UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended March 31, 2018

Or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission File Number 000-50194

HMS HOLDINGS CORP.
(Exact name of registrant as specified in its charter)

Delaware	**11-3656261**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
5615 High Point Drive, Irving, TX	**75038**
(Address of principal executive offices)	(Zip Code)

(Registrant's Telephone Number, Including Area Code)
(214) 453-3000

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for shorter period that the registrant was required to submit and post such files). ☒ Yes ☐ No

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

Large accelerated filer ☒	Accelerated filer ☐
Non-accelerated filer ☐ (Do not check if a smaller reporting company)	Smaller reporting company ☐
	Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of April 27, 2018, there were approximately 83,216,661 shares of the registrant's common stock (par value $0.01 per share) outstanding.

HMS HOLDINGS CORP. AND SUBSIDIARIES
QUARTERLY REPORT ON FORM 10-Q
FOR THE THREE MONTHS ENDED MARCH 31, 2018
INDEX

Glossary of Terms and Abbreviations

Form 10-Q	HMS Holdings Corp. Quarterly Report on Form 10-Q for the three months ended March 31, 2018
2017 Form 10-K	HMS Holdings Corp. Annual Report on Form 10-K for the year ended December 31, 2017
ACA	Patient Protections and Affordable Care Act, as amended by the Health Care and Education
ACO	Accountable Care Organization
ADR	Additional Documentation Request
ASC	Accounting Standards Codification
ASO	Administrative Service Only
ASU	Accounting Standards Update
CHIP	Children's Health Insurance Program
CMS	Centers for Medicare & Medicaid Services
CMS NHE	CMS National Health Expenditures
COSO	Committee of Sponsoring Organizations of the Treadway Commission
Credit Agreement	The Amended and Restated Credit Agreement dated as of May 3, 2013, as amended by Amendment No. 1 to Amended and Restated Credit Agreement dated as of March 8, 2017, and as further amended by Amendment No. 2 to Amended and Restated Credit Agreement, dated as of December 19, 2017, by and among HMS Holdings Corp. the Guarantors party thereto, the Lenders party thereto and Citibank, N.A. as Administrative Agent
DRA	Deficit Reduction Act of 2005
DSO	Days Sales Outstanding
ERISA	Employment Retirement Income Security Act of 1974
Exchange Act	Securities Exchange Act of 1934, as amended
FASB	Financial Accounting Standards Board
HIPAA	Health Insurance Portability and Accountability Act of 1996
HITECH	Health Information Technology for Economic and Clinical Health
IRC	Internal Revenue Code
IRS	U.S Internal Revenue Service
LIBOR	Intercontinental Exchange London Interbank Offered Rate
MCO	Managed care organization
MMIS	Medicaid Management Information Systems
PBM	Pharmacy Benefit Manager
PHI	Protected health information
PI	Payment Integrity
PMPM	Per Member Per Month
PMPY	Per Member Per Year
R&D Credit	U.S. Research and Experimentation Tax Credit pursuant to IRC Section 41
RAC	Recovery Audit Contractor
RFP	Request for proposal
SEC	U.S. Securities and Exchange Commission
Securities Act	Securities Act of 1933, as amended
Section 199 Deduction	U.S. Production Activities Deduction pursuant to IRC Section 199
SG&A	Selling, general and administrative
TPL	Third-party liability
U.S. GAAP	United States Generally Accepted Accounting Principles
VHA	Veterans Health Administration
2011 HDI Plan	HDI Holdings, Inc. Amended 2011 Stock Option and Stock Issuance Plan
2006 Stock Plan	HMS Holdings Corp. Fourth Amended and Restated 2006 Stock Plan, as amended by Amendment No. 1 to the HMS Holdings Corp. Fourth Amended and Restated 2006 Stock Plan dated as of February 16, 2017
2016 Omnibus Plan	HMS Holdings Corp. 2016 Omnibus Incentive Plan
2011 HDI Plan	HDI Holdings, Inc. Amended 2011 Stock Option and Stock Issuance Plan
2017 Tax Act	Tax Cuts and Jobs Act of 2017
401(k) Plan	HMS Holdings Corp. 401(k) Plan

Cautionary Note Regarding Forward-Looking Statements

For purposes of this Form 10-Q, the terms "HMS," "Company," "we," "us," and "our" refer to HMS Holdings Corp. and its consolidated subsidiaries unless the context clearly indicates otherwise. Included in this Form 10-Q are "forward-looking statements" within the meaning of the U.S. Private Securities Litigation Reform Act of 1995. From time to time, we also provide forward-looking statements in other materials we release to the public, as well as oral forward-looking statements. Such statements relate to our current expectations, projections and assumptions about our business, the economy and future events or conditions. They do not relate strictly to historical or current facts.

We have tried to identify forward-looking statements by using words such as "aim," "anticipate," "believe," "estimate," "expect," "forecast," "future," "intend," "likely," "may," "plan," "project," "seek," "strategy," "target," "will," "would," "could," "should," and similar expressions and references to guidance, although some forward-looking statements may be expressed differently. These statements include, among other things, information concerning our future growth, business strategy, strategic or operational initiatives, our future operating or financial performance, our ability to invest in and utilize our data and analytics capabilities to expand our solutions and services, the benefits and synergies to be obtained from completed and future acquisitions, the future performance of companies we have acquired, the future effect of different accounting determinations or remediation activities, the sufficiency of our sources of funding for working capital, capital expenditures, acquisitions, stock repurchases, debt repayments and other matters, our future expenses, interest rates, effective tax rates and financial results, the impact of changes to U.S. healthcare legislation or healthcare spending affecting Medicare, Medicaid or other publicly funded or subsidized health programs, and other statements regarding our possible future actions, business plans, objectives and prospects.

Forward-looking statements are not guarantees and involve risks, uncertainties and assumptions that are difficult to predict. Actual results may differ materially from past results and forward-looking statements if known or unknown risks or uncertainties materialize, or if underlying assumptions prove inaccurate. These risks and uncertainties include, among other things:

- *our ability to execute our business plans or growth strategy;*
- *our ability to innovate, develop or implement new or enhanced solutions or services;*
- *the nature of investment and acquisition opportunities we are pursuing, and the successful execution of such investments and acquisitions;*
- *our ability to successfully integrate acquired businesses and realize synergies;*
- *variations in our results of operations;*
- *our ability to accurately forecast the revenue under our contracts and solutions;*
- *our ability to protect our systems from damage, interruption or breach, and to maintain effective information and technology systems and networks;*
- *our ability to protect our intellectual property rights, proprietary technology, information processes and know-how;*
- *significant competition relating to our solutions and services;*
- *our failure to maintain a high level of customer retention or the unexpected reduction in scope or termination of key contracts with major customers;*
- *customer dissatisfaction or our non-compliance with contractual provisions or regulatory requirements;*
- *our failure to meet performance standards triggering significant costs or liabilities under our contracts;*
- *our inability to manage our relationships with information and data sources and suppliers;*
- *our reliance on subcontractors and other third party providers and parties to perform services;*
- *our ability to continue to secure contracts and favorable contract terms through the competitive bidding process;*
- *pending or threatened litigation;*
- *unfavorable outcomes in legal proceedings;*
- *our success in attracting and retaining qualified employees and members of our management team;*

- *our ability to generate sufficient cash to cover our interest and principal payments under our credit facility, or to borrow or use credit;*
- *unexpected changes in tax laws, regulations or guidance and unexpected changes in our effective tax rate;*
- *unanticipated increases in the number or amount of claims for which we are self-insured;*
- *our ability to develop, implement and maintain effective internal control over financial reporting;*
- *changes in the U.S. healthcare environment or healthcare financing system, including regulatory, budgetary or political actions that affect healthcare spending or the practices and operations of healthcare organizations;*
- *our failure to comply with applicable laws and regulations governing individual privacy and information security or to protect such information from theft and misuse;*
- *our ability to comply with current and future legal and regulatory requirements;*
- *negative results of government or customer reviews, audits or investigations;*
- *state or federal limitations related to outsourcing of certain government programs or functions;*
- *restrictions on bidding or performing certain work due to perceived conflicts of interests;*
- *the market price of our common stock and lack of dividend payments; and*
- *anti-takeover provisions in our corporate governance documents.*

These and other risks are discussed under the headings "Part I, Item 1. Business," "Part I. Item 1A, Risk Factors," "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations," and "Part II, Item 7A. Quantitative and Qualitative Disclosures About Market Risk," of our 2017 Form 10-K and in other documents we file with the SEC.

Any forward-looking statements made by us in this Form 10-Q speak only as of the date on which they are made. We undertake no obligation to publicly update forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by law. We caution readers not to place undue reliance upon any of these forward-looking statements. You are advised, however, to consult any further disclosures we make on related subjects in our Form 10-K, Form 10-Q and Form 8-K reports and our other filings with the SEC.

Market and Industry Data

This Form 10-Q contains market, industry and government data and forecasts that have been obtained from publicly available information, various industry publications and other published industry sources. We have not independently verified the information and cannot make any representation as to the accuracy or completeness of such information. None of the reports and other materials of third party sources referred to in this Form 10-Q were prepared for use in, or in connection with, this report.

Trademarks and Tradenames

We have a number of registered trademarks, including HMS®, as well as the corresponding HMS + logo design mark, HMS IntegritySource®, Eliza® and Essette®. These and other trademarks of ours appearing in this report are our property. Solely for convenience, trademarks and trade names of ours referred to in this Form 10-Q may appear without the ® or ™ symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the right of the applicable licensor to these trademarks and trade names. This report contains additional trade names and trademarks of other companies. We do not intend our use or display of other companies' trade names or trademarks to imply an endorsement or sponsorship of us by such companies, or any relationship with any of these companies.

PART I — FINANCIAL INFORMATION

Item 1. Financial Statements

HMS HOLDINGS CORP. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share amounts)

	March 31, 2018	December 31, 2017
Assets	(unaudited)	
Current assets:		
Cash and cash equivalents	$ 83,898	$ 83,313
Accounts receivable, net of allowance of $14,371 and $14,799, at March 31, 2018 and December 31, 2017, respectively	187,132	189,460
Prepaid expenses	14,050	16,589
Income tax receivable	-	1,892
Deferred financing costs, net	564	564
Other current assets	367	836
Total current assets	286,011	292,654
Property and equipment, net	96,037	98,581
Goodwill	487,617	487,617
Intangible assets, net	85,361	91,482
Deferred financing costs, net	2,096	2,237
Other assets	2,614	2,589
Total assets	$ 959,736	$ 975,160
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable, accrued expenses and other liabilities	$ 45,445	$ 61,900
Income tax payable	1,027	-
Estimated liability for appeals	22,622	30,787
Total current liabilities	69,094	92,687
Long-term liabilities:		
Revolving credit facility	240,000	240,000
Net deferred tax liabilities	21,212	21,989
Deferred rent	4,673	4,852
Other liabilities	9,614	9,403
Total long-term liabilities	275,499	276,244
Total liabilities	344,593	368,931
Commitments and contingencies (Note 12)		
Shareholders' equity:		
Preferred stock -- $0.01 par value; 5,000,000 shares authorized; none issued	—	—
Common stock -- $0.01 par value; 175,000,000 shares authorized; 96,876,154 shares issued and 83,212,960 shares outstanding at March 31, 2018; 96,536,251 shares issued and 83,256,858 shares outstanding at December 31, 2017	965	965
Capital in excess of par value	375,772	368,721
Retained earnings	373,982	366,164
Treasury stock, at cost: 13,663,194 shares at March 31, 2018 and 13,279,393 shares at December 31, 2017	(135,576)	(129,621)
Total shareholders' equity	615,143	606,229
Total liabilities and shareholders' equity	$ 959,736	$ 975,160

See accompanying notes to unaudited consolidated financial statements.

HMS HOLDINGS CORP. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME
(in thousands, except per share amounts)
(unaudited)

	Three Months Ended March 31,	
	2018	**2017**
Revenue	$ 141,425	$ 113,733
Cost of services:		
Compensation	56,079	48,920
Information technology	12,263	9,783
Occupancy	4,383	3,547
Direct project expenses	10,083	10,443
Other operating expenses	6,565	7,203
Amortization of acquisition related software and intangible assets	8,132	6,286
Total cost of services	97,505	86,182
Selling, general and administrative expenses	31,998	23,608
Total operating expenses	129,503	109,790
Operating income	11,922	3,943
Interest expense	(2,648)	(2,286)
Interest income	120	155
Income before income taxes	9,394	1,812
Income taxes	3,003	370
Net income	$ 6,391	$ 1,442
Basic income per common share:		
Net income per common share -- basic	$ 0.08	$ 0.02
Diluted income per common share:		
Net income per common share -- diluted	$ 0.07	$ 0.02
Weighted average shares:		
Basic	83,933	83,617
Diluted	85,682	85,580

See accompanying notes to unaudited consolidated financial statements.

HMS HOLDINGS CORP. AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF SHAREHOLDERS' EQUITY
(in thousands, except share amounts)
(unaudited)

	Common Stock				Treasury Stock		
	# of Shares Issued	Par Value	Capital in Excess of Par Value	Retained Earnings	# of Shares	Amount	Total Shareholders' Equity
Balance at December 31, 2017	96,536,251	$ 965	$ 368,721	$ 366,164	13,279,393	$ (129,621)	$ 606,229
Adoption of accounting standard (Note 1 and 3)	-	-	-	1,427	-	-	1,427
Net income	-	-	-	6,391	-	-	6,391
Stock-based compensation expense	-	-	9,494	-	-	-	9,494
Purchase of treasury stock	-	-	-	-	383,801	(5,955)	(5,955)
Exercise of stock options	9,043	-	144	-	-	-	144
Vesting of restricted stock awards and units, net of shares withheld for employee tax	330,860	-	(2,587)	-	-	-	(2,587)
Balance at March 31, 2018	96,876,154	$ 965	$ 375,772	$ 373,982	13,663,194	$ (135,576)	$ 615,143

See accompanying notes to the unaudited consolidated financial statements.

HMS HOLDINGS CORP. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)
(unaudited)

	Three Months Ended March 31,	
	2018	**2017**
Operating activities:		
Net income	$ 6,391	$ 1,442
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization of property, equipment and software	7,345	6,235
Amortization of intangible assets	6,121	4,327
Amortization of deferred financing costs	141	521
Stock-based compensation expense	9,494	5,386
Deferred income taxes	(777)	248
Loss on disposal of assets	72	-
Release of estimated liability for appeals	(8,436)	-
Changes in operating assets and liabilities:		
Accounts receivable	2,328	6,978
Prepaid expenses	2,539	(2,677)
Other current assets	469	433
Other assets	(25)	84
Income taxes receivable / (payable)	2,919	(734)
Accounts payable, accrued expenses and other liabilities	(14,115)	(19,646)
Estimated liability for appeals	271	789
Net cash provided by operating activities	14,737	3,386
Investing activities:		
Purchases of property and equipment	(791)	(6,282)
Investment in capitalized software	(4,963)	(2,206)
Net cash used in investing activities	(5,754)	(8,488)
Financing activities:		
Proceeds from exercise of stock options	144	2
Payments of tax withholdings on behalf of employees for net-share settlement for stock-based compensation	(2,587)	(2,608)
Payments on capital lease obligations	-	(2)
Purchases of treasury stock	(5,955)	-
Net cash used in financing activities	(8,398)	(2,608)
Net increase (decrease) in cash and cash equivalents	585	(7,710)
Cash and Cash Equivalents		
Cash and cash equivalents at beginning of year	83,313	175,999
Cash and cash equivalents at end of period	$ 83,898	$ 168,289
Supplemental disclosure of cash flow information:		
Cash paid for income taxes	$ 626	$ 734
Cash paid for interest	$ 2,055	$ 1,686
Supplemental disclosure of non-cash activities:		
Change in balance of accrued property and equipment purchases	$ 881	$ (1,244)

See accompanying notes to the unaudited consolidated financial statements.

1. Business and Summary of Significant Accounting Policies

(a) Business

HMS is a leading provider of cost containment solutions in the U.S. healthcare marketplace. We use innovative technology, extensive data services and powerful analytics to deliver coordination of benefits, payment integrity and care management and consumer engagement solutions to help healthcare payers improve financial performance and clinical outcomes. We provide coordination of benefits services to government and commercial healthcare payers and sponsors to ensure that the responsible party pays healthcare claims. Our payment integrity services ensure healthcare claims billed are accurate and appropriate, and our care management and consumer engagement technology helps risk-bearing organizations to better engage with and manage the care delivered to their members. Together these various services help customers recover erroneously paid amounts from liable third parties; prevent future improper payments; reduce fraud, waste and abuse; better manage the care their members receive; engage healthcare consumers to improve clinical outcomes while increasing member satisfaction and retention; and achieve regulatory compliance. We currently operate as one business segment with a single management team that reports to our Chief Executive Officer.

The accompanying consolidated financial statements and notes are unaudited. Accordingly, they do not include all of the information and notes required by U.S. GAAP for complete financial statements. These statements include all adjustments (which include only normal recurring adjustments, except as disclosed) that management considers necessary to present a fair statement of the Company's results of operations, financial position and cash flows. The results reported in these unaudited consolidated financial statements should not be regarded as necessarily indicative of results that may be expected for the entire year. It is suggested that these unaudited consolidated financial statements be read in conjunction with the Company's consolidated financial statements as of and for the year ended December 31, 2017 which were filed with the SEC as part of the 2017 Form 10-K. The consolidated balance sheet as of December 31, 2017 included herein was derived from audited financial statements, but does not include all disclosures required by U.S. GAAP.

The preparation of the Company's unaudited consolidated financial statements requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities, primarily accounts receivable, intangible assets, fixed assets, accrued expenses, estimated liability for appeals, the disclosure of contingent liabilities at the date of the unaudited consolidated financial statements and the reported amounts of revenue and expenses during the reporting periods. The Company's actual results could differ from those estimates.

These unaudited consolidated financial statements include HMS accounts and transactions and those of the Company's wholly owned subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation.

(b) Summary of Significant Accounting Policies

There have been no material changes to the Company's significant accounting policies that are referenced in the 2017 Form 10-K other than as described below with respect to revenue recognition.

Recently Adopted Accounting Pronouncements

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers* (Topic 606) ("ASU 2014-09"), which is the new comprehensive revenue recognition standard that supersedes all existing revenue recognition guidance under U.S. GAAP. The Company adopted ASU 2014-09 on January 1, 2018 to all contracts using the modified retrospective method. The Company recognized the cumulative effect of initially applying the new revenue standard as an adjustment to the opening balance of retained earnings. The financial information for comparative prior periods has not been restated and continues to be reported under the accounting standards in effect for those periods. The affect of adopting ASU 2014-09 in the current reporting period as compared with the guidance that was in effect before the change is immaterial. The Company's internal control framework did not materially change, but existing internal controls were modified due to certain changes to business processes and systems to support the new revenue recognition standard as necessary. The Company expects the impact of the adoption of the new standard to be immaterial to its net income and its internal control framework on an ongoing basis.

In August 2016, the FASB issued ASU No. 2016-15, *Statements of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments* ("ASU 2016-15"). ASU 2016-15 clarifies where certain cash receipts and cash payments are presented and classified in the statement of cash flows. The amendments are effective for annual reporting periods beginning after December 15, 2017, and for interim reporting periods within such annual periods. The Company adopted this guidance on January 1, 2018. The adoption of this guidance did not have a material effect on the Company's consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-01, *Business Combinations (Topic 805) – Clarifying the Definition of a Business* ("ASU 2017-01"). ASU 2017-01 finalizes previous proposals regarding shareholder concerns that the definition of a business is applied too broadly. The guidance assists entities with evaluating whether transactions should be accounted for as acquisitions of assets or of businesses. The amendments are effective for annual periods beginning after December 15, 2017, including interim periods within those periods. The Company adopted this guidance on January 1, 2018. The adoption of this guidance did not have a material effect on the Company's consolidated financial statements.

