016	Ochsner	ACHC	LA	82	Nov 2017
August 2016	Lancaster General	UHS	PA	126	June 2018
Nov 2016	Greenville	ACHC	SC	120	CON Denied
Feb 2017	Maury Regional	HCA/Tristar	TN	60	End 2019
April 2017	Providence St Joseph	UHS	WA	100	Fall 2018
April 2017	UMass	US Healthvest	MA	120	2019
June 2017	Univ Miami	ACHC	FL	104	??
July 2017	Mount Carmel	ACHC	OH	80	End 2018
Oct 2017	Silver Oaks	US Healthvest	IL	100	2020
Dec 2017	Tower Health	ACHC	PA	144	Early 2019
Dec 2017	Providence St Peter	UHS	WA	85	2019
May 2018	St Thomas	ACHC	TN	80	2020

Since mid-2016, acute care hospitals appear much more likely to expand their existing units or even build their own freestanding psychiatric hospitals. This makes sense, because these hospital operators do not need outside management expertise. By expanding independently, hospitals do not have to share the economics or pay management fees. Our search for announced behavioral health expansions by acute care hospitals came up with just one expansion announcement in 2015 and two in 2016. In 2017, however, we found 13 announcements, followed by 17 thus far in 2018. We think this list is far from comprehensive, because many expansions may not warrant a press release or local news coverage.

Table 6: Acute Care Hospital Inpatient Psych De Novos/Expansions, 2015-present

Announced	Hospital	State	Beds	Opening
April 2015	Mercy Health St. E's	OH	Expand from 16 to 38	Jan 2016
2016	Banner Health	AZ	Expand from 96 to 156	End 2017
June 2016	Texas Health	TX	Bought building to covert to 60 bed	Never opened
August 2016	Grand Strand Med Center	SC	New 20 bed unit	Feb 2018
2017	Generations BH	OH	New 76 bed facility	March 2018
Feb 2017	Woodridge of West TN	TN	Add 16 pediatric beds	2017
Feb 2017	Parkridge West	TN	Convert 8 med/surg to psych	2017
Jan 2017	Ephrata Comm Hospital	PA	Expand from 7 to 18	Summer 2017

June 2017	Cannon Memorial	NC	Expand from 10 to 30	Fall 2019
July 2017	Duke LifePoint	NC	Add 16 geriatric	July 2017
July 2017	Haywood Regional	NC	Add 16 geriatric	July 2017
July 2017	UP Health System	MI	Expand from 32 to 50	2018
July 2017	Pine Rest	MI	Expand from 172 to 198	July 2017
Sept 2017	Franklin Cty Med Center	NC	Reopen 13 bed geriatric, expand inpt	End 2018
October 2017	Nationwide Children's	OH	New 74 bed facility	2020
October 2017	Hilton Head Hospital	SC	New 16 bed unit	pending
Dec 2017	Carolinas Health	SC	New 20 bed unit	pending
January 2018	UTHealth Houston	TX	New 300 bed facility	2021
Feb 2018	Maryvale Hosptial	AZ	New 203 bed facility	Early 2019
Feb 2018	St Mary's	WI	Expand from 20 to 48 beds	2018
Feb 2018	Medical Center McKinney	TX	New 80 bed facility	Dec 2019
March 2018	Kershaw Health	SC	New 20 bed unit	??
March 2018	Crestwyn (ACHC JV)	TN	Expand from 66 to 80 beds	2018
March 2018	St Marys Madison	WI	Expand from 20 to 48 beds	2018
March 2018	St Thomas Stone River	TN	New 6 bed unit	March 2018
March 2018	Northwest Health	AR	Expand from 29 to 47 beds	March 2018
April 2018	Unity Psych Services	TN	48 geriatric beds	2019
April 2018	HCA/HealthOne	CO	Expand from 78 to 128 beds	2019
May 2018	St Vincent	MA	Expand inpt from 13 to 20	May 2018
June 2018	Vanderbilt	TN	Expand 92 to 106	2018
June 2018	Providence St Joseph	WA	New 24 bed adolescent unit	Fall 2018
June 2018	HCA Trident Med Center	SC	New 43 bed facility	CON approved
June 2018	Penn Highlands	PA	Expand from 40 to 126 beds	2021
July 2018	San Antonio St Hosp	TX	Expand from 302 to 342 beds	2020

Several behavioral health operators like ACHC are also aggressively expanding their freestanding psychiatric hospitals, further adding to supply and competition for the best paying patients. Our search for announced behavioral health de novos and expansions by behavioral health operators came up with one de novo announcement in 2014, six in 2015, six in 2016, eight in 2017, and eight so far in 2018. Again, we think this list is far from comprehensive. Many additional projects may be under development.

Table 7: Behavioral Health Operator De Novos/Expansions, 2014-present

Announced	Hospital	Investor	State	Beds	Open
2014	Cross Creek	ACHC	TX	90	March 2015
2015	San Jose	ACHC	CA	80	March 2016
April 2015	Willow Creek	Strategic BH	WI	72	Jan 2017
2015	Copper Springs	Springstone	AZ	72	May 2016
June 2015	Aurora BH East	Signature	AZ	Expand from 75 to 138	2016
June 2015	Palo Verde	UHS	AZ	Expand from 48 to 84	2016
2015	Taravista	Psychiatrist and RE investors	MA	10	Jan 2016
April 2016	Westbourgh	Signature	MA	152	Oct 2017
July 2016	Smokey Point	US Healthvest	WA	115	June 2018
July 2016	South Sound	US Healthvest	WA	75	Early 2019
July 2016	Smokey Point	US Healthvest	WA	115	June 2018
Oct 2016	Conway	ACHC	AR	80	Dec 2017
Nov 2016	Georgetown	SUN Behavioral	DE	90	Oct 2018
Jan 2017	Creekside	Strategic BH	TN	72	Oct 2018
Jan 2017	Ridgeview Instit	US Healthvest	GA	88	n/a
Feb 2017	Albuquerque	Haven BH	NM	Expand from 34 to 48	Feb 2017