In May 2017, the FASB issued ASU No. 2017-09, *Compensation – Stock Compensation (Topic 718) – Scope of Modification Accounting,* ("ASU 2017-09"). ASU 2017-09 requires entities to apply modification accounting to changes made to a share-based payment award. The new guidance specifies that entities will apply modification accounting to changes to a share-based payment award only if any of the following are not the same immediately before and after the change: 1) The award's fair value (or calculated value or intrinsic value, if those measurement methods are used), 2) the award's vesting conditions, and 3) the award's classification as an equity or liability instrument. ASU 2017-09 is effective for annual reporting periods beginning after December 15, 2017, including interim periods within such annual periods, with early adoption permitted. The Company adopted this guidance on January 1, 2018. The adoption of this guidance did not have a material effect on the Company's consolidated financial statements.

Recently Issued Accounting Pronouncements

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)* ("ASU 2016-02"). ASU 2016-02 will require most lessees to recognize a majority of the company's leases on the balance sheet, which will increase reported assets and liabilities. ASU 2016-02 is effective for annual reporting periods beginning after December 15, 2018 including interim periods within such annual reporting periods with early adoption permitted. The Company has not early adopted this guidance. The Company is currently developing a preliminary implementation plan. One major element of this plan will involve reviewing historical lease agreements to quantify the impact of adoption. Depending on the results of the Company's review, there could be material changes to the Company's financial position and/or results of operations. The Company expects to complete the review of historical agreements and the overall assessment process by the end of the fourth quarter of 2018.

In January 2017, the FASB issued ASU No. 2017-04, *Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment* ("ASU 2017-04"). This amendment simplifies the manner in which an entity is required to test for goodwill impairment by eliminating Step 2 from the goodwill impairment test. Step 2 measures goodwill impairment loss by comparing the implied fair value of a reporting unit's goodwill with the carrying amount of that goodwill. The amendment simplifies this approach by having the entity (1) perform its annual or interim goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount, and (2) recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value, with the understanding that the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. The amendment is effective for public entities that are SEC filers prospectively for their annual, or any interim, goodwill impairment tests in fiscal years beginning after December 15, 2019. Early adoption is permitted for all entities for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. The Company is currently evaluating the impact on the Company's financial statements of adopting this guidance.

2. Fair Value of Financial Instruments

Financial instruments (principally cash and cash equivalents, accounts receivable, accounts payable and accrued expenses) are carried at cost, which approximates fair value due to the short-term maturity of these instruments. The Company's long-term credit facility is carried at cost, which, due to the variable interest rate associated with the revolving credit facility, approximates its fair value. The Company has no Level 1 or Level 2 financial instruments and there were no transfers between Level 1 or Level 2 financial instruments. Included in Other liabilities on the unaudited Consolidated Balance Sheets at March 31, 2018 is a $35,000 contingent consideration liability classified as Level 3 which remains unchanged from December 31, 2017. The liability is valued using a Monte Carlo simulation and includes unobservable inputs such as expected levels of revenues and discount rates. Changes in the unobservable inputs of this instrument could result in a significant change in the fair value measurement.

3. Revenue Recognition

The Company's revenue disaggregated by product for the three-months ended March 31 is as follows *(in thousands)*:

	2018	2017
Coordination of benefits	$ 91,752	$ 88,491
Analytical services	49,673	25,242
Total	$ 141,425	$ 113,733

Coordination of benefits

Coordination of benefits revenue is derived from contracts with state governments and Medicaid managed care plans that typically span 3 to 5 years with the option to renew. Types of services within these contracts could include: (a) the identification of erroneously paid claims; (b) the delivery of verified commercial insurance coverage information; (c) the identification of paid claims where another third party is liable; and (d) the identification and enrollment of Medicaid members who have access to affordable employer insurance. Most of these contracts contain multiple tasks/deliverables, all of which are not separately identifiable as they are highly interrelated and indistinct within the context of the contract. Therefore, each type of service represents a single, distinct performance obligation. Revenue derived from these performance obligations is largely based on variable consideration where, based on the number of claims or amount of findings the Company identified, a contingent or fixed transaction price/recovery percentage is allocated to each distinct performance obligation. Revenue is recognized when, or as, the performance obligation is satisfied. Due to the timing and volume of information provided from our customers, range of performance obligations and the differing consideration associated with each type of contract, revenue may be recognized in varying increments. Generally, coordination of benefit contract payment terms are not standardized within the respective contract; however, payment is typically due on demand and there is a clear and distinct history of customers making consistent payments.

Analytical services

The Company's analytical services revenue consists mostly of payment integrity services but also care management and consumer engagement services.

Payment integrity services revenue is derived from contracts with federal and state governments, commercial health plans and other at-risk entities that can span several years with the option to renew. Types of services within these contracts could include: (a) services designed to ensure that healthcare payments are accurate and appropriate; and (b) the identification of over/(under)payments or inaccurate charges based on a review of medical records. Most of these contracts contain multiple tasks/deliverables, all of which are not separately identifiable as they are highly interrelated and indistinct within the context of the contract. Therefore, each type of service represents a single, distinct performance obligation. Revenue derived from these performance obligations is largely based on variable consideration where, based on the number of claims or amount of findings the Company identified, a contingent or fixed transaction price/recovery percentage is allocated to each distinct performance obligation. Revenue is recognized when, or as, the performance obligation is satisfied. Due to the timing and volume of information provided from our customers, range of performance obligations and the differing consideration associated with each type of contract, revenue may be recognized in varying increments. Generally, payment integrity contract payment terms are not standardized within the respective contract; however, payment is typically due on demand and there is a clear and distinct history of customers making consistent payments.

Care management and consumer engagement services revenue is derived from contracts with health plans and other risk-bearing entities that can span several years with the option to renew. Types of services within these contracts could include: (a) programs designed to improve member engagement; and (b) outreach services designed to improve clinical outcomes. Most of these contracts contain multiple tasks/deliverables, all of which are not separately identifiable as they are highly interrelated and indistinct within the context of the contract. Therefore, each type of service represents a single, distinct performance obligation. Revenue derived from these services is largely based on consideration associated with prices per order/transfer and PMPM/PMPY fees and is generally recognized monthly/yearly based on the services performed; therefore, the amount of variable consideration does not often need to be estimated for these agreements. Additionally, certain care management and consumer engagement services contracts have distinct performance obligations related to software license and implementation fees which have historically been recognized as revenue ratably over the life of the contract. However, upon adoption of ASU 2014-09 revenue for software licenses is recognized at the beginning of the license period when control is transferred as the license is installed and revenue for implementation fees is recognized when control is as transferred over time as the implementation is being performed. As the performance obligation is deemed to have been satisfied and control transferred to our customers for software licenses and implementation fees on or before December 31, 2017, the Company recorded a decrease to deferred revenue and an increase to opening retained earnings of $1.4 million as of January 1, 2018 for the cumulative impact of adopting ASU 2014-09. A portion of the Company's care management and consumer engagement services are deferred and revenue is recognized over time. Deferred revenue of this nature was approximately $5.0 million and $6.4 million as of March 31, 2018 and December 31, 2017 and is included in Accounts payable, accrued expenses and other liabilities in the Consolidated Balance Sheets. Generally, care management and consumer engagement contract payment terms are stated within the contract and are due within an explicitly stated time period (e.g., 30, 45, 60 days) from the date of invoice.

Contract modifications are routine in nature and often done to account for changes in the contract specifications or requirements. In most instances, contract modifications are for services that are not distinct, and, therefore, modifications are accounted for as part of the existing contract.

4. Accounts Receivable and Accounts Receivable Allowance

The Company's accounts receivable, net, consisted of the following *(in thousands)*:

	March 31, 2018	December 31, 2017
Accounts receivable	$ 201,503	$ 204,259
Allowance	(14,371)	(14,799)
Accounts receivable, net	$ 187,132	$ 189,460

We record an accounts receivable allowance, based on historical patterns of billing adjustments, length of operating and collection cycle and customer negotiations, behaviors and payment patterns. Changes in these estimates are recorded to revenue in the period of change. A summary of the activity in the accounts receivable allowance was as follows *(in thousands)*:

	March 31, 2018	December 31, 2017
Balance--beginning of period	$ 14,799	$ 10,772
Provision	5,011	20,233
Charge-offs	(5,439)	(16,206)
Recoveries	-	-
Balance--end of period	$ 14,371	$ 14,799

5. Intangible Assets and Goodwill

Intangible assets consisted of the following (*in thousands, except for weighted average amortization period*):

	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Weighted Average Amortization Period (in years)
March 31, 2018				
Customer relationships	$ 159,290	$ (93,677)	$ 65,613	11.3
Trade names	16,246	(14,470)	1,776	1
Intellectual property	21,700	(3,796)	17,904	5.2
Restrictive covenants	263	(195)	68	1.3
Total	$ 197,499	$ (112,138)	$ 85,361	

	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Weighted Average Amortization Period (in years)
December 31, 2017				
Customer relationships	$ 159,290	$ (89,106)	$ 70,184	11.3
Trade names	16,246	(13,916)	2,330	1
Intellectual property	21,700	(2,874)	18,826	5.2
Restrictive covenants	263	(121)	142	1.3
Total	$ 197,499	$ (106,017)	$ 91,482	

Amortization expense of intangible assets is expected to approximate the following *(in thousands):*

Year ending December 31,	
2018	$ 17,735
2019	9,258
2020	7,804
2021	7,477
2022	7,197
Thereafter	35,890
Total	$ 85,361

For the three months ended March 31, 2018 and 2017 amortization expense related to intangible assets was $6.1 million and $4.3 million, respectively.

There were no changes in the carrying amount of goodwill for the quarter ended March 31, 2018.

6. Accounts Payable, Accrued Expenses and Other Liabilities

Accounts payable, accrued expenses and other liabilities consisted of the following *(in thousands)*:

	March 31, 2018	December 31, 2017
Accounts payable, trade	$ 10,416	$ 19,330
Accrued compensation and other	16,341	24,072
Accrued operating expenses	18,688	18,498
Total accounts payable, accrued expenses and other liabilities	$ 45,445	$ 61,900

7. Income Taxes

The Company's effective tax rate increased to 32.0% for the three months ended March 31, 2018 from 20.4% for the three months ended March 31, 2017. The effective tax rate for the three months ended March 31, 2018 includes discrete tax expense for interest on uncertain tax benefits and net stock compensation shortfalls as well as a net federal tax reform benefit comprised of a federal tax rate decrease, net of state impact, offset by tax increases for officer compensation deduction limits and loss of the Section 199 Deduction. For the three months ended March 31, 2018, the differences between the federal statutory rate and our effective tax rate are state taxes, equity compensation impacts, unrecognized tax benefits, including interest, officer compensation deduction limits, R&D Credits, and other permanent differences.

The effective tax rate for the three months ended March 31, 2018 represents the Company's best estimate using information available to the Company as of May 7, 2018. The Company anticipates U.S. regulatory agencies will issue further regulations over the next nine months which may alter this estimate. The Company is still evaluating, among other things, the application of limitations for executive compensation related to contracts existing prior to November 2, 2017. The Company will refine its estimates to incorporate new or better information as it becomes available through the filing date of its 2017 U.S. income tax returns in the fourth quarter of 2018.

Included in Other Liabilities on the Consolidated Balance Sheets, are the total amount of unrecognized tax benefits of approximately $8.5 million and $8.2 million, as of March 31, 2018 and December 31, 2017, respectively, (net of the federal benefit for state issues) that, if recognized, would favorably affect the Company's future effective tax rate. Also included in Other Liabilities on the Consolidated Balance Sheets, are accrued liabilities for interest expense and penalties related to unrecognized tax benefits of $0.8 million and $0.6 million as of March 31, 2018 and December 31, 2017, respectively. HMS includes interest expense and penalties in the provision for income taxes in the unaudited Consolidated Statements of Income. The amount of interest expense (net of federal and state income tax benefits) and penalties in the unaudited Consolidated Statements of Income for the three months ended March 31, 2018 and 2017 was $0.2 million and $0.1 million, respectively. The Company believes it is reasonably possible that the amount of unrecognized tax benefits may decrease by $1.8 million over the next twelve months, due to the expiration of the statute of limitations in federal and various state jurisdictions.

HMS files income tax returns with the U.S. Federal government and various state and local jurisdictions. HMS is no longer subject to U.S. Federal income tax examinations for years before 2012. The Company is currently under audit by the Internal Revenue Service for years 2013 and 2014, and no assessments have been received. HMS operates in a number of state and local jurisdictions. Accordingly, HMS is subject to state and local income tax examinations based on the various statutes of limitations in each jurisdiction. Previously recognized Texas refund claims are currently being examined by the state.

8. Estimated Liability For Appeals

Under the Company's contracts with certain commercial health plan customers and its Medicare RAC contracts with CMS (included within the Company's analytical services product revenue), providers have the right to appeal HMS claim findings and to pursue additional appeals if the initial appeal is found in favor of HMS's customer. The appeal process established under the Medicare RAC contract with CMS includes five levels of appeals, and resolution of appeals can take substantial time to resolve. HMS records a) a return obligation liability for findings which have been adjudicated in favor of providers and b) an estimated return obligation liability based on the amount of revenue that is subject to appeals and which are probable of being adjudicated in favor of providers following their successful appeal. The Company's estimate is based on the Company's historical experience. To the extent the amount to be returned to providers following a successful appeal exceeds or is less than the amount recorded, revenue in the applicable period would be reduced or increased by such amount. Any future changes to any of the Company's customer contracts, including modifications to the Medicare RAC contract, may require the Company to apply different assumptions that could materially affect both the Company's revenue and estimated liability for appeals in future periods.

The Company's original Medicare RAC contract with CMS expired on January 31, 2018. As a result of the contract expiration, the Company's contractual obligation with respect to any appeals resolved in favor of providers subsequent to the expiration date have ceased and therefore the Company released its estimated liability and increased revenue by $8.4 million during the first quarter of 2018. The Company continues to assess the remaining Medicare RAC liability to determine management's best estimate of liability for any findings which have been previously adjudicated prior to the expiration of the contract.

The total estimated liability for appeals balance of $22.6 million and $30.8 million as of March 31, 2018 and December 31, 2017, respectively, includes $19.4 million and $19.3 million, respectively, of Medicare RAC claim findings which have been adjudicated in favor of providers, and $0.0 million and $8.5 million, respectively, of the Company's estimate of the potential amount of Medicare RAC repayments that are probable of being adjudicated in favor of providers following a successful appeal. Additionally, the total estimated liability for appeals balance includes $3.2 million and $3.0 million related to commercial customers claim appeals. The provision included in the estimated liability for appeals is an offset to revenue in the Company's Consolidated Statements of Income.

A summary of the activity in the estimated liability for appeals related to the Company's original Medicare RAC contract was as follows *(in thousands)*:

	March 31, 2018	December 31, 2017
Balance--beginning of period	$ 8,544	$ 11,126
Provision	-	83
Appeals found in providers favor	(108)	(2,665)
Release of liability	(8,436)	-
Balance--end of period	$ -	$ 8,544

9. Credit Agreement

In December 2017, the Company entered into an amendment to its Credit Agreement, which, among other things, extended the maturity of its then existing revolving credit facility by five years to December 2022 (the "Amended Revolving Facility"). The availability of funds under the Amended Revolving Facility includes sublimits for (a) up to $50 million for the issuance of letters of credit and (b) up to $25 million for swingline loans. In addition, the Company may increase the commitments under the Amended Revolving Facility and/or add one or more incremental term loan facilities, provided that such incremental facilities do not exceed in the aggregate the sum of (i) the greater of $120 million and 100% of Consolidated EBITDA (as defined in the Credit Agreement) and (ii) an additional amount so long as our first lien leverage ratio (as defined in the Credit Agreement) on a pro forma basis is not greater than 3.00:1.00, subject to obtaining commitments from lenders therefor and meeting certain other conditions.

As of March 31, 2018 and December 31, 2017, the outstanding principal balance due on the Amended Revolving Facility was $240.0 million. No principal payments were made against the Company's Amended Revolving Facility during the three months ended March 31, 2018.

Borrowings under the Amended Revolving Facility bear interest at a rate equal to, at the Company's election (except with respect to swingline borrowings, which will accrue interest based only at the base rate), either:

- a base rate determined by reference to the greatest of (a) the prime or base commercial lending rate of the administrative agent as in effect on the relevant date, (b) the federal funds effective rate plus 0.50% and (c) the one-month LIBO rate plus 1.00%, plus an interest margin ranging from 0.50% to 1.00% based on the Company's consolidated leverage ratio for the applicable period; or

- an adjusted LIBO rate, equal to the LIBO rate for the applicable interest period multiplied by the statutory reserve rate (equal to (x) one divided by (y) one minus the aggregate of the maximum reserve percentage (including any marginal, special, emergency or supplemental reserves) established by the Board of Governors of the Federal Reserve System of the United States), plus an interest margin ranging from 1.50% to 2.00% based on the Company's consolidated leverage ratio for the applicable period.

In addition to paying interest on the outstanding principal, the Company is required to pay unused commitment fees on the Amended Revolving Facility during the term of the Credit Agreement ranging from 0.375% to 0.250% per annum based on the Company's consolidated leverage ratio and letter of credit fees equal to 0.125% per annum on the aggregate face amount of each letter of credit, as well as customary agency fees.

The Amended Revolving Facility is secured, subject to certain customary carve-outs and exceptions, by a first priority lien and security interest in substantially all tangible and intangible assets of the Company and certain subsidiaries of the Company. The Amended Revolving Facility contains certain restrictive covenants, which affect, among other things, the ability of the Company and its subsidiaries to incur indebtedness, create liens, make investments, sell or otherwise dispose of assets, engage in mergers or consolidations with other entities, and pay dividends or repurchase stock. The Company is also required to comply, on a quarterly basis, with two financial covenants: (i) a minimum interest coverage ratio of 3:00:1:00, and (ii) a maximum consolidated leverage ratio of 4.75:1.00 through December 2019 and 4.25:1.00 from and after January 2020. The consolidated leverage ratio is subject to a step-up to 5.25:1.00 for four full consecutive fiscal quarters following a permitted acquisition or similar investment. As of March 31, 2018, the Company was in compliance with all terms of the Credit Agreement.

Interest expense and the commitment fees on the unused portion of the Company's revolving credit facility were as follows (*in thousands*):

	Three Months Ended March 31,	
	2018	**2017**
Interest expense	$ 2,070	$ 1,374
Commitment fees	239	378

As of March 31, 2018 and December 31, 2017, the unamortized balance of deferred origination fees and debt issuance costs were $2.7 million and $2.8 million, respectively. For the three month periods ended March 31, 2018 and 2017, HMS amortized $0.1 million and $0.5 million, respectively, of interest expense related to the Company's deferred origination fees and debt issue costs.

Although HMS expects that operating cash flows will continue to be a primary source of liquidity for the Company's operating needs, the Amended Revolving Facility may be used for general corporate purposes, including, but not limited to acquisitions, if necessary.

As part of the Company's contractual agreement with a customer, HMS has an outstanding irrevocable letter of credit for $5.4 million, which is issued against the Amended Revolving Facility and expires June 22, 2018.

10. Earnings Per Share

The following table reconciles the basic to diluted weighted average common shares outstanding using the treasury stock method *(in thousands, except per share amounts)*:

	Three Months Ended March 31,	
	2018	**2017**
Net income	$ 6,391	$ 1,442
Weighted average common shares outstanding-basic	83,933	83,617
Plus: net effect of dilutive stock options and restricted stock units	1,749	1,963
Weighted average common shares outstanding-diluted	85,682	85,580
Net income per common share-basic	$ 0.08	$ 0.02
Net income per common share-diluted	$ 0.07	$ 0.02

For the three months ended March 31, 2018 and 2017, 3,118,939 and 2,106,397 stock options, respectively, were not included in the diluted earnings per share calculation because the effect would have been anti-dilutive. For the three months ended March 31, 2018 and 2017, restricted stock units representing 58,743 and 42,056 shares of common stock, respectively, were not included in the diluted earnings per share calculation because the effect would have been anti-dilutive.

11. Stock-Based Compensation

(a) Stock-Based Compensation Expense

Total stock-based compensation expense in the Company's unaudited Consolidated Statements of Income related to the Company's long-term incentive award plans was as follows *(in thousands)*:

	Three Months Ended March 31,	
	2018	**2017**
Cost of services-compensation	$ 2,563	$ 2,040
Selling, general and administrative	6,931	3,346
Total	$ 9,494	$ 5,386

(b) Stock Options

Stock-based compensation expense related to stock options was approximately $4.0 million and $2.1 million for the three months ended March 31, 2018 and 2017, respectively.

Presented below is a summary of stock option activity for the three months ended March 31, 2018 (*in thousands except for weighted average exercise price and weighted average remaining contractual terms*):

	Number of Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Terms	Aggregate Intrinsic Value
Outstanding balance at December 31, 2017	5,554	$ 17.35		
Granted	923	19.41		
Exercised	(9)	15.97		
Forfeitures	(21)	15.74		
Expired	(21)	20.36		
Outstanding balance at March 31, 2018	6,426	17.70	5.53	$ 7,875
Expected to vest at March 31, 2018	1,657	17.48	8.12	1,691
Exercisable at March 31, 2018	3,908	$ 17.84	3.90	$ 5,331

During the three months ended March 31, 2018 and 2017, the Company issued 9,043 and 677 shares, respectively, of the Company's common stock upon the exercise of outstanding stock options and received proceeds of $144,408 and $1,836, respectively. The total intrinsic value of stock options exercised during the three months ended March 31, 2018 and 2017 was $13,849 and $10,903, respectively.

As of March 31, 2018, there was approximately $10.5 million of total unrecognized compensation cost related to stock options outstanding, which is expected to be recognized over a weighted average period of 2.47 years.

The weighted-average grant date fair value per share of the stock options granted during the three months ended March 31, 2018 was $6.83. There were no stock options granted during the three months ended March 31, 2017. HMS estimated the fair value of each stock option grant on the date of grant using a Black-Scholes option pricing model and weighted–average assumptions set forth in the following table:

	Three Months Ended March 31,	
	2018	2017
Expected dividend yield	-	-
Risk-free interest rate	2.66%	-
Expected volatility	42.49%	-
Expected life (years)	6.00	-

The total tax benefits recognized on stock-based compensation for the three months ended March 31, 2018 and 2017 is $2.1 million and $3.1 million, respectively.

(c) Restricted Stock Units

Stock-based compensation expense related to restricted stock units was $5.5 million and $3.3 million for the three months ended March 31, 2018 and 2017, respectively.

Presented below is a summary of restricted stock units activity for the three months ended March 31, 2018 *(in thousands, except for weighted average grant date fair value per unit):*

	Number of Units	Weighted Average Grant Date Fair Value per Unit
Outstanding balance at December 31, 2017	1,346	$ 17.65
Granted	699	16.93
Vesting of restricted stock units, net of units withheld for taxes	(331)	16.85
Units withheld for taxes	(154)	16.85
Forfeitures	(11)	16.60
Outstanding balance at March 31, 2018	1,549	$ 17.56

As of March 31, 2018, 1,363,295 restricted stock units remained unvested and there was approximately $16.0 million of unrecognized compensation cost related to restricted stock units, which is expected to be recognized over a weighted average vesting period of 1.54 years.

12. Commitments and Contingencies

In July 2012, Dennis Demetre and Lori Lewis (the "Plaintiffs"), filed an action in the Supreme Court of the State of New York against HMS Holdings Corp., claiming an undetermined amount of damages alleging that various actions by HMS unlawfully deprived the Plaintiffs of the acquisition earn-out portion of the purchase price for Allied Management Group Special Investigation Unit ("AMG") under the applicable Stock Purchase Agreement (the "SPA") and that HMS had breached certain contractual provisions under the SPA. The Plaintiffs filed a second amended complaint with two causes of action for breach of contract and one cause of action for breach of implied covenant of good faith and fair dealing. HMS asserted a counterclaim against Plaintiffs for breach of contract based on contractual indemnification costs, including attorneys' fees arising out of the Company's defense of AMG in Kern Health Systems v. AMG, Dennis Demetre and Lori Lewis (the "California Action"), which are recoverable under the SPA. In June 2016, Kern Health Systems and AMG entered into a settlement agreement that resolved all claims in the California Action. In July 2017, the Court issued a decision on the Company's motion for partial summary judgment and granted the motion in part, dismissing one of Plaintiffs' breach of contract causes of action against HMS. On November 3, 2017, following a jury trial, a verdict was returned in favor of the Plaintiffs on a breach of contract claim, and the jury awarded $60 million in damages to the Plaintiffs. On March 14, 2018, the Court held a hearing on the Company's post-trial motion for an order granting it judgment notwithstanding the verdict or, alternatively, setting aside the jury's award of damages. A decision on the motion has not yet been issued by the Court. The Company continues to believe that strong grounds exist to overturn or greatly reduce the damages awarded by the jury. In light of the Company's belief that the jury award was unsupportable as a matter of law, the Company has not recorded a reserve for this pending litigation. HMS will continue to monitor developments in assessing the probability and measurability of any related loss contingency.

In February 2018, the Company received a Civil Investigative Demand from the Texas Attorney General, purporting to investigate possible unspecified violations of the Texas Medicaid Fraud Prevention Act. The Company has been cooperating with the government and providing documents and information in response to the Civil Investigative Demand.

From time to time, HMS may be subject to investigations, legal proceedings and other disputes arising in the ordinary course of the Company's business, including but not limited to regulatory audits, billing and contractual disputes, employment-related matters and post-closing disputes related to acquisitions. Due to the Company's contractual relationships, including those with federal and state government entities, HMS's operations, billing and business practices are subject to scrutiny and audit by those entities and other multiple agencies and levels of government, as well as to frequent transitions and changes in the personnel responsible for oversight of the Company's contractual performance. HMS may have contractual disputes with its customers arising from differing interpretations of contractual provisions that define the Company's rights, obligations, scope of work or terms of payment, and with associated claims of liability for inaccurate or improper billing for reimbursement of contract fees, or for sanctions or damages for alleged performance deficiencies. Resolution of such disputes may involve litigation or may require that HMS accept some amount of loss or liability in order to avoid customer abrasion, negative marketplace perceptions and other disadvantageous results that could affect the Company's business, financial condition, results of operations and cash flows.

HMS records accruals for outstanding legal matters when it believes it is probable that a loss will be incurred and the amount can be reasonably estimated. The Company evaluates, on a quarterly basis, developments in legal matters that could affect the amount of any accrual and developments that would make a loss contingency both probable and reasonably estimable. If a loss contingency is not both probable and estimable, HMS does not establish an accrued liability.

13. Subsequent Events

In connection with the preparation of these unaudited Consolidated Financial Statements, an evaluation of subsequent events was performed through the date of filing and there were no events that have occurred that would require adjustments to the financial statements or disclosure.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following Management's Discussion and Analysis is intended to help the reader understand the results of operations and financial condition of HMS. You should read this discussion and analysis in conjunction with the other sections of this Form 10-Q, including the Cautionary Note Regarding Forward-Looking Statements appearing prior to Part I and the unaudited Consolidated Financial Statements and Notes thereto in Part I, Item 1. The historical results set forth in Part I, Item 1 and Item 2 of this Form 10-Q should not be taken as necessarily indicative of our future operations or financial results.

Business Overview

HMS is a leading provider of cost containment solutions in the U.S. healthcare marketplace. Using innovative technology as well as extensive data services and powerful analytics, we deliver coordination of benefits, payment integrity, and care management and consumer engagement solutions through our operating subsidiaries to help healthcare payers improve financial performance and clinical outcomes. Together our various services help our customers recover improper payments; prevent future improper payments; reduce fraud, waste and abuse; better manage the care that their members receive; engage healthcare consumers to improve clinical outcomes and increase retention; and achieve regulatory compliance.

We serve state Medicaid programs, commercial health plans, federal government health agencies, government and private employers, CHIPs and other healthcare payers and sponsors. We also serve as a subcontractor for certain business outsourcing and technology firms. As of March 31, 2018, our customer base included the following:

- over 40 state Medicaid programs;
- approximately 325 health plans, including 23 of the top 25 health plans nationally (based on membership) in support of their multiple lines of business, including Medicaid managed care, Medicare Advantage and group and individual health;
- over 225 private employers;
- CMS, the Centers for Disease Control and Prevention, and the Department of Veterans Affairs; and
- PBMs, third-party administrators and other risk-bearing entities, including independent practice associations, hospital systems, ACOs and specialty care organizations.

Critical Accounting Policies and Estimates

Since the date of our 2017 Form 10-K, there have been no material changes to our critical accounting policies other than with respect to revenue recognition as described in Notes 1 and 3 to the unaudited Consolidated Financial Statements in Part I, Item 1 of this Form 10-Q. With respect to our accounting policies other than revenue recognition, refer to the discussion in our 2017 Form 10-K under "Critical Accounting Policies and Estimates" in Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations and "Business and Summary of Significant Accounting Policies" in Note 1 to the Consolidated Financial Statements under Part II, Item 8.

RESULTS

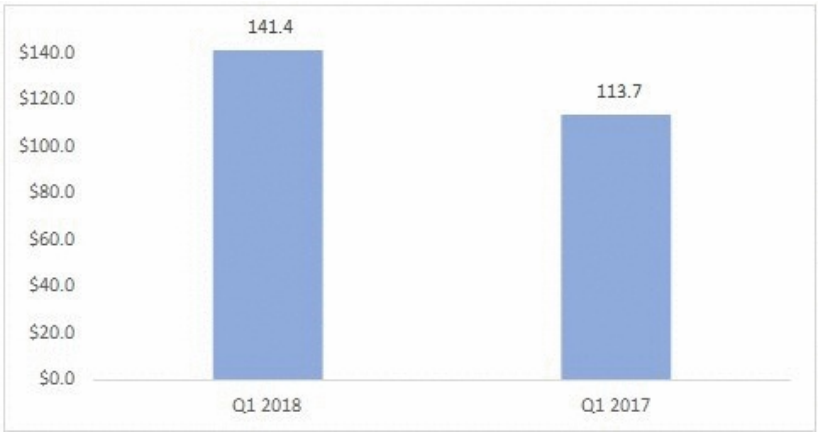
As of and for the period ended March 31, 2018

- Revenue of $141.4 million increased $27.7 million, or 24.4% over the same quarter in 2017;
- Operating income of $11.9 million increased by $8.0 million over the same quarter in 2017;
- Net income of $6.3 million increased $4.9 million over the same quarter in 2017; and
- First quarter 2018 cash flow from operations was $14.7 million

Comparison of Three Months Ended March 31, 2018 to March 31, 2017

dollars in millions	Three Months Ended March 31,		$ Change	% Change
	2018	2017	2018 vs 2017	
Revenue	$ 141.4	$ 113.7	$ 27.7	24.4%
Cost of Services :				
Compensation	56.1	48.9	7.2	14.7
Information technology	12.3	9.8	2.5	25.5
Occupancy	4.4	3.6	0.8	22.2
Direct project costs	10.1	10.4	(0.3)	(2.9)
Other operating costs	6.5	7.2	(0.7)	(9.7)
Amortization of acquisition related software and intangible assets	8.1	6.3	1.8	28.6
Total Cost of Services	97.5	86.2	11.3	13.1
Selling, general and administrative expenses	32.0	23.6	8.4	35.6
Total Operating Expenses	129.5	109.8	19.7	17.9
Operating Income	11.9	3.9	8.0	205.1
Interest expense	(2.6)	(2.3)	(0.3)	13.0
Interest income	0.1	0.2	(0.1)	(50.0)
Income before income taxes	9.4	1.8	7.6	422.2
Income taxes	3.0	0.4	2.6	650.0
Net Income	$ 6.4	$ 1.4	$ 5.0	357.1%

Revenue (in millions)



Three Months Ended March 31 – 2018 vs. 2017

During the three months ended March 31, 2018 revenue was $141.4 million, an increase of $27.7 million or 24.4% compared to revenue of $113.7 million for the prior year quarter.

- By product:
    - Coordination of benefits revenue increased $3.2 million or 3.6% which was attributable to incremental services and yield increases provided to existing customers in our cost avoidance business.
    - Analytical services revenue increased $24.5 million or 97.2% which was attributable to our Eliza subsidiary (acquired in April 2017) contributing revenue of $9.7 million and revenue from Essette increasing $0.7 million as compared to prior year quarter. Medicare RAC revenue increased by $9.7 million, primarily relating to an $8.4 million release of our Medicare RAC appeals liability due to contract expiration. Payment integrity revenue increased $4.4 million as compared to prior year quarter primarily due to increased demand from existing clients, yield enhancements and improvements in provider processes.

- By market:
    - Commercial health plan market revenue increased $16.7 million or 30.3% which was attributable to our Eliza subsidiary (acquired in April 2017) contributing revenue of $9.7 million and revenue from Essette increasing $0.7 million as compared to the prior year quarter. Other increases were related to incremental services and yield increases provided to existing customers in our cost avoidance business.
    - State government market revenue grew by $1.3 million or 2.4%, which was attributable to expanded scopes and yield improvements.
    - Federal government market revenue increased $9.7 million, primarily relating to an $8.4 million release of our Medicare RAC appeals liability due to contract expiration. Payment integrity revenue increased $4.4 million as compared to prior year quarter primarily due to increased demand from existing clients, yield enhancements and improvements in provider processes.

Total Cost of Services (in millions)

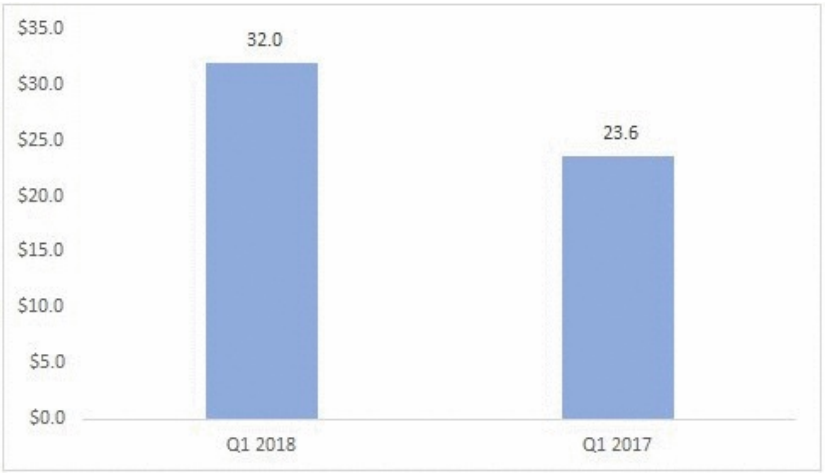
Three Months Ended March 31 – 2018 vs. 2017

During three months ended March 31, 2018, total cost of services was $97.5 million, an increase of $11.3 million or 13.1% compared to $86.2 million for the prior year period.

- Our Eliza subsidiary (acquired in April 2017) and its related compensation, information technology, occupancy and amortization of intangibles expenses represented $8.3 million of the increase.

- Cost of sales also increased by $3.7 million due to higher non-Eliza compensation related expenses.

Selling, General and Administrative expenses (in millions)



Three Months Ended March 31 – 2018 vs. 2017

During the three months ended March 31, 2018, SG&A expense was $32.0 million, an increase of $8.4 million or 35.6% compared to $23.6 million for the prior year period.

- Our Eliza subsidiary (acquired in April 2017) represented $3.2 million of the increase.

- Excluding Eliza, stock compensation expense increased by $3.6 million due to an increase in the number of retirement eligible employees and variable compensation expense increased by $1.2 million.

Income Taxes

Three Months Ended March 31 – 2018 vs. 2017

The Company's effective tax rate increased to 32.0% for the three months ended March 31, 2018 from 20.4% for the three months ended March 31, 2017. The effective tax rate for the three months ended March 31, 2018 includes discrete tax expense for interest on uncertain tax benefits and net stock compensation shortfalls as well as a net federal tax reform benefit comprised of a federal tax rate decrease, net of state impact, partially offset by tax increases for officer compensation deduction limits and loss of the Section 199 Deduction. Excluding the above mentioned discrete tax expense and net federal tax reform benefit, our effective tax rate would approximate 38.7% for the three months ended March 31, 2018. For the three months ended March 31, 2018, the differences between the federal statutory rate and our effective tax rate are state taxes, equity compensation impacts, unrecognized tax benefits, including interest, officer compensation deduction limits, R&D Credits, and other permanent differences.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements.

Liquidity and Capital Resources

The following tables should be read in conjunction with the unaudited Consolidated Financial Statements and Notes thereto in Part I, Item 1 of this Form 10-Q.

Our cash and cash equivalents, working capital and available borrowings under our credit facility (based upon the borrowing base and financial covenants in our Credit Agreement) were as follows *(in thousands)*:

		March 31, 2018		December 31, 2017
Cash and cash equivalents	$	83,898	$	83,313
Working capital	$	216,917	$	199,967
Available borrowings under credit facility	$	338,498	$	254,600

A summary of our cash flows was as follows *(in thousands)*:

		Three Months Ended March 31,		
		2018		2017
Net cash provided by operating activities	$	14,737	$	3,386
Net cash used in investing activities		(5,754)		(8,488)
Net cash used in financing activities		(8,398)		(2,608)
Net increase (decrease) in cash and cash equivalents	$	585	$	(7,710)

Our principal source of cash has been our cash flow from operations and our $500 million five-year revolving credit facility. Other sources of cash include proceeds from the exercise of stock options and tax benefits associated with stock option exercises. The primary uses of cash are capital investments, acquisitions, compensation expenses, information technology, direct project costs, SG&A expenses and repurchases of our common stock.

We believe that expected cash flows from operations, available cash and cash equivalents, and funds available under our revolving credit facility will be sufficient to meet our liquidity requirements for the following year, which include:

- the working capital requirements of our operations;
- investments in our business;
- business development activities;
- repurchases of common stock; and
- repayment of our revolving credit facility.

Any projections of future earnings and cash flows are subject to substantial uncertainty. We may need to access debt and equity markets in the future if unforeseen costs or opportunities arise, to meet working capital requirements, fund acquisitions or repay our indebtedness under the Credit Agreement. If we need to obtain new debt or equity financing in the future, the terms and availability of such financing may be impacted by economic and financial market conditions as well as our financial condition and results of operations at the time we seek additional financing.

Cash Flows from Operating Activities

Net cash provided by operating activities for the three months ended March 31, 2018 was $14.7 million, an increase of $11.3 million as compared to net cash provided by operating activities of $3.4 million for the three months ended March 31, 2017. The increase in operating cash flow is primarily attributable to increases in net income, stock-based compensation, income taxes receivable and prepaid expenses, together with a decrease in accounts payable, accrued expenses and other liabilities. These were partially offset by the non-cash release of the estimated liability for appeals and a decrease in accounts receivable.

Cash Flows from Investing Activities

Net cash used in investing activities for the three months ended March 31, 2018 was $5.8 million, a $2.7 million decrease compared to net cash used in investing activities of $8.5 million for the three months ended March 31, 2017 due to decreases in purchases of property and equipment which were partially offset by increases in investments in capital software.

Cash Flows from Financing Activities

Net cash used in financing activities for the three months ended March 31, 2018 was $8.4 million, a $5.8 million increase compared to net cash used in financing activities of $2.6 million for the three months ended March 31, 2017 due primarily to share repurchases.

Contractual Obligations

There have been no material changes outside the ordinary course of business in our contractual obligations as presented in our 2017 Form 10-K.

Recently Issued Accounting Pronouncements

The information set forth under the caption “Recently Issued Accounting Pronouncements” in Note 1 to the unaudited Consolidated Financial Statements in Part I, Item 1 is incorporated herein by reference.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

There have been no material changes to the market risks discussed in Item 7A to Part II of our 2017 Form 10-K.

Item 4. Controls and Procedures

We are responsible for maintaining disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) that are designed to ensure that information required to be disclosed in our reports filed under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms and that such information is accumulated and communicated to our management, including our Chief Executive Officer and our Chief Financial Officer, as appropriate, to allow for timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

As required by Rule 13a-15(b) under the Exchange Act, management, with the participation of our Chief Executive Officer and Chief Financial Officer, performed an evaluation of the effectiveness of our disclosure controls and procedures as of March 31, 2018. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective to provide reasonable assurance that their objectives were met as of the end of the period covered by this Form 10-Q.