Mar 2017	San Jose	Signature	CA	126	2019
May 2017	Columbus Springs	Springstone	OH	Expand from 24 to 72	2018
June 2017	Destiny	MedProperties/ Psychiatrist	AZ	90	Fall 2018
Dec 2017	Madison	Strategic BH	WI	72	2019
Dec 2017	El Paso	ACHC	TX	80	End 2018
Jan 2018	Boise	Haven BH	ID	72	Early 2019
Mar 2018	Lake Behavioral	US Healthvest	IL	Expand from 88 to146	Fall 2019
Mar 2018	Reading PA	Haven BH	PA	Expand from 67 to 86	2020
April 2018	Copper Springs East	Springstone	AZ	72 beds	2019
April 2018	Crossroads BH	Physician and investors	IN	40	End 2018
April 2018	Eagle View	Strategic BH	IA	72	2019
June 2018	Palmetto Low Country	UHS	SC	Expand from 48 to 108	CON under review
July 2018	San Antonio BH	Signature	TX	Expand from 108 to 198	2020

A particularly active player is US Healthvest, backed by Polaris, Oak HC/FT, and F-Prime, with five announced de novos since July 2016. Signature Healthcare (Aurora) signed a sale-leaseback deal with Care Capital Properties in April 2017, and has two announced de novos since July 2016, as does Welsh Carson's Springstone. PE-backed SUN Behavioral has one.

2. Acute care hospitals are keeping more profitable managed care/Medicare, sending Medicaid patients to ACHC, shifting the payor mix.

Acute psychiatric patient referrals most commonly come from hospital emergency rooms. These patients are a danger to themselves or others, and so cannot be turned away. Prior to 2016, the only way for hospitals to get these patients out of their emergency rooms was to admit them to their own small psychiatric units or their general ward "scatter beds," or wait until a bed opened in a state hospital acute care unit. Now, hospitals are using their referral power to quickly send Medicaid managed care patients to freestanding psychiatric hospitals such as those run by ACHC, and they are keeping more profitable commercially insured and Medicare patients. UHS has blamed this dynamic for the increase it has seen in Medicaid revenue and flat commercial insurance and Medicare revenue it has seen for the past few quarters.

ACHC management has denied that this dynamic is impacting ACHC, saying instead that Medicaid revenue is increasing due to higher revenue from its outpatient addiction treatment centers, which are receiving increased state funding. "Street" analysts have not pressed management on its earnings calls, perhaps because the company does not report revenue by payor in its earnings releases, and does so only in its SEC filings.

As shown on the tables below, ACHC's Medicaid revenue has increased by 12%-14% y-y for the past three quarters. This is very unlikely to be from outpatient addiction treatment centers (CTCs), especially since the company has added only 10 new CTCs since 2015. Moreover, the increase in Medicaid revenue coincides with slowing growth followed by declines in commercial and Medicare revenue from 4Q17 to 2Q18. We think ACHC is experiencing the same patient mix shift phenomenon that UHS is being more upfront about.

Table 8: ACHC Revenue by Payor, 2017-2Q18

	2017	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18
US Commercial Insur.	569.2	139.5	149.5	142.9	137.4	137.6	147.3
US Medicare	281.3	67.8	71.6	73.6	68.3	67.3	69.5
US Medicaid	796.4	190.8	197.3	199.6	208.7	213.3	225.6
US Self Pay/Other, net	163.0	42.1	43.1	37.6	40.2	44.2	39.1
Total US Revenue	1,809.9	440.2	461.4	453.7	454.6	462.4	481.5

Y-Y change

	2017	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18
US Commercial Insur	6.5%	10.9%	9.7%	5.0%	0.7%	-1.3%	-1.5%
US Medicare	5.4%	13.1%	5.8%	4.3%	-0.6%	-0.8%	-2.9%
US Medicaid	9.8%	7.0%	8.5%	9.4%	14.1%	11.8%	14.3%
US Self Pay/Other, net	-5.1%	-4.9%	-3.0%	-11.5%	-0.7%	5.1%	-9.2%
Total US Revenue	6.6%	7.8%	7.3%	5.1%	6.1%	5.0%	4.3%

% Total Revenue

	2017	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18
US Commercial Insur.	31.5%	31.7%	32.4%	31.5%	30.2%	29.8%	30.6%
US Medicare	15.5%	15.4%	15.5%	16.2%	15.0%	14.5%	14.4%
US Medicaid	44.0%	43.3%	42.8%	44.0%	45.9%	46.1%	46.8%
US Self Pay/Other, net	9.0%	9.6%	9.3%	8.3%	8.8%	9.6%	8.1%
Total US Revenue	100%	100%	100%	100%	100%	100%	100%

ACHC seems likely to lose even more commercially insured patients as competitors open new facilities in its markets. If a hospital's own acute facility is full, we think it is more likely to send commercially insured patients to the newest facilities in its area, rather than to ACHC's older, tired facilities. Moreover, new facilities may have relationships with the area's top psychiatrists, who can influence referrals. This could leave ACHC with even more Medicaid patients, and therefore less for more well off patients, perhaps, in the end, making ACHC's older facilities into facilities primarily for the underprivileged.

3. ACHC's US EBITDA margins are under pressure.

The shift in payor mix toward Medicaid has been accompanied by slowing US segment EBITDA growth and an accelerating decline in ACHC's US segment

EBITDA margins. As shown in the table below, US segment EBITDA increased only 1.3% y-y in 2Q18 versus an 8.2% y-y increase in 2Q17 and a 4.3% y-y increase in 1Q18. US segment EBITDA margins fell -82 bp y-y in 2Q18 versus a 26 bp y-y increase in 2Q17 and a -18 bp y-y decline in 1Q18.

Table 9: ACHC US Segment EBITDA, 2017-2Q18

	2017	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18
US Segment EBITDA	475.3	112.2	128.4	118.7	116.0	117.0	130.0
Y-Y change	7.2%	5.0%	8.2%	9.1%	6.3%	4.3%	1.3%
US EBITDA Margin	26.3%	25.5%	27.8%	26.2%	25.5%	25.3%	27.0%
Y-Y bp change	16	(69)	26	96	5	(18)	(82)

4. Shortages of psychiatrists, psychiatric nurses, and other healthcare workers are driving up US wage costs

The rapid expansion of US acute inpatient psychiatric beds, combined with tougher immigration laws and low unemployment, have created staffing shortages for acute psychiatric facilities like ACHC's. ACHC has acknowledged as much on its earnings calls, but claims it can keep costs under control. It has blamed higher wage costs primarily on issues in the UK, which we discuss below. Competitor UHS has attributed labor shortages in its US behavioral health business to the economic recovery, since nurses and health technicians are finding more pleasant and better paid work elsewhere. We think wage pressures are likely to intensify in the US, as the facilities under development we identified in Tables 5-7 look for experienced staff.

5. Recent incidents at ACHC facilities suggest ACHC may be cutting staffing to dangerous levels.

Unfortunately for ACHC's patients, the company may already be working with reduced staffing levels due to shortages and/or to save costs. We have identified reported safety incidents at five ACHC facilities in five different states just since the beginning of 2018. We provide links to media reports of these incidents below. In Ohio, the situation was bad enough that OhioHealth, OSU, Netcare and Mount Carmel (an ACHC JV partner) halted referrals to ACHC's Ohio Hospital for Psychiatry in May 2018. This followed the publication of a scathing report (http://www.disabilityrightsohio.org/dro_report_problems_at_ohp) by Disability Rights Ohio, detailing problems at the hospital.

Table 10: Media Reports of Safety Issues at ACHC Facilities, June 2017-July 2018

Date	State	Facility	Links
July 2018	MI	Harbor Oaks	https://www.wxyz.com/news/local-news/investigations/3-more-abuse-claims-lead-to-charges-at-harbor-oaks-hospital https://www.wxyz.com/news/local-news/investigations/abuse-allegations-mount-at-harbor-oaks-as-watchdogs-issue-clean-bill-of-health
May 2018	OH	Ohio Hospital for Psychiatry	http://www.dispatch.com/news/20180525/patient-referrals-temporarily-halted-at-ohio-hospital-for-psychiatry
April 2018	VA	Southstone	http://www.yourgv.com/news/local_news/two-juveniles-charged-in-southstone-incident-thursday/article_bad1887a-3f3d-11e8-ae2d-1bd6fb5bf8dd.html
March 2018	IN	Resource Residential Treatment	https://www.theindychannel.com/news/local-news/crime/police-arrest-9-during-riot-at-east-side-juvenile-facility https://www.wishtv.com/news/i-team-8/former-employee-staff-at-youth-psychiatric-facility-encouraged-fights-were-violent-with-kids/1096558222
Jan 2018	FL	Park Royal	https://www.news-press.com/story/news/crime/2018/01/03/park-royal-hospital-patient-reports-sex-crime-after-finding-used-condom-her-according-lee-sheriff-re/1001338001/ https://www.news-press.com/story/news/2017/11/16/park-royal-hospital-patient-care-deficiencies-highlighted-federal-inspection-report/866310001/
June 2017	AR	Ascent Child Health Services	https://www.arktimes.com/ArkansasBlog/archives/2017/06/21/state-announces-probation-end-of-transportation-for-facility-where-child-died https://www.arktimes.com/ArkansasBlog/archives/2017/08/01/child-left-on-playground-at-ascent-center-in-north-little-rock-two-fired

6. Increasing competition for medication-assisted treatment patients (MAT) limits growth, and threatens the residential addiction center business.

ACHC has about 117 outpatient addiction treatment centers that it calls comprehensive treatment centers (CTCs). It bought 88 of them in 2015 with its acquisitions of CRC Health and QAM. It acquired another 19 in November 2015 in its Discovery House acquisition. Since then it has added only 10 more.

In contrast, PE backed start-ups are rapidly adding centers. For example, CleanSlate Centers has grown from 23 centers in 2017 to 45 centers in August 2018. By the end of 2018, it expects to have 65 centers. In May 2018, the

company raised $25M in a private round led by HealthQuest Capital and Granite Growth Partners. Another start up is MedMark Treatment centers, backed by Webster Capital, that has 167 centers in 26 states.

In Massachusetts, CleanSlate has opened facilities in some of the same towns as ACHC's facilities. For example, in Springfield, MA, CleanSlate's facility at 1985 Main Street is less than a mile from ACHC's CTC facility at 2257 Main Street. CleanSlate locations seem much more desirable than ACHC's, which began life as methadone clinics serving patients that no one wanted to live near or see. Now that opioid addiction is recognized as a disease of the upper and middle classes, and medication treatment options include more accepted alternatives like Suboxone and Vivitrol, CleanSlate is able to locate its facilities in office complexes with ample parking in safe locations. We think patients, who can choose where they receive treatment, are likely voting with their feet and moving to CleanSlate.

We think medication assisted treatment (MAT) with Suboxone and Vivitrol represents an emerging threat to ACHC's residential recovery business. As patients become more educated about the dismal outcomes of 30-day addiction programs such as those offered by ACHC, they are more likely to try long term treatment with medication. This is likely to be a preferred option for insurers, as well, since MAT can be much less expensive than residential treatment.