There have been no changes in the Company's internal control over financial reporting identified in connection with the evaluation of our controls performed during the three months ended March 31, 2018, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

Item 1. Legal Proceedings

The information set forth under the caption "Commitments and Contingencies" in Note 12 to the unaudited Consolidated Financial Statements of this Form 10-Q is incorporated herein by reference.

Item 1A. Risk Factors

In addition to the information set forth in this Form 10-Q, the risks that are discussed in the 2017 Form 10-K, under the headings "Part I, Item 1. Business," "Part I, Item 1A. Risk Factors" and "Part II, Item 7A. Quantitative and Qualitative Disclosures About Market Risk," should be carefully considered as such risks could materially affect the Company's business, financial conditions or future results. There has been no material change in the Company's risk factors from those described in the 2017 Form 10-K.

These risks are not the only risks facing the Company. Additional risks and uncertainties not currently known to the Company or that it currently deems to be immaterial also may have a material adverse effect on the Company's business, financial condition or future results.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Repurchases of Shares of Common Stock

On November 1, 2017, the Board of Directors of the Company approved a share repurchase program authorizing the Company to repurchase up to $50.0 million of shares of its common stock from time to time on the open market or in privately negotiated or other transactions. We publicly announced the program in November 2017. The repurchase program is authorized for a period of up to two years, and may be suspended or discontinued at any time. In order to facilitate repurchases, the Company may enter into a Rule 10b5-1 plan from time to time, which would permit shares to be repurchased when the Company might otherwise be precluded from doing so under insider trading laws or because of a self-imposed trading blackout period. During the three months ended March 31, 2018, we repurchased 383,801 shares of our common stock for approximately $6.0 million. All repurchases for the periods presented were made under the program and using cash resources.

The summary of our repurchases of shares of our common stock through the reported periods are:

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Program	Maximum Approximate Dollar Value of Shares That May Yet Be Purchased Under the Program
January 1, 2018 to January 31, 2018	—	$ —	—	$ —
February 1, 2018 to February 28, 2018	383,801	15.50	383,801	29,933,055
March 1, 2018 to March 31, 2018	—	—	—	—
January 1, 2018 to March 31, 2018	**383,801**	**$ 15.50**	**383,801**	**29,933,055**

Item 6. Exhibits

The Exhibits include agreements to which the Company is a party or has a beneficial interest. The agreements have been filed to provide investors with information regarding their respective terms. The agreements are not intended to provide any other actual information about the Company or its business or operations. In particular, the assertions embodied in any representations, warranties, and covenants contained in the agreements may be subject to qualifications with respect to knowledge and materiality different from those applicable to investors and may be qualified by information in confidential disclosure schedules not included with the exhibits. These disclosure schedules may contain information that modifies, qualifies and creates exceptions to the representations, warranties and covenants set forth in the agreements. Moreover, certain representations, warranties, and covenants in the agreements may have been used for the purpose of allocating risk between parties, rather than establishing matters as facts. In addition, information concerning the subject matter of the representations, warranties and covenants may have changed after the date of the respective agreement, which subsequent information may or may not be fully reflected in the Company's public disclosures. Accordingly, investors should not rely on the representations, warranties and covenants in the agreements as characterizations of the actual state of facts about the Company or its business or operations on the date hereof.

Where an exhibit is filed by incorporate by reference to a previously filed registration statement or report, such registration statement or report is identified after the description of the exhibit.

Exhibit Number	Description
3.1	Conformed copy of Certificate of Incorporation of the Company, as amended through July 9, 2015 (incorporated by reference to Exhibit 3.1 to Company's Quarterly Report on Form 10-Q (File No. 000-50194) as filed with the SEC on August 10, 2015)
3.2	Amended and Restated Bylaws of the Company dated May 4, 2016 (incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K (File No. 000- 50194) as filed with the SEC on May 5, 2016)
10.1	Third Amendment to Executive Employment Agreement, dated February 21, 2018, by and between William C. Lucia and HMS Holdings Corp. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 000-50194) as filed with the SEC on February 23, 2018)†
10.2	Amended and Restated Employment Agreement, dated April 2, 2018, by and between Jeffrey S. Sherman and HMS Holdings Corp.†
10.3	Amended and Restated Employment Agreement, dated March 29, 2018, by and between Meredith W. Bjorck and HMS Holdings Corp.†
10.4	Amended and Restated Employment Agreement, dated April 2, 2018, by and between Semone Neuman and HMS Holdings Corp.†
10.5	Amended and Restated Employment Agreement, dated March 29, 2018, by and between Douglas M. Williams, Jr. and HMS Holdings Corp.†
31.1	Rule 13a-14(a)/15d-14(a) Certification of the Principal Executive Officer of HMS Holdings Corp., as adopted pursuant to Section 302 of the Sarbanes- Oxley Act of 2002
31.2	Rule 13a-14(a)/15d-14(a) Certification of the Principal Financial Officer of HMS Holdings Corp., as adopted pursuant to Section 302 of the Sarbanes- Oxley Act of 2002
32.1	Section 1350 Certification of the Principal Executive Officer of HMS Holdings Corp., as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*

32.2	Section 1350 Certification of the Principal Financial Officer of HMS Holdings Corp., as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

_____

† Indicates a management contract or compensatory plan, contract or arrangement

* The certifications attached hereto as Exhibit 32.1 and Exhibit 32.2 are furnished with this Form 10-Q and shall not be deemed "filed" by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Date: May 7, 2018

HMS HOLDINGS CORP.

By: /s/ William C. Lucia

William C. Lucia
President and Chief Executive Officer
(Principal Executive Officer)

By: /s/ Jeffrey S. Sherman

Jeffrey S. Sherman
Executive Vice President, Chief Financial Officer and Treasurer
(Principal Financial Officer)

AMENDED AND RESTATED EXECUTIVE EMPLOYMENT AGREEMENT

THIS AMENDED AND RESTATED EXECUTIVE EMPLOYMENT AGREEMENT (the "***Agreement***") is effective April 2, 2018 (the "***Effective Date***"), and is by and between HMS Holdings Corp., a Delaware corporation ("***HMS***"), and Jeffrey S. Sherman, an individual ("***you***") (and, together with HMS, the "***Parties***") to provide services, as directed, to the entities comprising the "***Company***" (HMS and its respective subsidiaries and affiliates). This Agreement amends, restates and supersedes the Employment Agreement between you and the Company dated July 28, 2014 in its entirety (the "***Prior Agreement***").

WHEREAS, the Company wishes to continue to employ you, and you wish to continue to be employed by the Company.

NOW THEREFORE, in consideration of your acceptance of employment pursuant to the terms set forth in this Agreement, the Parties agree to be bound by the terms contained in this Agreement as follows:

1. ***Engagement.*** As of the Effective Date, HMS will continue to employ you as Executive Vice President, Chief Financial Officer and Treasurer. You acknowledge that the Company organizes itself across multiple entities, and that assigning you to work directly for HMS or for one of its subsidiaries or affiliates will not, in and of itself, breach this Agreement. You will report directly to the Chief Executive Officer, or his or her designee ("***Supervisor***"). You will have the responsibilities, duties, and authorities specified from time to time by your Supervisor, which will generally be commensurate with executives, at a similar level, of entities of similar size and character to the Company. You also agree, if so requested, to serve as an officer and director of subsidiaries of HMS.

2. ***Commitment.*** During the Employment Period (as defined in Section 3 below), you must devote your full working time and attention to the Company. During the Employment Period, you must not engage in any employment, occupation, consulting or other similar activity without your Supervisor's prior written consent; *provided, however,* that you may (i) serve in any capacity with any professional, community, industry, civic (including governmental boards), educational, charitable, or other non-profit organization, (ii) serve on any for-profit entity board, with your Supervisor's prior written consent, and (iii) subject to the Company's conflict of interest policies, make investments in other businesses and manage your and your family's personal investments and legal affairs; *provided* that any such activities described in clauses (i)-(iii) above do not materially interfere with the performance of your duties for the Company and do not otherwise violate this Agreement or any other written agreement between the Company and you. You will perform your services under this Agreement primarily at the Company's offices in Irving, Texas, or at such place or places as you and the Company may agree. You understand and agree that your employment will require travel from time to time in a manner consistent with Company policy.

3. ***Employment Period.*** The Company hereby agrees to continue to employ you and you hereby accept continued employment with the Company upon the revised terms set forth in this Agreement, for the period commencing on the Effective Date and ending when and as provided in Section 6 (the "***Employment Period***").

4. ***Compensation.***

(a) ***Base Salary.*** You will receive an annual base salary at a monthly rate of $44,204.16, annualizing to $530,450.00 (as may be adjusted under this Agreement, the "***Base Salary***"). The Company will pay your Base Salary periodically in arrears not less frequently than monthly in accordance with the Company's regular payroll practices as in effect from time to time (which currently provide for bi-weekly payments). The Board of Directors of HMS (the "***Board***") or its Compensation Committee (the "***Compensation Committee***") will review your Base Salary periodically and may adjust your Base Salary at that time.

(b) ***Bonus.*** You will be eligible to receive bonus compensation (the "***Bonus***") from the Company in respect of each fiscal year (or portion thereof) during the Employment Period, in each case as the Compensation Committee may determine in its sole discretion on the basis of such performance-based or other criteria as it determines appropriate. The target bonus for your position for 2018 is 75% of Base Salary, which will not be prorated. You must be an employee of the Company at the time bonuses are paid to receive a Bonus. The Compensation Committee will review your target bonus periodically and may adjust your target bonus at that time. The Bonus, if any, will be paid when other executives receive their bonuses under comparable arrangements.

5. ***Employee Benefits.***

(a) ***Employee Welfare, Equity Compensation, and Retirement Plans.*** You will, to the extent eligible, be entitled to participate at a level commensurate with your position in all employee equity compensation plans and welfare benefit and retirement plans and programs the Company provides to its executives in accordance with the terms thereof as in effect from time to time. The Company may change or terminate the benefits at any time.

(b) ***Business Expenses.*** Upon submission of appropriate documentation in accordance with Company policies, the Company will promptly pay, or reimburse you for, all reasonable business expenses that you incur in performing your duties under this Agreement, including travel, entertainment, professional dues and subscriptions, as long as such expenses are reimbursable under the Company's policies. Any payments or expenses provided in this Section 5(b) will be paid in accordance with Section 7(c).

(c) ***Paid Time Off.*** You will accrue paid time off (**"*PTO*"**) at the rate of 18 hours per month (annualized to 27 days per year), or such greater number as the Company determines from time to time for its senior executive officers, provided that any accrual caps, carryover from year to year, and payment for accrued and unused PTO upon termination of employment will be subject to the Company's generally applicable policies.

6. Termination of Employment.

(a) ***General.*** Subject in each case to the provisions of this Section 6 and the other provisions of this Agreement relating to the Company's respective rights and obligations upon termination of your employment, nothing in this Agreement interferes with or limits in any way the Company's or your right to terminate your employment at any time, for any reason or no reason, with or without notice, and nothing in this Agreement confers on you any right or obligation to continue in the Company's employ. If your employment ceases for any or no reason, you (or your estate, as applicable) will be entitled to receive (in addition to any compensation and benefits you may be entitled to receive under Section 6(b), (d) or (e) below): (i) any earned but unpaid Base Salary and, to the extent consistent with general Company policy, accrued but unused PTO through and including the date of termination of your employment, to be paid in accordance with the Company's regular payroll practices and with applicable law, but no later than the next regularly scheduled pay period, (ii) unreimbursed business expenses in accordance with the Company's policies for which expenses you have provided appropriate documentation, to be paid in accordance with Section 7(c), and (iii) any amounts or benefits to which you are then entitled under the terms of the benefit plans then sponsored by the Company in accordance with their terms (and not accelerated to the extent acceleration does not satisfy Section 409A of the Internal Revenue Code of 1986, as amended ("***Section 409A***" of the "***Code***")). Notwithstanding any other provision in this Agreement to the contrary, you will be entitled to severance, if any, solely through the terms of this Section 6, unless another Board (or Compensation Committee) approved written agreement between you and the Company expressly provides otherwise.

(b) ***Termination Without Cause or Resignation With Good Reason.*** If, during the Employment Period, the Company terminates your employment without Cause (defined below) or you resign with Good Reason (defined below), in addition to the amounts described in Section 6(a), the Company will pay to you the following, subject to compliance with Section 6(b)(iii):

(i) *Cash Severance*. The Company will pay to you in cash an amount equal to 12 times your monthly Base Salary, paid ratably in equal installments over a 12 month period beginning in the first payroll period following the Release Effective Date (as defined below) (or such later date required by Section 7) in accordance with the Company's standard payroll policies and procedures and in a manner consistent with Section 7;

(ii) *Benefits*. The Company will pay you a lump sum amount equal to 12 times the difference between the monthly COBRA coverage premium for the same type of medical and dental coverage (single, family, or other) in which you are enrolled as of the date your employment ends and your then-monthly employee contribution. This payment will be taxable and subject to withholding. You may use the amount received for any purpose.

(iii) *Release*. To receive any severance benefits provided for under this Agreement or otherwise, you must deliver to the Company a separation agreement and general release of claims in the form the Company provides (releasing all releasable claims other than to payments under Section 6 or outstanding equity and including obligations to cooperate with the Company and reaffirming your obligations under the Restrictive Covenants Agreement (as defined below)), which agreement and release must become irrevocable within 60 days (or such earlier date as the release provides) following the date of your termination of employment. Benefits under Section 6(b)(i) and (ii) will be paid or commence in the first regular payroll beginning after the release becomes effective, subject to any delays required by Section 7; *provided, however*, that if the last day of the 60-day period for an effective release falls in the calendar year following the year of your date of termination, the severance payments will be paid or begin no earlier than January 1 of such subsequent calendar year. The date on which your release of claims becomes effective is the "***Release Effective Date***." You must continue to comply with the Restrictive Covenants Agreement to continue to receive severance benefits.

(c) ***Termination for Cause, Resignation without Good Reason.***

(i) *General*. If, during the Employment Period, the Company terminates your employment for Cause or you resign from your employment (other than for Good Reason), you will be entitled only to the payments described in Section 6(a), unless applicable law otherwise requires payment. You may resign from your employment (other than for Good Reason), at any time, by giving at least 30 days' prior written notice to the Company (the "***Notice Period***"). The Company may choose to respond to such notice of resignation by limiting your access and reducing your duties during the Notice Period, in which event you would remain an employee of the Company through the remainder of the Notice Period and continue to receive your Base Salary, less applicable deductions, and continue vesting under any outstanding equity grants through the end of the Notice Period. You will have no further right to receive any other compensation or benefits after such termination or resignation of employment, except as determined in accordance with the terms of the employee benefit plans or programs of the Company or as required by law.

(ii) *Cause*. For purposes of this Agreement, "***Cause***" means any of the following: your (i) fraud with respect to the Company; (ii) material misrepresentation to any regulatory agency, governmental authority, outside or internal auditors, internal or external Company counsel, or the Board concerning the operation or financial status of the Company; (iii) theft or embezzlement of assets of the Company; (iv) your conviction, or plea of guilty or nolo contendere to any felony (or to a felony charge reduced to a misdemeanor), or, with respect to your employment, to any misdemeanor (other than a traffic violation); (v) material failure to follow the Company's conduct and ethics policies that have been provided or made available to you; (vi) material breach of this Agreement or the Restrictive Covenants Agreement; and/or (vii) continued failure to attempt in good faith to perform your duties as reasonably assigned by your Supervisor at the time. Before terminating your employment for Cause under clauses (v) – (vii) above, the Company will specify in writing to you the nature of the act, omission, refusal, or failure that it deems to constitute Cause and, if the Company reasonably considers the situation to be correctable, give you 30 days after you receive such notice to correct the situation (and thus avoid termination for Cause), unless the Company agrees to further extend the time for correction. You agree that the Company will have discretion exercised in a reasonable manner to determine whether your correction is sufficient. Nothing in this definition prevents the Company from removing you from your position with the Company at any time and for any reason.

(iii) *Good Reason*. For purposes of this Agreement, "***Good Reason***" means, the occurrence, without your prior written consent, of any of the following events: (i) any material diminution in your authority, duties or responsibilities with the Company; (ii) a requirement that you report to an officer other than your then current Supervisor if the result is that your new Supervisor has materially diminished authority, duties, or responsibilities in comparison with your prior supervisor; (iii) a material reduction in your Base Salary; (iv) the Company requiring you to perform your principal services primarily in a geographic area more than 50 miles from the Company's offices in Irving, Texas (or such other place of primary employment for you at which you have agreed to provide such services); or (v) a material breach by the Company of any material provision of this Agreement. No resignation will be treated as resignation for Good Reason unless (x) you have given written notice to the Company of your intention to terminate your employment for Good Reason, describing the grounds for such action, no later than 90 days after the first occurrence of such circumstances, (y) you have provided the Company with at least 30 days in which to cure the circumstances, and (z) if the Company is not successful in curing the circumstance, you end your employment within 30 days following the cure period in (y). If the Company informs you that it will not treat your resignation as for Good Reason, you may withdraw the resignation and remain employed (provided that you do so before the original notice of resignation becomes effective) or may proceed and dispute the Company's decision.

(d) ***Death or Disability.*** Your employment hereunder will terminate immediately upon your death or Disability. "***Disability***" means the Chief Executive Officer, in consultation with the Chairman of the Compensation Committee or the Board, based upon appropriate medical evidence, determines you have become physically or mentally incapacitated so as to render you incapable of performing your usual and customary duties, with or without a reasonable accommodation, for 180 or more days, whether or not consecutive, during any 12 month period. You are also disabled if you are found to be disabled within the meaning of the Company's long-term disability insurance coverage as then in effect (or would be so found if you applied for the coverage or benefits). Employment termination under this subsection is not covered by Section 6(b) or 6(c), and you or your heirs will receive only the benefits and compensation in Section 6(a) (together, as applicable, with any life or disability insurance payments). Nothing in this Section 6(d) prevents the Company from removing you from your position with the Company or, under Section 6(b) or 6(c), from terminating your employment at any time, subject to compliance with those subsections.

(e) ***Change in Control.*** If, within 24 months following a Change in Control, the Company terminates your employment without Cause or you resign for Good Reason, in addition to the benefits described in Section 6(b)(ii) and subject to the release required under Section 6(b)(iii), you will receive the cash severance described in Section 6(b)(i), paid in a single lump sum on the Release Effective Date in accordance with the Company's standard payroll policies and procedures (or such later date as either Section 6(b)(iii) or 7(a) requires). For purposes of this Agreement, "***Change in Control***" means:

(i) the acquisition by an individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Securities Exchange Act of 1934 (the "***Exchange Act***") (a "***Person***") of beneficial ownership of any capital stock of HMS if, after such acquisition, such Person beneficially owns (within the meaning of Rule 13d-3 under the Exchange Act) 50.01% or more of either (x) the then-outstanding shares of common stock of HMS (the "***Outstanding Company Common Stock***") or (y) the combined voting power of the then-outstanding securities of HMS entitled to vote generally in the election of directors (the "***Outstanding Company Voting Securities***"); *provided, however,* that for purposes of this subsection (i) any acquisition directly from the Company will not be a Change in Control, nor will any acquisition by any individual, entity, or group pursuant to a Business Combination (as defined below) that complies with subclauses (x) and (y) of clause (ii) of this definition;

(ii) the consummation of a merger, consolidation, reorganization, recapitalization or share exchange involving HMS or a sale or other disposition of all or substantially all (i.e., in excess of 85%) of the assets of HMS (a "***Business Combination***"), unless, immediately following such Business Combination, each of the following two conditions is satisfied: (x) all or substantially all of the individuals and entities who were the beneficial owners of the Outstanding Company Common Stock and Outstanding Company Voting Securities immediately prior to such Business Combination beneficially own, directly or indirectly, more than 50% of the then-outstanding shares of common stock and the combined voting power of the then- outstanding securities entitled to vote generally in the election of directors, respectively, of the resulting or acquiring corporation in such Business Combination (which shall include a corporation that as a result of such transaction owns HMS or substantially all of HMS's assets either directly or through one or more subsidiaries (such resulting or acquiring corporation is referred to herein as the "***Acquiring Corporation***") in substantially the same proportions as their ownership of the Outstanding Company Common Stock and Outstanding Company Voting Securities, respectively, immediately prior to such Business Combination and (y) no Person beneficially owns, directly or indirectly, 50.01% or more of the then-outstanding shares of common stock of the Acquiring Corporation, or of the combined voting power of the then-outstanding securities of such corporation entitled to vote generally in the election of directors (except to the extent that such ownership existed prior to the Business Combination); or

(iii) a change in the composition of the Board that results, during any one year period, in the Continuing Directors (as defined below) no longer constituting a majority of the Board (or, if applicable, the Board of Directors of a successor corporation to HMS), where the term "***Continuing Director***" means at any date a member of the Board (x) who was a member of the Board on the Effective Date or (y) who was nominated or elected subsequent to such date by at least a majority of the directors who were Continuing Directors at the time of such nomination or election or whose election to the Board was recommended or endorsed by at least a majority of the directors who were Continuing Directors at the time of such nomination or election; *provided, however,* that there shall be excluded from this clause (y) any individual whose initial assumption of office after the Effective Date occurred as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents, by or on behalf of a person other than the Board; *provided* that, where required by Section 409A, the event that occurs is also a "change in the ownership or effective control of a corporation, or a change in the ownership of a substantial portion of the assets of a corporation" as defined in Treasury Reg. § 1.409A-3(i)(5).