ACHC's residential recovery centers also face competition from many start-ups and some unscrupulous providers, as shown by recent crackdowns on patient brokering by Google and through Congressional investigations. We have no reason to think that ACHC engages in such practices, but it may be caught in the crossfire if insurers crackdown on reimbursement for these services.

7. Same facility patient day growth has slowed, suggesting US occupancy rates may come under pressure.

Management grows same facility patient days by adding beds to existing facilities. It says it carefully manages these additions, waiting until occupancy rates are consistently exceeding 80% and it is turning away patients, so it knows it can fill the added capacity. This has kept margins high. With so much new capacity entering the market, however, ACHC may be faced with lower occupancy rates and lower margins.

Slowing growth in same facility patient days suggests recent occupancy rates are not strong enough to justify significant new bed additions. As shown below, same facility patient days grew only 2% in 1H18, down from about 6% in

1H17. If same facility patient days turn negative in future quarters, it would suggest occupancy rates are declining.

Table 11: ACHC Y-Y growth in US Same Facility Patient Days, 2015-2Q18

	2015	2016	2017	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18
Same facility patient days	7.4%	7.0%	4.8%	5.8%	6.0%	4.2%	3.1%	2.0%	1.9%

Source: ACHC earnings releases

8. NHS funding for behavioral health in the UK is under pressure, keeping ACHC's UK growth in low single digits

ACHC's UK business has faced challenges since its February 2016 acquisition of Priory Group. UK antitrust officials forced ACHC to divest 21 of its UK facilities due to overlap with UK facilities that ACHC acquired in 2014. The sale, completed in November 2016, was booked at a loss of $175M. The divested facilities had higher EBITDA margins than the facilities ACHC was allowed to keep, so the divestment was a drag on UK and total EBITDA margins.

ACHC is also dealing with the repercussions of the Brexit vote in June 2016, which has lowered the value of the GBP and the profits it can bring back to the US. It has also exacerbated belt tightening by the NHS, which funds most of the care provided by ACHC in the UK. As shown on the tables below, so far in 2018, the total number of people in NHS England's system receiving early intervention in psychosis (hallucinations, delusions, and a disturbed relationship with reality) is declining by 8%-10% y-y. Waiting lists are growing at a worrying 10%-11% y-y.

Table 12: NHS England TTM Average Monthly Patients Awaiting or Receiving Treatment for Early Intervention in Psychosis

	Nov17	Dec17	Jan-18	Feb-18	Mar18	Apr-18	May-18	Jun-18
Waiting List	1,153	1,161	1,186	1,192	1,198	1,214	1,224	1,234
In Treatment	1,099	1,087	1,081	1,076	1,059	1,070	1,067	1,064
Total	2,251	2,248	2,266	2,268	2,257	2,284	2,291	2,298

Note: Numbers may not add due to rounding
Source: http://www.england.nhs.uk/statistics/statistical-work-areas/eip-waiting-times/

Y-Y change	Nov17	Dec17	Jan-18	Feb-18	Mar18	Apr-18	May-18	Jun-18
Waiting List	-3%	-2%	3%	5%	7%	10%	11%	11%
In Treatment	-3%	-5%	-7%	-8%	-10%	-8%	-8%	-8%
Total	-3%	-3%	-2%	-2%	-2%	1%	2%	2%

Once the Priory acquisition lapped in February 2016, UK constant currency revenue growth was about 3% y-y for the remaining quarters in 2017. The first half has seen bump up to 4.2% y-y in 1Q18 and 4.6% y-y in 2Q18, in part because of an acquisition in Scotland in November 2017 for $21M. Management also says it is repurposing beds in some of its facilities to meet areas of stronger demand, which may be contributing to revenue. We are modeling slightly better 5% y-y growth in the UK for 2019.

Table 13: UK cc Total Facility Growth

	2Q17	3Q17	4Q17	1Q18	2Q18
Y-Y cc change	2.9%*	2.4%*	3.3%*	4.2%	4.6%

*Excluding impact of revenue lost due to Priory divestiture in Nov 2016
Source: ACHC earnings releases

The new revenue does not appear to be boosting EBITDA, however. In 2Q18, UK segment constant currency EBITDA declined 1.8% y-y versus a 3% y-y increase in 1Q18. UK segment EBITDA margin declined -140 bp y-y in 2Q18 to 19.1% versus a -21 bp decline in 1Q18. We think margins should continue to decline in 2019 to 19.8% for the full year, a 30 bp y-y decline.

9. Labor shortages caused by Brexit and mandatory NHS wage increases adopted in May 2018 are pressuring UK margins

As shown on the table below, the Nurse and Midwifery Council reports that the number of mental health nurses registered in the UK has been declining since at least 2015, with declines accelerating in 2017 post Brexit.

Table 14: Mental Health Nurses Registered in the UK, March 2015-March 2018

	March 2015	March 2016	March 2017	March 2018
Nurses	90,953	90,068	88,741	88,421
Y-Y change	(0.4%)	(1.0%)	(1.5%)	(0.4%)

Source: https://www.nmc.org.uk/news/news-and-updates/new-nmc-figures-continue-to-highlight-major-concern-as-more-eu-nurses-leave-the-uk/

The declines are due at least in part to EU nurses across all disciplines leaving the UK. From April 2017-March 2018, net immigration to the UK of nurses from the EU was -3,157 compared to +3,301 in April 2016-March 2017 and +7,408 in April 2015-March 2016.

In response to union demands and persistent staff shortages, in May 2018 the UK government agreed to increase wages for NHS staff. The lowest paid workers will see an 11% y-y increase in 2018, while the average increase for all workers (excluding physicians and senior administrators) will be about 6.5% over three years (https://www.thesun.co.uk/news/5861360/nhs-pay-rise-scale-staff-theresa-may-2018/).

ACHC management has downplayed the impact of the pay raise on its UK business, saying it has always paid more than mandated by NHS. We think it is likely the company will have to maintain the difference versus competitors to keep its staff.

Wage pressures appear to be pressuring ACHC's EBITDA growth and margins. In 2Q18, UK segment constant currency EBITDA decline 1.8% y-y versus a 3% y-y increase in 1Q18. UK segment EBITDA margin declined 140 bp y-y in 2Q18 to 19.1% versus a -21 bp decline in 1Q18.

10. Most of ACHC's debt carries variable rate interest.

At present, the company has $3.1B in debt, and its current Net Debt/EBITDA is 5.1x. About 55% of debt is senior secured loans with floating interest rates of LIBOR plus 2.5% (totaling about 5.3% at present), while the remaining 45% of debt is at fixed interest rate debt at a blended 5.9%. The company has about $500M of availability under its revolving credit facility, which it has promised to deploy for acquisitions since early 2017. Its earliest term loan of $150M is due in 2021, with another $300M due in 2022 and $650M due in 2023.

On its 2Q18 call, ACHC lowered its expected 2018 EPS range from $2.58-$2.62 to $2.52-$2.56, citing higher interest rates and FX pressure from a declining pound. Its 2Q18 EPS guidance assumes a 1.30 GBP/USD rate versus 1.35 in 1Q18 and 1.30 today.

11. DSO is rising, especially for US Medicaid revenue (42 2Q17, 49 2Q18).

ACHC's SEC filings report A/R aging by payor type, allowing us to calculate DSO for each payor. In 1Q18, to comply with ASC 606, the company began reporting revenue by payor net of doubtful accounts, rather than gross. We think nearly all doubtful accounts are related to its self-pay and other revenue, so we calculate DSO using US/UK Self Pay and other revenue net of the entire provision for doubtful accounts.

As shown on the table below, DSO for Commercial, Medicare, and NHS have been fairly stable, but Medicaid DSO have increased from 43 and 42 in 1Q17 and 2Q17 to 50 and 49 days in 1Q18 and 2Q18, respectively. Total DSO increased from 56 in 1Q17 and 2Q17 to 63 and 62 in 1Q18 and 2Q18, respectively. We wonder if Medicaid managed care plans are denying claims or pushing back on length of stay in acute inpatient facilities.

Table 15: ACHC DSO by Payor, 1Q17-2Q18

	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18
US Commercial	61	59	64	66	71	62
US Medicare	55	53	50	49	55	55
US Medicaid	43	42	44	43	50	49
NHS	10	11	11	12	11	11
US/UK Self Pay/Other, net	36	38	37	35	34	42
Total	56	56	59	59	63	62

Source: SEC filings

12. Recent results and guidance

ACHC reported 2Q18 revenue of $765.7M, below the $768M expected. EBITDA of $165.0M was slightly below expectations of $165.8M. EPS of $0.70 was in line with consensus.

The company lowered its full year expectations on the 2Q18 earnings call, blaming higher interest rates and a declining British pound. Total 2018 revenue guidance was lowered from $3.04B-$3.08B to $3.02B-$3.06B, and 2018 EPS was lowered from $2.58-$2.62 to $2.52-$2.56. Interest expense guidance for 2018 increased from $180M to $186M. The tax rate is expected to be 16% for the remainder of 2018.

13. Financial assumptions

ACHC provides a number of metrics on its quarterly calls, including US and UK same facility and total patient days, admissions, length of stay (LOS) and revenue per patient day. These metrics seem to be of limited value in understanding ACHC's business. They are blended values for ACHC's many different types of facilities, which have very different pricing, LOS, and revenue per day.

We model ACHC's US revenue by payor. We expect US commercial insurance revenue to continue to decline, as more patients stay in psychiatric units of acute care hospitals, or are referred to newer facilities. We model a 1.4% y-y decline in 2018, and a 2.0% y-y decline in 2019. For similar reasons, we expect Medicare revenue to continue to decline, and model a 2.5% decline in 2018 and 2.7% decline in 2019.

We expect growth in Medicaid revenue to decelerate, as the surge in newly available Medicaid managed care patients is absorbed, and competition intensifies. Note that while the reimbursement change became effective in July 2016, its full effect was not in place until July 2017, since individual states had to approve the

change, and ACHC has to contract with Medicaid managed care plans. We expect Medicaid revenue to grow 12.4% y-y in 2018 and 5.0% y-y in 2019.

We model total US revenue growth of 4.5% y-y in 2018 and 1.4% y-y in 2019, versus "street" expectations of 5.7% growth in 2018 and 5.6% growth in 2019. We model UK revenue growth of 12.7% (aided by 4%-5% appreciation in the British pound) in 2018 and 5.0% in 2019, versus "street" expectations of 10.3% growth in 2018 and 5.7% growth in 2019.

We expect lower US occupancy rates and rising wage costs in both the US and UK to lower EBITDA margins. We project US segment EBITDA margin will fall 55 bp in 2018 to 25.7%, and a further 99 bp in 2019 to 24.7%. We project UK segment EBITDA margin will fall 50 bp in 2018 to 18.8%, and a further 30 bp in 2019 to 18.5%.

We project corporate/other overhead of $80M in 2018, below the company's guidance on its 4Q17 call of $90M, but in line with its current run rate. We estimate $78M in corporate/other overhead in 2019. Our total EBITDA margin estimate is 20.5% for 2018 and 19.8% for 2019 versus the "street" expectation of 20.9% and 21.2%.