(f) ***Further Effect of Termination on Board and Officer Positions.*** If your employment ends for any reason, you agree that you will cease immediately to hold any and all officer or director positions you then have with the Company, absent a contrary direction from the Board (which may include either a request to continue such service or a direction to cease serving upon notice). You hereby irrevocably appoint the Company to be your attorney-in-fact to execute any documents and do anything in your name to effect your ceasing to serve as a director and officer of the Company, should you fail to resign following a request from the Company to do so. You will not be required to sign, and the Company will not sign on your behalf without your consent, documents effecting your ceasing to serve as a director that characterize your cessation of employment differently than the manner in which it is effected through Section 6 above. A written notification signed by a director or duly authorized officer of the Company that any instrument, document, or act falls within the authority conferred by this subsection will be conclusive evidence that it does so. The Company will prepare any documents, pay any filing fees, and bear any other expenses related to this Section 6(f).

7. ***Effect of Section 409A of the Code.***

(a) ***Six Month Delay.*** If and to the extent any portion of any payment, compensation or other benefit provided to you in connection with your employment termination is determined to constitute "nonqualified deferred compensation" within the meaning of Section 409A and you are a specified employee as defined in Section 409A(a)(2)(B)(i), as determined by the Company in accordance with its procedures, by which determination you hereby agree that you are bound, such portion of the payment, compensation or other benefit shall not be paid before the earlier of (i) the expiration of the six month period measured from the date of your "separation from service" (as determined under Section 409A) or (ii) the tenth day following the date of your death following such separation from service (the "***New Payment Date***"). The aggregate of any payments that otherwise would have been paid to you during the period between the date of separation from service and the New Payment Date shall be paid to you in a lump sum in the first payroll period beginning after such New Payment Date, and any remaining payments will be paid on their original schedule.

(b) ***General 409A Principles.*** For purposes of this Agreement, a termination of employment will mean a "separation from service" as defined in Section 409A. For purposes of this Agreement, each amount to be paid or benefit to be provided will be construed as a separate identified payment for purposes of Section 409A, and any payments that are due within the "short term deferral period" as defined in Section 409A or are paid in a manner covered by Treas. Reg. Section 1.409A-1(b)(9)(iii) will not be treated as deferred compensation unless applicable law requires otherwise. Neither the Company nor you will have the right to accelerate or defer the delivery of any such payments or benefits except to the extent specifically permitted or required by Section 409A. This Agreement is intended to comply with the provisions of Section 409A and this Agreement shall, to the extent practicable, be construed in accordance therewith. Terms defined in this Agreement will have the meanings given such terms under Section 409A if and to the extent required to comply with Section 409A. In any event, the Company makes no representations or warranty and will have no liability to you or any other person if any provisions of or payments under this Agreement are determined to constitute deferred compensation subject to Code Section 409A but not to satisfy the conditions of that section.

(c) ***Expense Timing.*** Payments with respect to reimbursements of business expenses will be made in the ordinary course in accordance with the Company's procedures (generally within 45 days after you have submitted appropriate documentation) and, in any case, on or before the last day of the calendar year following the calendar year in which the relevant expense is incurred. The amount of expenses eligible for reimbursement, or in-kind benefits provided, during a calendar year may not affect the expenses eligible for reimbursement, or in-kind benefits to be provided, in any other calendar year. The right to reimbursement or in-kind benefits is not subject to liquidation or exchange for another benefit.

8. ***Restrictive Covenants.*** You have previously signed a Noncompetition, Nonsolicitation, Proprietary and Confidential Information and Developments Agreement (the "***Restrictive Covenants Agreement***"), which addresses your responsibilities to the Company in connection with confidentiality, transfer and protection of intellectual property, noncompetition, nonsolicitation of employees and customers, and nondisparagement. You agree that the Restrictive Covenants Agreement remains in effect and shall survive the termination of this Agreement and termination of your employment with the Company.

9. ***Cooperation.*** Following your separation of employment from the Company, you agree to cooperate with the Company in regard to the transition of the business matters you handled on behalf of the Company. You also agree to reasonably cooperate with the Company and its counsel in the defense or prosecution of any claims or actions now in existence or which may be brought in the future against or on behalf of the Company which relate in any way to events or occurrences that transpired while you were employed by the Company, subject to your right to initiate communications with, or participate or cooperate in any investigation conducted by, any Federal, State or Local government agency or regulatory authority. Your cooperation in connection with such claims or actions will include, but not be limited to, participating in interviews and discussions with the Company and/or its counsel, meeting with the Company's counsel to prepare for discovery, trial, or any legal proceeding, appearing and preparing for deposition or testimony at trial, and otherwise cooperating with HMS and its legal counsel, as requested. Nothing in this Agreement is to be construed as instructing you to testify in any particular manner, other than truthfully. To the extent possible, the Company will provide you with reasonable advance notice of the request for your cooperation. The Company will reimburse you for all reasonable, pre-approved out-of-pocket costs and expenses (but not including attorneys' fees and costs) that you incur, and compensate you at an hourly rate based on the base salary paid to you at the time of your separation (which is intended to be a fair and reasonable estimate of the total value of your lost time) in connection with your performance of your obligations under this paragraph of the Agreement, to the extent permitted by law.

10. ***Miscellaneous*****.**

(a) ***Notices.*** All notices required or permitted under this Agreement must be in writing and will be deemed effective upon personal delivery or three business days following deposit in a United States Post Office, by certified mail, postage prepaid, or one business day after it is sent for next-business day delivery via a reputable nationwide overnight courier service in the case of notice to the Company at its then principal headquarters, and in the case of notice to you to the current address on file with the Company. Notice to the Company must include a separate notice to the General Counsel of HMS. Either Party may change the address to which notices are to be delivered by giving notice of such change to the other Party in the manner set forth in this Section 10(a).

(b) ***No Mitigation*****.** You are not required to seek other employment or otherwise mitigate the value of any severance benefits contemplated by this Agreement, nor will any such benefits be reduced by any earnings or benefits that you may receive from any other source. Notwithstanding any other provision of this Agreement, any sum or sums paid under this Agreement will be in lieu of any amounts to which you may otherwise be entitled under the terms of any severance plan, policy, program, agreement or other arrangement sponsored by the Company or an affiliate of the Company.

(c) ***Waiver of Jury Trial.*** TO THE EXTENT NOT PROHIBITED BY APPLICABLE LAW THAT CANNOT BE WAIVED, THE PARTIES HEREBY WAIVE, AND COVENANT THAT THEY WILL NOT ASSERT (WHETHER AS PLAINTIFF, DEFENDANT OR OTHERWISE), ANY RIGHT TO TRIAL BY JURY IN ANY ACTION, SUIT OR OTHER PROCEEDING ARISING IN WHOLE OR IN PART UNDER OR IN CONNECTION WITH THIS AGREEMENT OR THE RELEASE IT CONTEMPLATES, WHETHER NOW EXISTING OR HEREAFTER ARISING, AND WHETHER SOUNDING IN CONTRACT, TORT OR OTHERWISE, THE PARTIES AGREE THAT ANY PARTY MAY FILE A COPY OF THIS PARAGRAPH WITH ANY COURT AS WRITTEN EVIDENCE OF THE KNOWING, VOLUNTARY AND BARGAINED-FOR AGREEMENT AMONG THE PARTIES IRREVOCABLY TO WAIVE THEIR RIGHTS TO TRIAL BY JURY IN ANY PROCEEDING WHATSOEVER BETWEEN THEM RELATING TO THIS AGREEMENT OR TO ANY OF THE MATTERS CONTEMPLATED UNDER THIS AGREEMENT, RELATING TO YOUR EMPLOYMENT, OR COVERED BY THE CONTEMPLATED RELEASE.

(d) ***Severability.*** Each provision of this Agreement must be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be prohibited by or invalid under applicable law, such provision will be ineffective only to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Agreement. Moreover, if an arbitrator or a court of competent jurisdiction determines any of the provisions contained in this Agreement to be unenforceable because the provision is excessively broad in scope, whether as to duration, activity, geographic application, subject or otherwise, it will be construed, by limiting or reducing it to the extent legally permitted, so as to be enforceable to the extent compatible with then applicable law to achieve the intent of the Parties.

(e) ***Assignment.*** This Agreement will be binding upon and will inure to the benefit of (i) your heirs, beneficiaries, executors and legal representatives upon your death and (ii) any successor of the Company. Any such successor of the Company will be treated as substituted for the Company under the terms of this Agreement for all purposes. The Company may assign this Agreement without your consent, and such an assignment will not terminate your employment for purposes of triggering your entitlement to severance; *provided, however,* that if such an assignment provides a basis for you to resign for Good Reason after a Change in Control, you may resign for Good Reason, and you will be entitled to severance, if any, subject to the terms of Section 6. You specifically agree that any assignment may include rights under the Restrictive Covenants Agreement without requiring your consent; *provided*, *however*, that an assignment that occurs after the termination of your employment will not expand in any manner the scope of the Restrictive Covenants Agreement. As used herein, "successor" will mean any person, firm, corporation or other business entity that at any time, whether by purchase, merger or otherwise, directly or indirectly acquires all or substantially all of the assets or business of the Company. Any attempted assignment, transfer, conveyance or other disposition of any interest in your rights to receive any form of compensation hereunder will be null and void.

(f) ***No Oral Modification, Waiver, Cancellation or Discharge.*** This Agreement may only be amended, canceled or discharged or any obligations thereunder waived through a writing signed by you and any executive officer of the Company (other than you) duly authorized either by the Board or the Compensation Committee.

(g) ***No Conflict of Interest.*** You confirm that you have fully disclosed to the Company, to the best of your knowledge, all circumstances under which you, your immediate family and other persons who reside in your household have or may have a conflict of interest with the Company. You further agree to fully disclose to the Company any such circumstances that might arise during your employment upon your becoming aware of such circumstances.

(h) ***Other Agreements.*** You hereby represent that your performance of all the terms of this Agreement and the performance of your duties as an employee of the Company does not and will not breach any agreement to keep in confidence proprietary information, knowledge or data acquired by you in confidence or in trust prior to your employment with the Company. You also represent that you are not a party to or subject to any restrictive covenants, legal restrictions, policies, commitments or other agreements in favor of any entity or person that would in any way preclude, inhibit, impair or limit your ability to perform your obligations under this Agreement, including noncompetition agreements or nonsolicitation agreements, and you further represent that your performance of the duties and obligations under this Agreement does not violate the terms of any agreement to which you are a party. You agree that you will not enter into any agreement or commitment or agree to any policy that would prevent or hinder your performance of duties and obligations under this Agreement.

(i) ***Disclosure of this Agreement.*** You acknowledge that the Company may provide persons or entities who may employ or engage you with a copy of the Restrictive Covenants Agreement (or portions thereof) to highlight your continuing obligations to the Company. You also acknowledge that the Company may be obligated to disclose the entire Agreement, or any portion thereof, to satisfy applicable laws and regulations.

(j) ***Survivorship.*** The respective rights and obligations of the Company and you hereunder will survive any termination of your employment to the extent necessary to preserve the intent of such rights and obligations.

(k) ***Withholding.*** The Company will be entitled to withhold, or cause to be withheld, any amount of federal, state, city or other withholding taxes or other amounts either required by law or authorized by you with respect to payments made to you in connection with your employment or the termination of your employment.

(l) ***Company Policies.*** References in this Agreement to Company policies and procedures are to those policies and procedures in effect at the Effective Date, as the Company may amend them from time to time.

(m) ***Governing Law; Dispute Resolution.*** The Parties agree that the enforcement of this Agreement shall be governed by the Federal Arbitration Act ("FAA"), 9 U.S.C. §1 et seq. The laws of the State of Texas and the National Rules (as defined below) shall apply to the interpretation of this Agreement, pursuant to section 2 of the FAA. The laws of the State of Texas shall govern the substantive merits of any legal dispute set forth herein, without regard to conflicts of law provisions. In case of any controversy or claim arising out of or related to this Agreement or relating to your employment or the termination of your employment (including claims relating to employment discrimination), except as expressly excluded herein, each Party agrees to give the other Party notice of an intent to seek arbitration under this Agreement and 10 days to reach a resolution. Should resolution of any controversy or claim not be reached following provision of notice and a reasonable opportunity to cure, then the dispute (including the arbitrability of the dispute itself, and the formation or enforceability of this Agreement) shall be settled by arbitration under the American Arbitration Association's Employment Arbitration Rules and Mediation Procedures (the "***National Rules***"). A single arbitrator shall be selected in accordance with the National Rules. The dispute will be arbitrated in Dallas, Texas, absent mutual agreement of the Parties to another venue. Any claim or controversy not submitted to arbitration in accordance with this Section 10(m) (other than as provided under the Restrictive Covenants Agreement) will be waived, and thereafter no arbitrator, arbitration panel, tribunal, or court will have the power to rule or make any award on any such claim or controversy. In determining a claim or controversy under this Agreement and in making an award, the arbitrator must consider the terms and provisions of this Agreement, as well as all applicable federal, state, or local laws. The award rendered in any arbitration proceeding held under this Section 10(m) shall be final and binding and judgment upon the award may be entered in any court having jurisdiction thereof. The following claims are not covered by this Section 10(m): (1) claims for workers' compensation or unemployment compensation benefits; (2) administrative charges to any federal, state or local equal opportunity or fair employment practices agency; (3) administrative charges to the National Labor Relations Board; (4) agency charges or complaints to exhaust an administrative remedy; or (5) any other charges filed with or communication to a federal, state or local government office, official or agency. Also not covered by this Section 10(m) are claims by the Company or by you for temporary restraining orders, preliminary injunctions or permanent injunctions ("equitable relief") in cases in which such equitable relief would be otherwise authorized by law or pursuant to the Restrictive Covenants Agreement. The Company will be responsible for paying any filing fee of the sponsoring organization and the fees and costs of the arbitrator; provided, however, that if you initiate the claim, you will contribute an amount equal to the filing fee you would have incurred to initiate a claim in the court of general jurisdiction in the State of Texas. Each party will pay for its own costs and attorneys' fees, if any, provided that the arbitrator or court, as applicable, may award reasonable costs and expenses in favor of the prevailing party. The Company and you agree that the decision as to whether a party is the prevailing party in an arbitration, or a legal proceeding that is commenced in connection therewith will be made in the sole discretion of the arbitrator or, if applicable, the court.

Any action, suit or other legal proceeding with respect to equitable relief that is excluded from arbitration above must be commenced only in a court of the State of Texas (or, if appropriate, a federal court located within the State of Texas), and the Company and you each consent to the jurisdiction of such a court. With respect to any such court action, the Parties hereto (a) submit to the personal jurisdiction of such courts; (b) consent to service of process by the means specified under Section 10(a); and (c) waive any other requirement (whether imposed by statute, rule of court, or otherwise) with respect to personal jurisdiction, inconvenient forum, or service of process.

(n) ***Interpretation.*** The parties agree that this Agreement will be construed without regard to any presumption or rule requiring construction or interpretation against the drafting party. References in this Agreement to "include" or "including" should be read as though they said "without limitation" or equivalent forms.

(o) ***Entire Agreement.*** This Agreement and any documents referred to herein, including, but not limited to, the Restrictive Covenants Agreement referenced in Section 8, represent the entire agreement of the Parties and will supersede any and all previous contracts, arrangements or understandings between the Company and you, including, without limitation, the Prior Agreement.

(p) ***Counterparts.*** This Agreement may be executed in counterparts, and all so executed shall constitute one agreement which shall be binding upon all Parties hereto, notwithstanding that all Parties' signatures do not appear on the same page.

[Signatures on Following Page(s)]

IN WITNESS WHEREOF, the Parties have executed this Agreement to be effective as of the Effective Date set forth above.

HMS Holdings Corp.

By: /s/ William C. Lucia
William C. Lucia
Its: Chairman, President and Chief Executive Officer

3/29/2018
Date

Jeffrey S. Sherman

/s/ Jeffrey S. Sherman

4/2/2018
Date

Exhibit 10.3

AMENDED AND RESTATED EXECUTIVE EMPLOYMENT AGREEMENT

THIS AMENDED AND RESTATED EXECUTIVE EMPLOYMENT AGREEMENT (the "***Agreement***") is effective March 29, 2018 (the "***Effective Date***"), and is by and between HMS Holdings Corp., a Delaware corporation ("***HMS***"), and Meredith W. Bjorck, an individual ("***you***") (and, together with HMS, the "***Parties***") to provide services, as directed, to the entities comprising the "***Company***" (HMS and its respective subsidiaries and affiliates). This Agreement amends, restates and supersedes the Employment Agreement between you and the Company dated March 14, 2016 in its entirety (the "***Prior Agreement***").

WHEREAS, the Company wishes to continue to employ you, and you wish to continue to be employed by the Company.

NOW THEREFORE, in consideration of your acceptance of employment pursuant to the terms set forth in this Agreement, the Parties agree to be bound by the terms contained in this Agreement as follows:

1. ***Engagement.*** As of the Effective Date, HMS will continue to employ you as Executive Vice President, General Counsel and Corporate Secretary. You acknowledge that the Company organizes itself across multiple entities, and that assigning you to work directly for HMS or for one of its subsidiaries or affiliates will not, in and of itself, breach this Agreement. You will report directly to the Chief Executive Officer, or his or her designee ("***Supervisor***"). You will have the responsibilities, duties, and authorities specified from time to time by your Supervisor, which will generally be commensurate with executives, at a similar level, of entities of similar size and character to the Company. You also agree, if so requested, to serve as an officer and director of subsidiaries of HMS.

2. ***Commitment.*** During the Employment Period (as defined in Section 3 below), you must devote your full working time and attention to the Company. During the Employment Period, you must not engage in any employment, occupation, consulting or other similar activity without your Supervisor's prior written consent; *provided, however,* that you may (i) serve in any capacity with any professional, community, industry, civic (including governmental boards), educational, charitable, or other non-profit organization, (ii) serve on any for-profit entity board, with your Supervisor's prior written consent, and (iii) subject to the Company's conflict of interest policies, make investments in other businesses and manage your and your family's personal investments and legal affairs; *provided* that any such activities described in clauses (i)-(iii) above do not materially interfere with the performance of your duties for the Company and do not otherwise violate this Agreement or any other written agreement between the Company and you. You will perform your services under this Agreement primarily at the Company's offices in Irving, Texas, or at such place or places as you and the Company may agree. You understand and agree that your employment will require travel from time to time in a manner consistent with Company policy.

3. ***Employment Period.*** The Company hereby agrees to continue to employ you and you hereby accept continued employment with the Company upon the revised terms set forth in this Agreement, for the period commencing on the Effective Date and ending when and as provided in Section 6 (the "***Employment Period***").