14. Valuation

ACHC shares currently trade at an EV/2019 EBITDA of 9.3x. Since it stopped levering up in mid-2016, shares have traded between 6.9x and 10.6x forward EBITDA. Its closest peer, UHS, trades at 8.5x, while HCA trades at 8.6x.

ACHC's multiple should compress, as investors realize the supply of acute care psychiatric beds in the US is rapidly increasing, and hospitals are holding on to the most profitable patients. We think even experienced operators like ACHC's management will find it difficult to overcome competitive supply issues and hospital referral patterns that are now out of its control.

The "street" expects $3.04B in revenue in 2018 and $3.22B in 2019, with EBITDA of $635M and $682M, and EPS of $2.53 and $2.76, respectively. We model $3.05B in revenue in 2018 and $3.13B in 2019, with EBITDA of $624M and $621M, and EPS of $2.42 and $2.21, respectively. Our $25.80 future fair value estimate is based on an EV/EBITDA multiple of 8.7x our 2019 EBITDA of $627.4M, still a premium to UHS (8.5x) and HCA (8.6x).

15. Risks

Risks to achieving our target price include changes in reimbursement, including Congressional or CMS actions allowing allow fee-for-service Medicaid patients to be admitted to ACHC's freestanding psychiatric hospitals. Bills to make this change are periodically introduced in the House and Senate, but no action has occurred to date. In the UK, NHS may allocate more funding of mental health services.

ACHC could make another acquisition with its $500M revolver, as it has been promising to do for some time. Further UK acquisitions appear out of the question due to antitrust issues. In the US, we suspect ACHC management is aware of the increasing psychiatric bed capacity in hospitals and freestanding units, and is not willing to pay for assets that are likely to face the same challenges as it sees in the rest of its business.

16. Financial projections

a. Quarterly projections

Income Statement ($M)	1Q18	2Q18	3Q18e	4Q18e	1Q19e	2Q19e	3Q19e	4Q19e
US Commercial Insurance	137.6	147.3	141.0	135.5	135.0	144.0	138.0	133.0
US Medicare	67.3	69.5	71.5	66.0	65.5	67.5	69.5	64.5
US Medicaid	213.3	225.6	226.0	230.0	230.0	237.0	235.0	238.0
US Other, net	44.2	39.1	37.0	40.0	40.0	40.0	40.0	40.0
Total US Revenue	462.4	481.5	475.5	471.5	470.5	488.5	482.5	475.5
Total UK Revenue	279.8	284.3	293.0	300.0	295.0	299.0	307.0	314.0
Total Revenue	742.2	765.7	768.5	771.5	765.5	787.5	789.5	789.5
Salaries, wages	404.6	409.6	416.6	419.5	420.0	427.0	436.0	439.0
Professional fees	54.0	53.5	54.0	55.0	55.0	56.0	56.0	56.0
Supplies	29.4	30.1	31.0	31.0	31.0	31.0	31.0	31.0
Rents and leases	20.3	20.2	20.5	21.0	20.5	20.7	20.7	20.7
Other opex	88.2	87.3	89.0	89.0	89.0	89.5	90.5	90.5
Total Adj Expenses	596.5	600.7	611.1	615.5	615.5	624.2	634.2	637.2
Total Adj EBITDA	145.7	165.0	157.4	156.0	150.0	163.3	155.3	152.3
Stock comp (excl)	6.9	7.1	7.0	7.0	7.0	7.0	7.0	7.0
Deprec/Amort	39.8	39.9	40.0	40.1	41.8	41.9	42.0	42.1
EBIT	99.0	118.0	110.4	108.9	101.2	114.4	106.3	103.2
Interest expense, net	(45.2)	(45.8)	(47.0)	(48.0)	(49.0)	(49.0)	(49.0)	(49.0)
Transaction exp (excl)	4.8	2.9	0.0	0.0	0.0	0.0	0.0	0.0
Adj Pretax income	53.8	72.2	63.4	60.9	52.2	65.4	57.3	54.2
Taxes	8.6	11.0	9.5	9.1	7.8	9.8	8.6	8.1
Adj Net Income	45.3	61.3	53.9	51.8	44.4	55.6	48.7	46.1
Net inc noncontrolling	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
Total Net Income	45.2	61.2	53.8	51.7	44.3	55.5	48.6	46.0
Adj EPS	0.52	0.70	0.61	0.59	0.50	0.63	0.55	0.52
S/O	87.3	87.5	87.6	87.7	87.8	87.9	88.0	88.1

Y-Y change	1Q18	2Q18	3Q18e	4Q18e	1Q19e	2Q19e	3Q19e	4Q19e
US Commercial Insurance	-1.3%	-1.5%	-1.3%	-1.4%	-1.9%	-2.2%	-2.1%	-1.8%
US Medicare	-0.8%	-2.9%	-2.8%	-3.3%	-2.6%	-2.9%	-2.8%	-2.3%
US Medicaid	11.8%	14.3%	13.2%	10.2%	7.8%	5.1%	4.0%	3.5%
US Other, net	5.1%	-9.2%	-1.7%	-0.5%	-9.6%	2.3%	8.1%	0.0%
Total US Revenue	5.0%	4.3%	4.8%	3.7%	1.8%	1.5%	1.5%	0.8%
Total UK Revenue	17.1%	11.7%	11.4%	11.1%	5.4%	5.2%	4.8%	4.7%
Total Revenue	9.3%	7.0%	7.2%	6.5%	3.1%	2.8%	2.7%	2.3%
Salaries, wages	9.6%	8.9%	9.2%	8.6%	3.8%	4.2%	4.7%	4.6%
Professional fees	24.4%	15.6%	1.9%	2.9%	1.9%	4.7%	3.7%	1.8%
Supplies	6.1%	5.2%	8.0%	5.3%	5.4%	3.0%	0.0%	0.0%
Rents and leases	7.0%	4.1%	7.9%	8.7%	1.0%	2.5%	1.0%	-1.4%
Other opex	5.4%	5.1%	8.1%	7.7%	0.9%	2.5%	1.7%	1.7%
Total Adj Expenses	9.9%	8.5%	8.3%	7.8%	3.2%	3.9%	3.8%	3.5%
Total Adj EBITDA	6.9%	1.7%	3.3%	1.6%	2.9%	-1.1%	-1.3%	-2.4%
Stock comp (excl)	-6.4%	-4.1%	68.9%	57.0%	1.4%	-1.4%	0.0%	0.0%
Deprec/Amort	18.4%	13.4%	9.9%	6.2%	5.0%	5.0%	5.0%	5.0%
EBIT	3.8%	-1.4%	-1.2%	-2.2%	2.2%	-3.1%	-3.7%	-5.2%
Interest expense, net	5.7%	5.3%	5.6%	6.1%	8.4%	7.0%	4.3%	2.1%
Adj Pretax income	2.3%	-5.2%	-5.8%	-7.9%	-3.0%	-9.5%	-9.6%	-11.0%
Taxes	-33.6%	-41.9%	-44.1%	-30.7%	-8.5%	-10.4%	-9.6%	-11.0%
Adj Net Income	14.0%	6.9%	7.2%	-2.2%	-2.0%	-9.3%	-9.6%	-11.0%
Total Net Income	13.3%	6.8%	6.7%	-2.3%	-2.1%	-9.4%	-9.6%	-11.0%
Adj EPS	12.8%	6.3%	6.2%	-2.9%	-2.7%	-9.8%	-10.1%	-11.4%
S/O	0.5%	0.5%	0.5%	0.6%	0.6%	0.5%	0.5%	0.5%

% Total Revenue	1Q18	2Q18	3Q18e	4Q18e	1Q19e	2Q19e	3Q19e	4Q19e
Commercial % US rev	29.8%	30.6%	29.7%	28.7%	28.7%	29.5%	28.6%	28.0%
Medicare % US rev	14.5%	14.4%	15.0%	14.0%	13.9%	13.8%	14.4%	13.6%
Medicaid % US rev	46.1%	46.8%	47.5%	48.8%	48.9%	48.5%	48.7%	50.1%
US Other, net % US rev	9.6%	8.1%	7.8%	8.5%	8.5%	8.2%	8.3%	8.4%
Total US Revenue	62.3%	62.9%	61.9%	61.1%	61.5%	62.0%	61.1%	60.2%
Total UK Revenue	37.7%	37.1%	38.1%	38.9%	38.5%	38.0%	38.9%	39.8%
Total Revenue	100%	100%	100%	100%	100%	100%	100%	100%
Salaries, wages	54.5%	53.5%	54.2%	54.4%	54.9%	54.2%	55.2%	55.6%
Professional fees	7.3%	7.0%	7.0%	7.1%	7.2%	7.1%	7.1%	7.1%
Supplies	4.0%	3.9%	4.0%	4.0%	4.0%	3.9%	3.9%	3.9%
Rents and leases	2.7%	2.6%	2.7%	2.7%	2.7%	2.6%	2.6%	2.6%
Other opex	11.9%	11.4%	11.6%	11.5%	11.6%	11.4%	11.5%	11.5%
Gain/Loss Derivatives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Adj Expenses	80.4%	78.4%	79.5%	79.8%	80.4%	79.3%	80.3%	80.7%
Total Adj EBITDA	19.6%	21.6%	20.5%	20.2%	19.6%	20.7%	19.7%	19.3%
Stock comp (excl)	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%
Deprec/Amort	5.4%	5.2%	5.2%	5.2%	5.5%	5.3%	5.3%	5.3%
EBIT	13.3%	15.4%	14.4%	14.1%	13.2%	14.5%	13.5%	13.1%
Interest expense, net	-6.1%	-6.0%	-6.1%	-6.2%	-6.4%	-6.2%	-6.2%	-6.2%
Transaction exp (excl)	0.6%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Adj Pretax income	7.3%	9.4%	8.2%	7.9%	6.8%	8.3%	7.3%	6.9%
Taxes	1.2%	1.4%	1.2%	1.2%	1.0%	1.2%	1.1%	1.0%
Adj Net Income	6.1%	8.0%	7.0%	6.7%	5.8%	7.1%	6.2%	5.8%
Net inc noncontrolling	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Net Income	6.1%	8.0%	7.0%	6.7%	5.8%	7.0%	6.2%	5.8%

Income Statement ($M)	2015a	2016a	2017a	2018e	2019e
US Commercial Insurance	423.1	534.5	569.2	561.4	550.0
US Medicare	214.1	266.9	281.3	274.3	267.0
US Medicaid	609.8	725.5	796.4	894.8	940.0
US Other, net	179.2	171.7	163.0	160.4	160.0
Total US Revenue	1,426.2	1,698.5	1,809.9	1,890.9	1,917.0
Total UK Revenue	360.7	1,110.4	1,026.5	1,157.1	1,215.0
Corporate/Other	7.6	2.0	0.0	0.0	0.0
Total Revenue	1,794.5	2,810.9	2,836.4	3,048.0	3,132.0
Salaries, wages	953.3	1,513.5	1,512.7	1,650.3	1,722.0
Professional fees	116.5	185.5	196.2	216.5	223.0
Supplies	80.7	117.4	114.4	121.5	124.0
Rents and leases	32.5	73.4	76.7	82.0	82.6
Other opex	206.7	312.6	331.8	353.5	359.5
Gain/Loss Derivatives	0.1	(0.5)	0.0	0.0	0.0
Total Adj Expenses	1,389.7	2,201.9	2,231.8	2,423.8	2,511.1
Total Adj EBITDA	404.9	608.5	604.5	624.2	620.9
Stock comp (excl)	20.5	28.4	23.4	28.0	28.0
Deprec/Amort	63.6	135.2	143.0	159.8	167.8
EBIT	320.9	445.0	438.2	436.4	425.1
Interest expense, net	(106.7)	(181.4)	(176.0)	(186.0)	(196.0)
Transaction exp (excl)	31.4	48.3	24.3	7.7	0.0
Adj Pretax income	214.2	263.6	262.2	250.4	229.1
Taxes	62.4	55.5	62.0	38.2	34.4
Adj Net Income	151.8	208.1	200.3	212.2	194.7
Net inc noncontrolling	1.1	2.0	0.2	(0.3)	(0.4)
Total Net Income	152.9	210.1	200.5	211.9	194.3
Adj EPS	2.23	2.44	2.30	2.42	2.21
S/O	68.5	86.0	87.1	87.5	88.0