4. ***Compensation.***

(a) ***Base Salary.*** You will receive an annual base salary at a monthly rate of $32,187.50, annualizing to $386,250.00 (as may be adjusted under this Agreement, the "***Base Salary***"). The Company will pay your Base Salary periodically in arrears not less frequently than monthly in accordance with the Company's regular payroll practices as in effect from time to time (which currently provide for bi-weekly payments). The Board of Directors of HMS (the "***Board***") or its Compensation Committee (the "***Compensation Committee***") will review your Base Salary periodically and may adjust your Base Salary at that time.

(b) ***Bonus.*** You will be eligible to receive bonus compensation (the "***Bonus***") from the Company in respect of each fiscal year (or portion thereof) during the Employment Period, in each case as the Compensation Committee may determine in its sole discretion on the basis of such performance-based or other criteria as it determines appropriate. The target bonus for your position for 2018 is 65% of Base Salary, which will not be prorated. You must be an employee of the Company at the time bonuses are paid to receive a Bonus. The Compensation Committee will review your target bonus periodically and may adjust your target bonus at that time. The Bonus, if any, will be paid when other executives receive their bonuses under comparable arrangements.

5. ***Employee Benefits.***

(a) ***Employee Welfare, Equity Compensation, and Retirement Plans.*** You will, to the extent eligible, be entitled to participate at a level commensurate with your position in all employee equity compensation plans and welfare benefit and retirement plans and programs the Company provides to its executives in accordance with the terms thereof as in effect from time to time. The Company may change or terminate the benefits at any time.

(b) ***Business Expenses.*** Upon submission of appropriate documentation in accordance with Company policies, the Company will promptly pay, or reimburse you for, all reasonable business expenses that you incur in performing your duties under this Agreement, including travel, entertainment, professional dues and subscriptions, as long as such expenses are reimbursable under the Company's policies. Any payments or expenses provided in this Section 5(b) will be paid in accordance with Section 7(c).

(c) ***Paid Time Off.*** You will accrue paid time off (**"*PTO*"**) at the rate of 18 hours per month (annualized to 27 days per year), or such greater number as the Company determines from time to time for its senior executive officers, provided that any accrual caps, carryover from year to year, and payment for accrued and unused PTO upon termination of employment will be subject to the Company's generally applicable policies.

6. Termination of Employment.

(a) ***General.*** Subject in each case to the provisions of this Section 6 and the other provisions of this Agreement relating to the Company's respective rights and obligations upon termination of your employment, nothing in this Agreement interferes with or limits in any way the Company's or your right to terminate your employment at any time, for any reason or no reason, with or without notice, and nothing in this Agreement confers on you any right or obligation to continue in the Company's employ. If your employment ceases for any or no reason, you (or your estate, as applicable) will be entitled to receive (in addition to any compensation and benefits you may be entitled to receive under Section 6(b), (d) or (e) below): (i) any earned but unpaid Base Salary and, to the extent consistent with general Company policy, accrued but unused PTO through and including the date of termination of your employment, to be paid in accordance with the Company's regular payroll practices and with applicable law, but no later than the next regularly scheduled pay period, (ii) unreimbursed business expenses in accordance with the Company's policies for which expenses you have provided appropriate documentation, to be paid in accordance with Section 7(c), and (iii) any amounts or benefits to which you are then entitled under the terms of the benefit plans then sponsored by the Company in accordance with their terms (and not accelerated to the extent acceleration does not satisfy Section 409A of the Internal Revenue Code of 1986, as amended ("***Section 409A***" of the "***Code***")). Notwithstanding any other provision in this Agreement to the contrary, you will be entitled to severance, if any, solely through the terms of this Section 6, unless another Board (or Compensation Committee) approved written agreement between you and the Company expressly provides otherwise.

(b) ***Termination Without Cause or Resignation With Good Reason.*** If, during the Employment Period, the Company terminates your employment without Cause (defined below) or you resign with Good Reason (defined below), in addition to the amounts described in Section 6(a), the Company will pay to you the following, subject to compliance with Section 6(b)(iii):

(i) *Cash Severance*. The Company will pay to you in cash an amount equal to 12 times your monthly Base Salary, paid ratably in equal installments over a 12 month period beginning in the first payroll period following the Release Effective Date (as defined below) (or such later date required by Section 7) in accordance with the Company's standard payroll policies and procedures and in a manner consistent with Section 7;

(ii) *Benefits*. The Company will pay you a lump sum amount equal to 12 times the difference between the monthly COBRA coverage premium for the same type of medical and dental coverage (single, family, or other) in which you are enrolled as of the date your employment ends and your then-monthly employee contribution. This payment will be taxable and subject to withholding. You may use the amount received for any purpose.

(iii) *Release*. To receive any severance benefits provided for under this Agreement or otherwise, you must deliver to the Company a separation agreement and general release of claims in the form the Company provides (releasing all releasable claims other than to payments under Section 6 or outstanding equity and including obligations to cooperate with the Company and reaffirming your obligations under the Restrictive Covenants Agreement (as defined below)), which agreement and release must become irrevocable within 60 days (or such earlier date as the release provides) following the date of your termination of employment. Benefits under Section 6(b)(i) and (ii) will be paid or commence in the first regular payroll beginning after the release becomes effective, subject to any delays required by Section 7; *provided, however*, that if the last day of the 60-day period for an effective release falls in the calendar year following the year of your date of termination, the severance payments will be paid or begin no earlier than January 1 of such subsequent calendar year. The date on which your release of claims becomes effective is the "***Release Effective Date***." You must continue to comply with the Restrictive Covenants Agreement to continue to receive severance benefits.

(c) ***Termination for Cause, Resignation without Good Reason.***

(i) *General*. If, during the Employment Period, the Company terminates your employment for Cause or you resign from your employment (other than for Good Reason), you will be entitled only to the payments described in Section 6(a), unless applicable law otherwise requires payment. You may resign from your employment (other than for Good Reason), at any time, by giving at least 30 days' prior written notice to the Company (the "***Notice Period***"). The Company may choose to respond to such notice of resignation by limiting your access and reducing your duties during the Notice Period, in which event you would remain an employee of the Company through the remainder of the Notice Period and continue to receive your Base Salary, less applicable deductions, and continue vesting under any outstanding equity grants through the end of the Notice Period. You will have no further right to receive any other compensation or benefits after such termination or resignation of employment, except as determined in accordance with the terms of the employee benefit plans or programs of the Company or as required by law.

(ii) *Cause*. For purposes of this Agreement, "***Cause***" means any of the following: your (i) fraud with respect to the Company; (ii) material misrepresentation to any regulatory agency, governmental authority, outside or internal auditors, internal or external Company counsel, or the Board concerning the operation or financial status of the Company; (iii) theft or embezzlement of assets of the Company; (iv) your conviction, or plea of guilty or nolo contendere to any felony (or to a felony charge reduced to a misdemeanor), or, with respect to your employment, to any misdemeanor (other than a traffic violation); (v) material failure to follow the Company's conduct and ethics policies that have been provided or made available to you; (vi) material breach of this Agreement or the Restrictive Covenants Agreement; and/or (vii) continued failure to attempt in good faith to perform your duties as reasonably assigned by your Supervisor at the time. Before terminating your employment for Cause under clauses (v) – (vii) above, the Company will specify in writing to you the nature of the act, omission, refusal, or failure that it deems to constitute Cause and, if the Company reasonably considers the situation to be correctable, give you 30 days after you receive such notice to correct the situation (and thus avoid termination for Cause), unless the Company agrees to further extend the time for correction. You agree that the Company will have discretion exercised in a reasonable manner to determine whether your correction is sufficient. Nothing in this definition prevents the Company from removing you from your position with the Company at any time and for any reason.

(iii) *Good Reason*. For purposes of this Agreement, "***Good Reason***" means, the occurrence, without your prior written consent, of any of the following events: (i) any material diminution in your authority, duties or responsibilities with the Company; (ii) a requirement that you report to an officer other than your then current Supervisor if the result is that your new Supervisor has materially diminished authority, duties, or responsibilities in comparison with your prior supervisor; (iii) a material reduction in your Base Salary; (iv) the Company requiring you to perform your principal services primarily in a geographic area more than 50 miles from the Company's offices in Irving, Texas (or such other place of primary employment for you at which you have agreed to provide such services); or (v) a material breach by the Company of any material provision of this Agreement. No resignation will be treated as resignation for Good Reason unless (x) you have given written notice to the Company of your intention to terminate your employment for Good Reason, describing the grounds for such action, no later than 90 days after the first occurrence of such circumstances, (y) you have provided the Company with at least 30 days in which to cure the circumstances, and (z) if the Company is not successful in curing the circumstance, you end your employment within 30 days following the cure period in (y). If the Company informs you that it will not treat your resignation as for Good Reason, you may withdraw the resignation and remain employed (provided that you do so before the original notice of resignation becomes effective) or may proceed and dispute the Company's decision.

(d) ***Death or Disability.*** Your employment hereunder will terminate immediately upon your death or Disability. "***Disability***" means the Chief Executive Officer, in consultation with the Chairman of the Compensation Committee or the Board, based upon appropriate medical evidence, determines you have become physically or mentally incapacitated so as to render you incapable of performing your usual and customary duties, with or without a reasonable accommodation, for 180 or more days, whether or not consecutive, during any 12 month period. You are also disabled if you are found to be disabled within the meaning of the Company's long-term disability insurance coverage as then in effect (or would be so found if you applied for the coverage or benefits). Employment termination under this subsection is not covered by Section 6(b) or 6(c), and you or your heirs will receive only the benefits and compensation in Section 6(a) (together, as applicable, with any life or disability insurance payments). Nothing in this Section 6(d) prevents the Company from removing you from your position with the Company or, under Section 6(b) or 6(c), from terminating your employment at any time, subject to compliance with those subsections.

(e) ***Change in Control.*** If, within 24 months following a Change in Control, the Company terminates your employment without Cause or you resign for Good Reason, in addition to the benefits described in Section 6(b)(ii) and subject to the release required under Section 6(b)(iii), you will receive the cash severance described in Section 6(b)(i), paid in a single lump sum on the Release Effective Date in accordance with the Company's standard payroll policies and procedures (or such later date as either Section 6(b)(iii) or 7(a) requires). For purposes of this Agreement, "***Change in Control***" means:

(i) the acquisition by an individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Securities Exchange Act of 1934 (the "***Exchange Act***") (a "***Person***") of beneficial ownership of any capital stock of HMS if, after such acquisition, such Person beneficially owns (within the meaning of Rule 13d-3 under the Exchange Act) 50.01% or more of either (x) the then-outstanding shares of common stock of HMS (the "***Outstanding Company Common Stock***") or (y) the combined voting power of the then-outstanding securities of HMS entitled to vote generally in the election of directors (the "***Outstanding Company Voting Securities***"); *provided, however,* that for purposes of this subsection (i) any acquisition directly from the Company will not be a Change in Control, nor will any acquisition by any individual, entity, or group pursuant to a Business Combination (as defined below) that complies with subclauses (x) and (y) of clause (ii) of this definition;

(ii) the consummation of a merger, consolidation, reorganization, recapitalization or share exchange involving HMS or a sale or other disposition of all or substantially all (i.e., in excess of 85%) of the assets of HMS (a "***Business Combination***"), unless, immediately following such Business Combination, each of the following two conditions is satisfied: (x) all or substantially all of the individuals and entities who were the beneficial owners of the Outstanding Company Common Stock and Outstanding Company Voting Securities immediately prior to such Business Combination beneficially own, directly or indirectly, more than 50% of the then-outstanding shares of common stock and the combined voting power of the then- outstanding securities entitled to vote generally in the election of directors, respectively, of the resulting or acquiring corporation in such Business Combination (which shall include a corporation that as a result of such transaction owns HMS or substantially all of HMS's assets either directly or through one or more subsidiaries (such resulting or acquiring corporation is referred to herein as the "***Acquiring Corporation***") in substantially the same proportions as their ownership of the Outstanding Company Common Stock and Outstanding Company Voting Securities, respectively, immediately prior to such Business Combination and (y) no Person beneficially owns, directly or indirectly, 50.01% or more of the then-outstanding shares of common stock of the Acquiring Corporation, or of the combined voting power of the then-outstanding securities of such corporation entitled to vote generally in the election of directors (except to the extent that such ownership existed prior to the Business Combination); or

(iii) a change in the composition of the Board that results, during any one year period, in the Continuing Directors (as defined below) no longer constituting a majority of the Board (or, if applicable, the Board of Directors of a successor corporation to HMS), where the term "***Continuing Director***" means at any date a member of the Board (x) who was a member of the Board on the Effective Date or (y) who was nominated or elected subsequent to such date by at least a majority of the directors who were Continuing Directors at the time of such nomination or election or whose election to the Board was recommended or endorsed by at least a majority of the directors who were Continuing Directors at the time of such nomination or election; *provided, however,* that there shall be excluded from this clause (y) any individual whose initial assumption of office after the Effective Date occurred as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents, by or on behalf of a person other than the Board; *provided* that, where required by Section 409A, the event that occurs is also a "change in the ownership or effective control of a corporation, or a change in the ownership of a substantial portion of the assets of a corporation" as defined in Treasury Reg. § 1.409A-3(i)(5).

(f) ***Further Effect of Termination on Board and Officer Positions.*** If your employment ends for any reason, you agree that you will cease immediately to hold any and all officer or director positions you then have with the Company, absent a contrary direction from the Board (which may include either a request to continue such service or a direction to cease serving upon notice). You hereby irrevocably appoint the Company to be your attorney-in-fact to execute any documents and do anything in your name to effect your ceasing to serve as a director and officer of the Company, should you fail to resign following a request from the Company to do so. You will not be required to sign, and the Company will not sign on your behalf without your consent, documents effecting your ceasing to serve as a director that characterize your cessation of employment differently than the manner in which it is effected through Section 6 above. A written notification signed by a director or duly authorized officer of the Company that any instrument, document, or act falls within the authority conferred by this subsection will be conclusive evidence that it does so. The Company will prepare any documents, pay any filing fees, and bear any other expenses related to this Section 6(f).

7. ***Effect of Section 409A of the Code.***

(a) ***Six Month Delay.*** If and to the extent any portion of any payment, compensation or other benefit provided to you in connection with your employment termination is determined to constitute "nonqualified deferred compensation" within the meaning of Section 409A and you are a specified employee as defined in Section 409A(a)(2)(B)(i), as determined by the Company in accordance with its procedures, by which determination you hereby agree that you are bound, such portion of the payment, compensation or other benefit shall not be paid before the earlier of (i) the expiration of the six month period measured from the date of your "separation from service" (as determined under Section 409A) or (ii) the tenth day following the date of your death following such separation from service (the "***New Payment Date***"). The aggregate of any payments that otherwise would have been paid to you during the period between the date of separation from service and the New Payment Date shall be paid to you in a lump sum in the first payroll period beginning after such New Payment Date, and any remaining payments will be paid on their original schedule.

(b) ***General 409A Principles.*** For purposes of this Agreement, a termination of employment will mean a "separation from service" as defined in Section 409A. For purposes of this Agreement, each amount to be paid or benefit to be provided will be construed as a separate identified payment for purposes of Section 409A, and any payments that are due within the "short term deferral period" as defined in Section 409A or are paid in a manner covered by Treas. Reg. Section 1.409A-1(b)(9)(iii) will not be treated as deferred compensation unless applicable law requires otherwise. Neither the Company nor you will have the right to accelerate or defer the delivery of any such payments or benefits except to the extent specifically permitted or required by Section 409A. This Agreement is intended to comply with the provisions of Section 409A and this Agreement shall, to the extent practicable, be construed in accordance therewith. Terms defined in this Agreement will have the meanings given such terms under Section 409A if and to the extent required to comply with Section 409A. In any event, the Company makes no representations or warranty and will have no liability to you or any other person if any provisions of or payments under this Agreement are determined to constitute deferred compensation subject to Code Section 409A but not to satisfy the conditions of that section.

(c) ***Expense Timing.*** Payments with respect to reimbursements of business expenses will be made in the ordinary course in accordance with the Company's procedures (generally within 45 days after you have submitted appropriate documentation) and, in any case, on or before the last day of the calendar year following the calendar year in which the relevant expense is incurred. The amount of expenses eligible for reimbursement, or in-kind benefits provided, during a calendar year may not affect the expenses eligible for reimbursement, or in-kind benefits to be provided, in any other calendar year. The right to reimbursement or in-kind benefits is not subject to liquidation or exchange for another benefit.

8. ***Restrictive Covenants.*** You have previously signed a Noncompetition, Nonsolicitation, Proprietary and Confidential Information and Developments Agreement (the "***Restrictive Covenants Agreement***"), which addresses your responsibilities to the Company in connection with confidentiality, transfer and protection of intellectual property, noncompetition, nonsolicitation of employees and customers, and nondisparagement. You agree that the Restrictive Covenants Agreement remains in effect and shall survive the termination of this Agreement and termination of your employment with the Company.

9. ***Cooperation.*** Following your separation of employment from the Company, you agree to cooperate with the Company in regard to the transition of the business matters you handled on behalf of the Company. You also agree to reasonably cooperate with the Company and its counsel in the defense or prosecution of any claims or actions now in existence or which may be brought in the future against or on behalf of the Company which relate in any way to events or occurrences that transpired while you were employed by the Company, subject to your right to initiate communications with, or participate or cooperate in any investigation conducted by, any Federal, State or Local government agency or regulatory authority. Your cooperation in connection with such claims or actions will include, but not be limited to, participating in interviews and discussions with the Company and/or its counsel, meeting with the Company's counsel to prepare for discovery, trial, or any legal proceeding, appearing and preparing for deposition or testimony at trial, and otherwise cooperating with HMS and its legal counsel, as requested. Nothing in this Agreement is to be construed as instructing you to testify in any particular manner, other than truthfully. To the extent possible, the Company will provide you with reasonable advance notice of the request for your cooperation. The Company will reimburse you for all reasonable, pre-approved out-of-pocket costs and expenses (but not including attorneys' fees and costs) that you incur, and compensate you at an hourly rate based on the base salary paid to you at the time of your separation (which is intended to be a fair and reasonable estimate of the total value of your lost time) in connection with your performance of your obligations under this paragraph of the Agreement, to the extent permitted by law.

10. ***Miscellaneous*****.**

(a) ***Notices.*** All notices required or permitted under this Agreement must be in writing and will be deemed effective upon personal delivery or three business days following deposit in a United States Post Office, by certified mail, postage prepaid, or one business day after it is sent for next-business day delivery via a reputable nationwide overnight courier service in the case of notice to the Company at its then principal headquarters, and in the case of notice to you to the current address on file with the Company. Notice to the Company must include a separate notice to the General Counsel of HMS. Either Party may change the address to which notices are to be delivered by giving notice of such change to the other Party in the manner set forth in this Section 10(a).

(b) ***No Mitigation*****.** You are not required to seek other employment or otherwise mitigate the value of any severance benefits contemplated by this Agreement, nor will any such benefits be reduced by any earnings or benefits that you may receive from any other source. Notwithstanding any other provision of this Agreement, any sum or sums paid under this Agreement will be in lieu of any amounts to which you may otherwise be entitled under the terms of any severance plan, policy, program, agreement or other arrangement sponsored by the Company or an affiliate of the Company.

(c) ***Waiver of Jury Trial.*** TO THE EXTENT NOT PROHIBITED BY APPLICABLE LAW THAT CANNOT BE WAIVED, THE PARTIES HEREBY WAIVE, AND COVENANT THAT THEY WILL NOT ASSERT (WHETHER AS PLAINTIFF, DEFENDANT OR OTHERWISE), ANY RIGHT TO TRIAL BY JURY IN ANY ACTION, SUIT OR OTHER PROCEEDING ARISING IN WHOLE OR IN PART UNDER OR IN CONNECTION WITH THIS AGREEMENT OR THE RELEASE IT CONTEMPLATES, WHETHER NOW EXISTING OR HEREAFTER ARISING, AND WHETHER SOUNDING IN CONTRACT, TORT OR OTHERWISE, THE PARTIES AGREE THAT ANY PARTY MAY FILE A COPY OF THIS PARAGRAPH WITH ANY COURT AS WRITTEN EVIDENCE OF THE KNOWING, VOLUNTARY AND BARGAINED-FOR AGREEMENT AMONG THE PARTIES IRREVOCABLY TO WAIVE THEIR RIGHTS TO TRIAL BY JURY IN ANY PROCEEDING WHATSOEVER BETWEEN THEM RELATING TO THIS AGREEMENT OR TO ANY OF THE MATTERS CONTEMPLATED UNDER THIS AGREEMENT, RELATING TO YOUR EMPLOYMENT, OR COVERED BY THE CONTEMPLATED RELEASE.

(d) ***Severability.*** Each provision of this Agreement must be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be prohibited by or invalid under applicable law, such provision will be ineffective only to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Agreement. Moreover, if an arbitrator or a court of competent jurisdiction determines any of the provisions contained in this Agreement to be unenforceable because the provision is excessively broad in scope, whether as to duration, activity, geographic application, subject or otherwise, it will be construed, by limiting or reducing it to the extent legally permitted, so as to be enforceable to the extent compatible with then applicable law to achieve the intent of the Parties.

(e) ***Assignment.*** This Agreement will be binding upon and will inure to the benefit of (i) your heirs, beneficiaries, executors and legal representatives upon your death and (ii) any successor of the Company. Any such successor of the Company will be treated as substituted for the Company under the terms of this Agreement for all purposes. The Company may assign this Agreement without your consent, and such an assignment will not terminate your employment for purposes of triggering your entitlement to severance; *provided, however,* that if such an assignment provides a basis for you to resign for Good Reason after a Change in Control, you may resign for Good Reason, and you will be entitled to severance, if any, subject to the terms of Section 6. You specifically agree that any assignment may include rights under the Restrictive Covenants Agreement without requiring your consent; *provided*, *however*, that an assignment that occurs after the termination of your employment will not expand in any manner the scope of the Restrictive Covenants Agreement. As used herein, "successor" will mean any person, firm, corporation or other business entity that at any time, whether by purchase, merger or otherwise, directly or indirectly acquires all or substantially all of the assets or business of the Company. Any attempted assignment, transfer, conveyance or other disposition of any interest in your rights to receive any form of compensation hereunder will be null and void.

(f) ***No Oral Modification, Waiver, Cancellation or Discharge.*** This Agreement may only be amended, canceled or discharged or any obligations thereunder waived through a writing signed by you and any executive officer of the Company (other than you) duly authorized either by the Board or the Compensation Committee.

(g) ***No Conflict of Interest.*** You confirm that you have fully disclosed to the Company, to the best of your knowledge, all circumstances under which you, your immediate family and other persons who reside in your household have or may have a conflict of interest with the Company. You further agree to fully disclose to the Company any such circumstances that might arise during your employment upon your becoming aware of such circumstances.

(h) ***Other Agreements.*** You hereby represent that your performance of all the terms of this Agreement and the performance of your duties as an employee of the Company does not and will not breach any agreement to keep in confidence proprietary information, knowledge or data acquired by you in confidence or in trust prior to your employment with the Company. You also represent that you are not a party to or subject to any restrictive covenants, legal restrictions, policies, commitments or other agreements in favor of any entity or person that would in any way preclude, inhibit, impair or limit your ability to perform your obligations under this Agreement, including noncompetition agreements or nonsolicitation agreements, and you further represent that your performance of the duties and obligations under this Agreement does not violate the terms of any agreement to which you are a party. You agree that you will not enter into any agreement or commitment or agree to any policy that would prevent or hinder your performance of duties and obligations under this Agreement.

(i) ***Disclosure of this Agreement.*** You acknowledge that the Company may provide persons or entities who may employ or engage you with a copy of the Restrictive Covenants Agreement (or portions thereof) to highlight your continuing obligations to the Company. You also acknowledge that the Company may be obligated to disclose the entire Agreement, or any portion thereof, to satisfy applicable laws and regulations.

(j) ***Survivorship.*** The respective rights and obligations of the Company and you hereunder will survive any termination of your employment to the extent necessary to preserve the intent of such rights and obligations.

(k) ***Withholding.*** The Company will be entitled to withhold, or cause to be withheld, any amount of federal, state, city or other withholding taxes or other amounts either required by law or authorized by you with respect to payments made to you in connection with your employment or the termination of your employment.

(l) ***Company Policies.*** References in this Agreement to Company policies and procedures are to those policies and procedures in effect at the Effective Date, as the Company may amend them from time to time.

(m) ***Governing Law; Dispute Resolution.*** The Parties agree that the enforcement of this Agreement shall be governed by the Federal Arbitration Act ("FAA"), 9 U.S.C. §1 et seq. The laws of the State of Texas and the National Rules (as defined below) shall apply to the interpretation of this Agreement, pursuant to section 2 of the FAA. The laws of the State of Texas shall govern the substantive merits of any legal dispute set forth herein, without regard to conflicts of law provisions. In case of any controversy or claim arising out of or related to this Agreement or relating to your employment or the termination of your employment (including claims relating to employment discrimination), except as expressly excluded herein, each Party agrees to give the other Party notice of an intent to seek arbitration under this Agreement and 10 days to reach a resolution. Should resolution of any controversy or claim not be reached following provision of notice and a reasonable opportunity to cure, then the dispute (including the arbitrability of the dispute itself, and the formation or enforceability of this Agreement) shall be settled by arbitration under the American Arbitration Association's Employment Arbitration Rules and Mediation Procedures (the "***National Rules***"). A single arbitrator shall be selected in accordance with the National Rules. The dispute will be arbitrated in Dallas, Texas, absent mutual agreement of the Parties to another venue. Any claim or controversy not submitted to arbitration in accordance with this Section 10(m) (other than as provided under the Restrictive Covenants Agreement) will be waived, and thereafter no arbitrator, arbitration panel, tribunal, or court will have the power to rule or make any award on any such claim or controversy. In determining a claim or controversy under this Agreement and in making an award, the arbitrator must consider the terms and provisions of this Agreement, as well as all applicable federal, state, or local laws. The award rendered in any arbitration proceeding held under this Section 10(m) shall be final and binding and judgment upon the award may be entered in any court having jurisdiction thereof. The following claims are not covered by this Section 10(m): (1) claims for workers' compensation or unemployment compensation benefits; (2) administrative charges to any federal, state or local equal opportunity or fair employment practices agency; (3) administrative charges to the National Labor Relations Board; (4) agency charges or complaints to exhaust an administrative remedy; or (5) any other charges filed with or communication to a federal, state or local government office, official or agency. Also not covered by this Section 10(m) are claims by the Company or by you for temporary restraining orders, preliminary injunctions or permanent injunctions ("equitable relief") in cases in which such equitable relief would be otherwise authorized by law or pursuant to the Restrictive Covenants Agreement. The Company will be responsible for paying any filing fee of the sponsoring organization and the fees and costs of the arbitrator; provided, however, that if you initiate the claim, you will contribute an amount equal to the filing fee you would have incurred to initiate a claim in the court of general jurisdiction in the State of Texas. Each party will pay for its own costs and attorneys' fees, if any, provided that the arbitrator or court, as applicable, may award reasonable costs and expenses in favor of the prevailing party. The Company and you agree that the decision as to whether a party is the prevailing party in an arbitration, or a legal proceeding that is commenced in connection therewith will be made in the sole discretion of the arbitrator or, if applicable, the court.

Any action, suit or other legal proceeding with respect to equitable relief that is excluded from arbitration above must be commenced only in a court of the State of Texas (or, if appropriate, a federal court located within the State of Texas), and the Company and you each consent to the jurisdiction of such a court. With respect to any such court action, the Parties hereto (a) submit to the personal jurisdiction of such courts; (b) consent to service of process by the means specified under Section 10(a); and (c) waive any other requirement (whether imposed by statute, rule of court, or otherwise) with respect to personal jurisdiction, inconvenient forum, or service of process.

(n) ***Interpretation.*** The parties agree that this Agreement will be construed without regard to any presumption or rule requiring construction or interpretation against the drafting party. References in this Agreement to "include" or "including" should be read as though they said "without limitation" or equivalent forms.

(o) ***Entire Agreement.*** This Agreement and any documents referred to herein, including, but not limited to, the Restrictive Covenants Agreement referenced in Section 8, represent the entire agreement of the Parties and will supersede any and all previous contracts, arrangements or understandings between the Company and you, including, without limitation, the Prior Agreement.

(p) ***Counterparts.*** This Agreement may be executed in counterparts, and all so executed shall constitute one agreement which shall be binding upon all Parties hereto, notwithstanding that all Parties' signatures do not appear on the same page.

[Signatures on Following Page(s)]

IN WITNESS WHEREOF, the Parties have executed this Agreement to be effective as of the Effective Date set forth above.

HMS Holdings Corp.

By: /s/ William C. Lucia
William C. Lucia
Its: Chairman, President and Chief Executive Officer

3/29/2018
Date

Meredith W. Bjorck

/s/ Meredith W. Bjorck

3/29/2018
Date

Exhibit 10.4

AMENDED AND RESTATED EXECUTIVE EMPLOYMENT AGREEMENT

THIS AMENDED AND RESTATED EXECUTIVE EMPLOYMENT AGREEMENT (the "***Agreement***") is effective April 2, 2018 (the "***Effective Date***"), and is by and between HMS Holdings Corp., a Delaware corporation ("***HMS***"), and Semone Neuman, an individual ("***you***") (and, together with HMS, the "***Parties***") to provide services, as directed, to the entities comprising the "***Company***" (HMS and its respective subsidiaries and affiliates). This Agreement amends, restates and supersedes the Employment Agreement between you and the Company dated January 16, 2013 in its entirety (the "***Prior Agreement***").

WHEREAS, the Company wishes to continue to employ you, and you wish to continue to be employed by the Company.

NOW THEREFORE, in consideration of your acceptance of employment pursuant to the terms set forth in this Agreement, the Parties agree to be bound by the terms contained in this Agreement as follows:

1. ***Engagement.*** As of the Effective Date, HMS will continue to employ you as Executive Vice President, Operations and IT. You acknowledge that the Company organizes itself across multiple entities, and that assigning you to work directly for HMS or for one of its subsidiaries or affiliates will not, in and of itself, breach this Agreement. You will report directly to the Chief Executive Officer, or his or her designee ("***Supervisor***"). You will have the responsibilities, duties, and authorities specified from time to time by your Supervisor, which will generally be commensurate with executives, at a similar level, of entities of similar size and character to the Company. You also agree, if so requested, to serve as an officer and director of subsidiaries of HMS.

2. ***Commitment.*** During the Employment Period (as defined in Section 3 below), you must devote your full working time and attention to the Company. During the Employment Period, you must not engage in any employment, occupation, consulting or other similar activity without your Supervisor's prior written consent; *provided, however,* that you may (i) serve in any capacity with any professional, community, industry, civic (including governmental boards), educational, charitable, or other non-profit organization, (ii) serve on any for-profit entity board, with your Supervisor's prior written consent, and (iii) subject to the Company's conflict of interest policies, make investments in other businesses and manage your and your family's personal investments and legal affairs; *provided* that any such activities described in clauses (i)-(iii) above do not materially interfere with the performance of your duties for the Company and do not otherwise violate this Agreement or any other written agreement between the Company and you. You will perform your services under this Agreement primarily at the Company's offices in Irving, Texas, or at such place or places as you and the Company may agree. You understand and agree that your employment will require travel from time to time in a manner consistent with Company policy.

3. ***Employment Period.*** The Company hereby agrees to continue to employ you and you hereby accept continued employment with the Company upon the revised terms set forth in this Agreement, for the period commencing on the Effective Date and ending when and as provided in Section 6 (the "***Employment Period***").

4. ***Compensation.***

(a) ***Base Salary.*** You will receive an annual base salary at a monthly rate of $42,916.66, annualizing to $515,000.00 (as may be adjusted under this Agreement, the "***Base Salary***"). The Company will pay your Base Salary periodically in arrears not less frequently than monthly in accordance with the Company's regular payroll practices as in effect from time to time (which currently provide for bi-weekly payments). The Board of Directors of HMS (the "***Board***") or its Compensation Committee (the "***Compensation Committee***") will review your Base Salary periodically and may adjust your Base Salary at that time.

(b) ***Bonus.*** You will be eligible to receive bonus compensation (the "***Bonus***") from the Company in respect of each fiscal year (or portion thereof) during the Employment Period, in each case as the Compensation Committee may determine in its sole discretion on the basis of such performance-based or other criteria as it determines appropriate. The target bonus for your position for 2018 is 65% of Base Salary, which will not be prorated. You must be an employee of the Company at the time bonuses are paid to receive a Bonus. The Compensation Committee will review your target bonus periodically and may adjust your target bonus at that time. The Bonus, if any, will be paid when other executives receive their bonuses under comparable arrangements.

5. ***Employee Benefits.***

(a) ***Employee Welfare, Equity Compensation, and Retirement Plans.*** You will, to the extent eligible, be entitled to participate at a level commensurate with your position in all employee equity compensation plans and welfare benefit and retirement plans and programs the Company provides to its executives in accordance with the terms thereof as in effect from time to time. The Company may change or terminate the benefits at any time.

(b) ***Business Expenses.*** Upon submission of appropriate documentation in accordance with Company policies, the Company will promptly pay, or reimburse you for, all reasonable business expenses that you incur in performing your duties under this Agreement, including travel, entertainment, professional dues and subscriptions, as long as such expenses are reimbursable under the Company's policies. Any payments or expenses provided in this Section 5(b) will be paid in accordance with Section 7(c).

(c) ***Paid Time Off.*** You will accrue paid time off (**"*PTO*"**) at the rate of 18 hours per month (annualized to 27 days per year), or such greater number as the Company determines from time to time for its senior executive officers, provided that any accrual caps, carryover from year to year, and payment for accrued and unused PTO upon termination of employment will be subject to the Company's generally applicable policies.

6. Termination of Employment.

(a) ***General.*** Subject in each case to the provisions of this Section 6 and the other provisions of this Agreement relating to the Company's respective rights and obligations upon termination of your employment, nothing in this Agreement interferes with or limits in any way the Company's or your right to terminate your employment at any time, for any reason or no reason, with or without notice, and nothing in this Agreement confers on you any right or obligation to continue in the Company's employ. If your employment ceases for any or no reason, you (or your estate, as applicable) will be entitled to receive (in addition to any compensation and benefits you may be entitled to receive under Section 6(b), (d) or (e) below): (i) any earned but unpaid Base Salary and, to the extent consistent with general Company policy, accrued but unused PTO through and including the date of termination of your employment, to be paid in accordance with the Company's regular payroll practices and with applicable law, but no later than the next regularly scheduled pay period, (ii) unreimbursed business expenses in accordance with the Company's policies for which expenses you have provided appropriate documentation, to be paid in accordance with Section 7(c), and (iii) any amounts or benefits to which you are then entitled under the terms of the benefit plans then sponsored by the Company in accordance with their terms (and not accelerated to the extent acceleration does not satisfy Section 409A of the Internal Revenue Code of 1986, as amended ("***Section 409A***" of the "***Code***")). Notwithstanding any other provision in this Agreement to the contrary, you will be entitled to severance, if any, solely through the terms of this Section 6, unless another Board (or Compensation Committee) approved written agreement between you and the Company expressly provides otherwise.

(b) ***Termination Without Cause or Resignation With Good Reason.*** If, during the Employment Period, the Company terminates your employment without Cause (defined below) or you resign with Good Reason (defined below), in addition to the amounts described in Section 6(a), the Company will pay to you the following, subject to compliance with Section 6(b)(iii):

(i) *Cash Severance*. The Company will pay to you in cash an amount equal to 12 times your monthly Base Salary, paid ratably in equal installments over a 12 month period beginning in the first payroll period following the Release Effective Date (as defined below) (or such later date required by Section 7) in accordance with the Company's standard payroll policies and procedures and in a manner consistent with Section 7;

(ii) *Benefits*. The Company will pay you a lump sum amount equal to 12 times the difference between the monthly COBRA coverage premium for the same type of medical and dental coverage (single, family, or other) in which you are enrolled as of the date your employment ends and your then-monthly employee contribution. This payment will be taxable and subject to withholding. You may use the amount received for any purpose.

(iii) *Release*. To receive any severance benefits provided for under this Agreement or otherwise, you must deliver to the Company a separation agreement and general release of claims in the form the Company provides (releasing all releasable claims other than to payments under Section 6 or outstanding equity and including obligations to cooperate with the Company and reaffirming your obligations under the Restrictive Covenants Agreement (as defined below)), which agreement and release must become irrevocable within 60 days (or such earlier date as the release provides) following the date of your termination of employment. Benefits under Section 6(b)(i) and (ii) will be paid or commence in the first regular payroll beginning after the release becomes effective, subject to any delays required by Section 7; *provided, however*, that if the last day of the 60-day period for an effective release falls in the calendar year following the year of your date of termination, the severance payments will be paid or begin no earlier than January 1 of such subsequent calendar year. The date on which your release of claims becomes effective is the "***Release Effective Date***." You must continue to comply with the Restrictive Covenants Agreement to continue to receive severance benefits.

(c) ***Termination for Cause, Resignation without Good Reason.***

(i) *General*. If, during the Employment Period, the Company terminates your employment for Cause or you resign from your employment (other than for Good Reason), you will be entitled only to the payments described in Section 6(a), unless applicable law otherwise requires payment. You may resign from your employment (other than for Good Reason), at any time, by giving at least 30 days' prior written notice to the Company (the "***Notice Period***"). The Company may choose to respond to such notice of resignation by limiting your access and reducing your duties during the Notice Period, in which event you would remain an employee of the Company through the remainder of the Notice Period and continue to receive your Base Salary, less applicable deductions, and continue vesting under any outstanding equity grants through the end of the Notice Period. You will have no further right to receive any other compensation or benefits after such termination or resignation of employment, except as determined in accordance with the terms of the employee benefit plans or programs of the Company or as required by law.

(ii) *Cause*. For purposes of this Agreement, "***Cause***" means any of the following: your (i) fraud with respect to the Company; (ii) material misrepresentation to any regulatory agency, governmental authority, outside or internal auditors, internal or external Company counsel, or the Board concerning the operation or financial status of the Company; (iii) theft or embezzlement of assets of the Company; (iv) your conviction, or plea of guilty or nolo contendere to any felony (or to a felony charge reduced to a misdemeanor), or, with respect to your employment, to any misdemeanor (other than a traffic violation); (v) material failure to follow the Company's conduct and ethics policies that have been provided or made available to you; (vi) material breach of this Agreement or the Restrictive Covenants Agreement; and/or (vii) continued failure to attempt in good faith to perform your duties as reasonably assigned by your Supervisor at the time. Before terminating your employment for Cause under clauses (v) – (vii) above, the Company will specify in writing to you the nature of the act, omission, refusal, or failure that it deems to constitute Cause and, if the Company reasonably considers the situation to be correctable, give you 30 days after you receive such notice to correct the situation (and thus avoid termination for Cause), unless the Company agrees to further extend the time for correction. You agree that the Company will have discretion exercised in a reasonable manner to determine whether your correction is sufficient. Nothing in this definition prevents the Company from removing you from your position with the Company at any time and for any reason.

(iii) *Good Reason*. For purposes of this Agreement, "***Good Reason***" means, the occurrence, without your prior written consent, of any of the following events: (i) any material diminution in your authority, duties or responsibilities with the Company; (ii) a requirement that you report to an officer other than your then current Supervisor if the result is that your new Supervisor has materially diminished authority, duties, or responsibilities in comparison with your prior supervisor; (iii) a material reduction in your Base Salary; (iv) the Company requiring you to perform your principal services primarily in a geographic area more than 50 miles from the Company's offices in Irving, Texas (or such other place of primary employment for you at which you have agreed to provide such services); or (v) a material breach by the Company of any material provision of this Agreement. No resignation will be treated as resignation for Good Reason unless (x) you have given written notice to the Company of your intention to terminate your employment for Good Reason, describing the grounds for such action, no later than 90 days after the first occurrence of such circumstances, (y) you have provided the Company with at least 30 days in which to cure the circumstances, and (z) if the Company is not successful in curing the circumstance, you end your employment within 30 days following the cure period in (y). If the Company informs you that it will not treat your resignation as for Good Reason, you may withdraw the resignation and remain employed (provided that you do so before the original notice of resignation becomes effective) or may proceed and dispute the Company's decision.