Y-Y change	2015a	2016a	2017a	2018e	2019e
US Commercial Insurance	78.5%	26.3%	6.5%	-1.4%	-2.0%
US Medicare	6.9%	24.6%	5.4%	-2.5%	-2.7%
US Medicaid	54.3%	19.0%	9.8%	12.4%	5.0%
US Other, net	888.3%	-4.2%	-5.1%	-1.6%	-0.2%
Total US Revenue	67.7%	19.1%	6.6%	4.5%	1.4%
Total UK Revenue	138.7%	207.8%	-7.6%	12.7%	5.0%
Total Revenue	78.6%	56.6%	0.9%	7.5%	2.8%
Salaries, wages	68.6%	58.8%	-0.1%	9.1%	4.3%
Professional fees	121.9%	59.3%	5.7%	10.4%	3.0%
Supplies	66.3%	45.5%	-2.5%	6.2%	2.1%
Rents and leases	166.4%	125.8%	4.5%	6.9%	0.7%
Other opex	86.9%	51.3%	6.1%	6.5%	1.7%
Total Adj Expenses	73.4%	58.4%	1.4%	8.6%	3.6%
Total Adj EBITDA	87.9%	50.3%	-0.7%	3.2%	-0.5%
Stock comp (excl)	102.5%	38.7%	-17.6%	19.8%	0.0%
Deprec/Amort	95.0%	112.7%	5.8%	11.8%	5.0%
EBIT	85.7%	38.7%	-1.5%	-0.4%	-2.6%
Interest expense, net	121.3%	70.0%	-3.0%	5.7%	5.4%
Adj Pretax income	71.9%	23.1%	-0.5%	-4.5%	-8.5%
Taxes	57.9%	-11.0%	11.6%	-38.4%	-9.9%
Adj Net Income	78.4%	37.1%	-3.8%	6.0%	-8.2%
Total Net Income	79.7%	37.4%	-4.6%	5.7%	-8.3%
Adj EPS	45.2%	9.4%	-5.8%	5.2%	-8.7%
S/O	23.8%	25.6%	1.3%	0.5%	0.5%

% Total Revenue	2015a	2016a	2017a	2018e	2019e
Commercial % US rev	29.7%	31.5%	31.5%	29.7%	28.7%
Medicare % US rev	15.0%	15.7%	15.5%	14.5%	13.9%
Medicaid % US rev	42.8%	42.7%	44.0%	47.3%	49.0%
US Other, net % US rev	12.6%	10.1%	9.0%	8.5%	8.3%
Total US Revenue	79.5%	60.4%	63.8%	62.0%	61.2%
Total UK Revenue	20.1%	39.5%	36.2%	38.0%	38.8%
Corporate/Other	0.4%	0.1%	0.0%	0.0%	0.0%
Total Revenue	100.0%	100.0%	100.0%	100.0%	100.0%
Salaries, wages	53.1%	53.8%	53.3%	54.1%	55.0%
Professional fees	6.5%	6.6%	6.9%	7.1%	7.1%
Supplies	4.5%	4.2%	4.0%	4.0%	4.0%
Rents and leases	1.8%	2.6%	2.7%	2.7%	2.6%
Other opex	11.5%	11.1%	11.7%	11.6%	11.5%
Gain/Loss Derivatives	0.0%	0.0%	0.0%	0.0%	0.0%
Total Adj Expenses	77.4%	78.3%	78.7%	79.5%	80.2%
Total Adj EBITDA	22.6%	21.6%	21.3%	20.5%	19.8%
Stock comp (excl)	1.1%	1.0%	0.8%	0.9%	0.9%
Deprec/Amort	3.5%	4.8%	5.0%	5.2%	5.4%
EBIT	17.9%	15.8%	15.4%	14.3%	13.6%
Interest expense, net	-5.9%	-6.5%	-6.2%	-6.1%	-6.3%
Transaction exp (excl)	1.7%	1.7%	0.9%	0.3%	0.0%
Adj Pretax income	11.9%	9.4%	9.2%	8.2%	7.3%
Taxes	3.5%	2.0%	2.2%	1.3%	1.1%
Adj Net Income	8.5%	7.4%	7.1%	7.0%	6.2%
Net inc noncontrolling	0.1%	0.1%	0.0%	0.0%	0.0%
Total Net Income	8.5%	7.5%	7.1%	7.0%	6.2%

17. Financial metrics

	6/30/18
Debt	3,221.10
Equity	2,653.30
Tangible book	-177.6
Market value	3,213
Cash	79.5
EV	6,355

	2017	2018e	2019e
EBITDA	604.5	624.2	620.9
Capex	-274.2	-361.6	-300.0
Surplus FCF (Net income + depr/amort - capex)	68.4	13.4	54.3
EV/EBITDA	10.5	10.2	10.2