(d) ***Death or Disability.*** Your employment hereunder will terminate immediately upon your death or Disability. "***Disability***" means the Chief Executive Officer, in consultation with the Chairman of the Compensation Committee or the Board, based upon appropriate medical evidence, determines you have become physically or mentally incapacitated so as to render you incapable of performing your usual and customary duties, with or without a reasonable accommodation, for 180 or more days, whether or not consecutive, during any 12 month period. You are also disabled if you are found to be disabled within the meaning of the Company's long-term disability insurance coverage as then in effect (or would be so found if you applied for the coverage or benefits). Employment termination under this subsection is not covered by Section 6(b) or 6(c), and you or your heirs will receive only the benefits and compensation in Section 6(a) (together, as applicable, with any life or disability insurance payments). Nothing in this Section 6(d) prevents the Company from removing you from your position with the Company or, under Section 6(b) or 6(c), from terminating your employment at any time, subject to compliance with those subsections.

(e) ***Change in Control.*** If, within 24 months following a Change in Control, the Company terminates your employment without Cause or you resign for Good Reason, in addition to the benefits described in Section 6(b)(ii) and subject to the release required under Section 6(b)(iii), you will receive the cash severance described in Section 6(b)(i), paid in a single lump sum on the Release Effective Date in accordance with the Company's standard payroll policies and procedures (or such later date as either Section 6(b)(iii) or 7(a) requires). For purposes of this Agreement, "***Change in Control***" means:

(i) the acquisition by an individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Securities Exchange Act of 1934 (the "***Exchange Act***") (a "***Person***") of beneficial ownership of any capital stock of HMS if, after such acquisition, such Person beneficially owns (within the meaning of Rule 13d-3 under the Exchange Act) 50.01% or more of either (x) the then-outstanding shares of common stock of HMS (the "***Outstanding Company Common Stock***") or (y) the combined voting power of the then-outstanding securities of HMS entitled to vote generally in the election of directors (the "***Outstanding Company Voting Securities***"); *provided, however,* that for purposes of this subsection (i) any acquisition directly from the Company will not be a Change in Control, nor will any acquisition by any individual, entity, or group pursuant to a Business Combination (as defined below) that complies with subclauses (x) and (y) of clause (ii) of this definition;

(ii) the consummation of a merger, consolidation, reorganization, recapitalization or share exchange involving HMS or a sale or other disposition of all or substantially all (i.e., in excess of 85%) of the assets of HMS (a "***Business Combination***"), unless, immediately following such Business Combination, each of the following two conditions is satisfied: (x) all or substantially all of the individuals and entities who were the beneficial owners of the Outstanding Company Common Stock and Outstanding Company Voting Securities immediately prior to such Business Combination beneficially own, directly or indirectly, more than 50% of the then-outstanding shares of common stock and the combined voting power of the then- outstanding securities entitled to vote generally in the election of directors, respectively, of the resulting or acquiring corporation in such Business Combination (which shall include a corporation that as a result of such transaction owns HMS or substantially all of HMS's assets either directly or through one or more subsidiaries (such resulting or acquiring corporation is referred to herein as the "***Acquiring Corporation***") in substantially the same proportions as their ownership of the Outstanding Company Common Stock and Outstanding Company Voting Securities, respectively, immediately prior to such Business Combination and (y) no Person beneficially owns, directly or indirectly, 50.01% or more of the then-outstanding shares of common stock of the Acquiring Corporation, or of the combined voting power of the then-outstanding securities of such corporation entitled to vote generally in the election of directors (except to the extent that such ownership existed prior to the Business Combination); or

(iii) a change in the composition of the Board that results, during any one year period, in the Continuing Directors (as defined below) no longer constituting a majority of the Board (or, if applicable, the Board of Directors of a successor corporation to HMS), where the term "***Continuing Director***" means at any date a member of the Board (x) who was a member of the Board on the Effective Date or (y) who was nominated or elected subsequent to such date by at least a majority of the directors who were Continuing Directors at the time of such nomination or election or whose election to the Board was recommended or endorsed by at least a majority of the directors who were Continuing Directors at the time of such nomination or election; *provided, however,* that there shall be excluded from this clause (y) any individual whose initial assumption of office after the Effective Date occurred as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents, by or on behalf of a person other than the Board; *provided* that, where required by Section 409A, the event that occurs is also a "change in the ownership or effective control of a corporation, or a change in the ownership of a substantial portion of the assets of a corporation" as defined in Treasury Reg. § 1.409A-3(i)(5).

(f) ***Further Effect of Termination on Board and Officer Positions.*** If your employment ends for any reason, you agree that you will cease immediately to hold any and all officer or director positions you then have with the Company, absent a contrary direction from the Board (which may include either a request to continue such service or a direction to cease serving upon notice). You hereby irrevocably appoint the Company to be your attorney-in-fact to execute any documents and do anything in your name to effect your ceasing to serve as a director and officer of the Company, should you fail to resign following a request from the Company to do so. You will not be required to sign, and the Company will not sign on your behalf without your consent, documents effecting your ceasing to serve as a director that characterize your cessation of employment differently than the manner in which it is effected through Section 6 above. A written notification signed by a director or duly authorized officer of the Company that any instrument, document, or act falls within the authority conferred by this subsection will be conclusive evidence that it does so. The Company will prepare any documents, pay any filing fees, and bear any other expenses related to this Section 6(f).

7. ***Effect of Section 409A of the Code.***

(a) ***Six Month Delay.*** If and to the extent any portion of any payment, compensation or other benefit provided to you in connection with your employment termination is determined to constitute "nonqualified deferred compensation" within the meaning of Section 409A and you are a specified employee as defined in Section 409A(a)(2)(B)(i), as determined by the Company in accordance with its procedures, by which determination you hereby agree that you are bound, such portion of the payment, compensation or other benefit shall not be paid before the earlier of (i) the expiration of the six month period measured from the date of your "separation from service" (as determined under Section 409A) or (ii) the tenth day following the date of your death following such separation from service (the "***New Payment Date***"). The aggregate of any payments that otherwise would have been paid to you during the period between the date of separation from service and the New Payment Date shall be paid to you in a lump sum in the first payroll period beginning after such New Payment Date, and any remaining payments will be paid on their original schedule.

(b) ***General 409A Principles.*** For purposes of this Agreement, a termination of employment will mean a "separation from service" as defined in Section 409A. For purposes of this Agreement, each amount to be paid or benefit to be provided will be construed as a separate identified payment for purposes of Section 409A, and any payments that are due within the "short term deferral period" as defined in Section 409A or are paid in a manner covered by Treas. Reg. Section 1.409A-1(b)(9)(iii) will not be treated as deferred compensation unless applicable law requires otherwise. Neither the Company nor you will have the right to accelerate or defer the delivery of any such payments or benefits except to the extent specifically permitted or required by Section 409A. This Agreement is intended to comply with the provisions of Section 409A and this Agreement shall, to the extent practicable, be construed in accordance therewith. Terms defined in this Agreement will have the meanings given such terms under Section 409A if and to the extent required to comply with Section 409A. In any event, the Company makes no representations or warranty and will have no liability to you or any other person if any provisions of or payments under this Agreement are determined to constitute deferred compensation subject to Code Section 409A but not to satisfy the conditions of that section.

(c) ***Expense Timing.*** Payments with respect to reimbursements of business expenses will be made in the ordinary course in accordance with the Company's procedures (generally within 45 days after you have submitted appropriate documentation) and, in any case, on or before the last day of the calendar year following the calendar year in which the relevant expense is incurred. The amount of expenses eligible for reimbursement, or in-kind benefits provided, during a calendar year may not affect the expenses eligible for reimbursement, or in-kind benefits to be provided, in any other calendar year. The right to reimbursement or in-kind benefits is not subject to liquidation or exchange for another benefit.

8. ***Restrictive Covenants.*** You have previously signed a Noncompetition, Nonsolicitation, Proprietary and Confidential Information and Developments Agreement (the "***Restrictive Covenants Agreement***"), which addresses your responsibilities to the Company in connection with confidentiality, transfer and protection of intellectual property, noncompetition, nonsolicitation of employees and customers, and nondisparagement. You agree that the Restrictive Covenants Agreement remains in effect and shall survive the termination of this Agreement and termination of your employment with the Company.

9. ***Cooperation.*** Following your separation of employment from the Company, you agree to cooperate with the Company in regard to the transition of the business matters you handled on behalf of the Company. You also agree to reasonably cooperate with the Company and its counsel in the defense or prosecution of any claims or actions now in existence or which may be brought in the future against or on behalf of the Company which relate in any way to events or occurrences that transpired while you were employed by the Company, subject to your right to initiate communications with, or participate or cooperate in any investigation conducted by, any Federal, State or Local government agency or regulatory authority. Your cooperation in connection with such claims or actions will include, but not be limited to, participating in interviews and discussions with the Company and/or its counsel, meeting with the Company's counsel to prepare for discovery, trial, or any legal proceeding, appearing and preparing for deposition or testimony at trial, and otherwise cooperating with HMS and its legal counsel, as requested. Nothing in this Agreement is to be construed as instructing you to testify in any particular manner, other than truthfully. To the extent possible, the Company will provide you with reasonable advance notice of the request for your cooperation. The Company will reimburse you for all reasonable, pre-approved out-of-pocket costs and expenses (but not including attorneys' fees and costs) that you incur, and compensate you at an hourly rate based on the base salary paid to you at the time of your separation (which is intended to be a fair and reasonable estimate of the total value of your lost time) in connection with your performance of your obligations under this paragraph of the Agreement, to the extent permitted by law.

10. ***Miscellaneous*****.**

(a) ***Notices.*** All notices required or permitted under this Agreement must be in writing and will be deemed effective upon personal delivery or three business days following deposit in a United States Post Office, by certified mail, postage prepaid, or one business day after it is sent for next-business day delivery via a reputable nationwide overnight courier service in the case of notice to the Company at its then principal headquarters, and in the case of notice to you to the current address on file with the Company. Notice to the Company must include a separate notice to the General Counsel of HMS. Either Party may change the address to which notices are to be delivered by giving notice of such change to the other Party in the manner set forth in this Section 10(a).

(b) ***No Mitigation*****.** You are not required to seek other employment or otherwise mitigate the value of any severance benefits contemplated by this Agreement, nor will any such benefits be reduced by any earnings or benefits that you may receive from any other source. Notwithstanding any other provision of this Agreement, any sum or sums paid under this Agreement will be in lieu of any amounts to which you may otherwise be entitled under the terms of any severance plan, policy, program, agreement or other arrangement sponsored by the Company or an affiliate of the Company.

(c) ***Waiver of Jury Trial.*** TO THE EXTENT NOT PROHIBITED BY APPLICABLE LAW THAT CANNOT BE WAIVED, THE PARTIES HEREBY WAIVE, AND COVENANT THAT THEY WILL NOT ASSERT (WHETHER AS PLAINTIFF, DEFENDANT OR OTHERWISE), ANY RIGHT TO TRIAL BY JURY IN ANY ACTION, SUIT OR OTHER PROCEEDING ARISING IN WHOLE OR IN PART UNDER OR IN CONNECTION WITH THIS AGREEMENT OR THE RELEASE IT CONTEMPLATES, WHETHER NOW EXISTING OR HEREAFTER ARISING, AND WHETHER SOUNDING IN CONTRACT, TORT OR OTHERWISE, THE PARTIES AGREE THAT ANY PARTY MAY FILE A COPY OF THIS PARAGRAPH WITH ANY COURT AS WRITTEN EVIDENCE OF THE KNOWING, VOLUNTARY AND BARGAINED-FOR AGREEMENT AMONG THE PARTIES IRREVOCABLY TO WAIVE THEIR RIGHTS TO TRIAL BY JURY IN ANY PROCEEDING WHATSOEVER BETWEEN THEM RELATING TO THIS AGREEMENT OR TO ANY OF THE MATTERS CONTEMPLATED UNDER THIS AGREEMENT, RELATING TO YOUR EMPLOYMENT, OR COVERED BY THE CONTEMPLATED RELEASE.

(d) ***Severability.*** Each provision of this Agreement must be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be prohibited by or invalid under applicable law, such provision will be ineffective only to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Agreement. Moreover, if an arbitrator or a court of competent jurisdiction determines any of the provisions contained in this Agreement to be unenforceable because the provision is excessively broad in scope, whether as to duration, activity, geographic application, subject or otherwise, it will be construed, by limiting or reducing it to the extent legally permitted, so as to be enforceable to the extent compatible with then applicable law to achieve the intent of the Parties.

(e) ***Assignment.*** This Agreement will be binding upon and will inure to the benefit of (i) your heirs, beneficiaries, executors and legal representatives upon your death and (ii) any successor of the Company. Any such successor of the Company will be treated as substituted for the Company under the terms of this Agreement for all purposes. The Company may assign this Agreement without your consent, and such an assignment will not terminate your employment for purposes of triggering your entitlement to severance; *provided, however,* that if such an assignment provides a basis for you to resign for Good Reason after a Change in Control, you may resign for Good Reason, and you will be entitled to severance, if any, subject to the terms of Section 6. You specifically agree that any assignment may include rights under the Restrictive Covenants Agreement without requiring your consent; *provided*, *however*, that an assignment that occurs after the termination of your employment will not expand in any manner the scope of the Restrictive Covenants Agreement. As used herein, "successor" will mean any person, firm, corporation or other business entity that at any time, whether by purchase, merger or otherwise, directly or indirectly acquires all or substantially all of the assets or business of the Company. Any attempted assignment, transfer, conveyance or other disposition of any interest in your rights to receive any form of compensation hereunder will be null and void.

(f) ***No Oral Modification, Waiver, Cancellation or Discharge.*** This Agreement may only be amended, canceled or discharged or any obligations thereunder waived through a writing signed by you and any executive officer of the Company (other than you) duly authorized either by the Board or the Compensation Committee.

(g) ***No Conflict of Interest.*** You confirm that you have fully disclosed to the Company, to the best of your knowledge, all circumstances under which you, your immediate family and other persons who reside in your household have or may have a conflict of interest with the Company. You further agree to fully disclose to the Company any such circumstances that might arise during your employment upon your becoming aware of such circumstances.

(h) ***Other Agreements.*** You hereby represent that your performance of all the terms of this Agreement and the performance of your duties as an employee of the Company does not and will not breach any agreement to keep in confidence proprietary information, knowledge or data acquired by you in confidence or in trust prior to your employment with the Company. You also represent that you are not a party to or subject to any restrictive covenants, legal restrictions, policies, commitments or other agreements in favor of any entity or person that would in any way preclude, inhibit, impair or limit your ability to perform your obligations under this Agreement, including noncompetition agreements or nonsolicitation agreements, and you further represent that your performance of the duties and obligations under this Agreement does not violate the terms of any agreement to which you are a party. You agree that you will not enter into any agreement or commitment or agree to any policy that would prevent or hinder your performance of duties and obligations under this Agreement.

(i) ***Disclosure of this Agreement.*** You acknowledge that the Company may provide persons or entities who may employ or engage you with a copy of the Restrictive Covenants Agreement (or portions thereof) to highlight your continuing obligations to the Company. You also acknowledge that the Company may be obligated to disclose the entire Agreement, or any portion thereof, to satisfy applicable laws and regulations.

(j) ***Survivorship.*** The respective rights and obligations of the Company and you hereunder will survive any termination of your employment to the extent necessary to preserve the intent of such rights and obligations.

(k) ***Withholding.*** The Company will be entitled to withhold, or cause to be withheld, any amount of federal, state, city or other withholding taxes or other amounts either required by law or authorized by you with respect to payments made to you in connection with your employment or the termination of your employment.

(l) ***Company Policies.*** References in this Agreement to Company policies and procedures are to those policies and procedures in effect at the Effective Date, as the Company may amend them from time to time.

(m) ***Governing Law; Dispute Resolution.*** The Parties agree that the enforcement of this Agreement shall be governed by the Federal Arbitration Act ("FAA"), 9 U.S.C. §1 et seq. The laws of the State of Texas and the National Rules (as defined below) shall apply to the interpretation of this Agreement, pursuant to section 2 of the FAA. The laws of the State of Texas shall govern the substantive merits of any legal dispute set forth herein, without regard to conflicts of law provisions. In case of any controversy or claim arising out of or related to this Agreement or relating to your employment or the termination of your employment (including claims relating to employment discrimination), except as expressly excluded herein, each Party agrees to give the other Party notice of an intent to seek arbitration under this Agreement and 10 days to reach a resolution. Should resolution of any controversy or claim not be reached following provision of notice and a reasonable opportunity to cure, then the dispute (including the arbitrability of the dispute itself, and the formation or enforceability of this Agreement) shall be settled by arbitration under the American Arbitration Association's Employment Arbitration Rules and Mediation Procedures (the "***National Rules***"). A single arbitrator shall be selected in accordance with the National Rules. The dispute will be arbitrated in Dallas, Texas, absent mutual agreement of the Parties to another venue. Any claim or controversy not submitted to arbitration in accordance with this Section 10(m) (other than as provided under the Restrictive Covenants Agreement) will be waived, and thereafter no arbitrator, arbitration panel, tribunal, or court will have the power to rule or make any award on any such claim or controversy. In determining a claim or controversy under this Agreement and in making an award, the arbitrator must consider the terms and provisions of this Agreement, as well as all applicable federal, state, or local laws. The award rendered in any arbitration proceeding held under this Section 10(m) shall be final and binding and judgment upon the award may be entered in any court having jurisdiction thereof. The following claims are not covered by this Section 10(m): (1) claims for workers' compensation or unemployment compensation benefits; (2) administrative charges to any federal, state or local equal opportunity or fair employment practices agency; (3) administrative charges to the National Labor Relations Board; (4) agency charges or complaints to exhaust an administrative remedy; or (5) any other charges filed with or communication to a federal, state or local government office, official or agency. Also not covered by this Section 10(m) are claims by the Company or by you for temporary restraining orders, preliminary injunctions or permanent injunctions ("equitable relief") in cases in which such equitable relief would be otherwise authorized by law or pursuant to the Restrictive Covenants Agreement. The Company will be responsible for paying any filing fee of the sponsoring organization and the fees and costs of the arbitrator; provided, however, that if you initiate the claim, you will contribute an amount equal to the filing fee you would have incurred to initiate a claim in the court of general jurisdiction in the State of Texas. Each party will pay for its own costs and attorneys' fees, if any, provided that the arbitrator or court, as applicable, may award reasonable costs and expenses in favor of the prevailing party. The Company and you agree that the decision as to whether a party is the prevailing party in an arbitration, or a legal proceeding that is commenced in connection therewith will be made in the sole discretion of the arbitrator or, if applicable, the court.

Any action, suit or other legal proceeding with respect to equitable relief that is excluded from arbitration above must be commenced only in a court of the State of Texas (or, if appropriate, a federal court located within the State of Texas), and the Company and you each consent to the jurisdiction of such a court. With respect to any such court action, the Parties hereto (a) submit to the personal jurisdiction of such courts; (b) consent to service of process by the means specified under Section 10(a); and (c) waive any other requirement (whether imposed by statute, rule of court, or otherwise) with respect to personal jurisdiction, inconvenient forum, or service of process.

(n) ***Interpretation.*** The parties agree that this Agreement will be construed without regard to any presumption or rule requiring construction or interpretation against the drafting party. References in this Agreement to "include" or "including" should be read as though they said "without limitation" or equivalent forms.

(o) ***Entire Agreement.*** This Agreement and any documents referred to herein, including, but not limited to, the Restrictive Covenants Agreement referenced in Section 8, represent the entire agreement of the Parties and will supersede any and all previous contracts, arrangements or understandings between the Company and you, including, without limitation, the Prior Agreement.

(p) ***Counterparts.*** This Agreement may be executed in counterparts, and all so executed shall constitute one agreement which shall be binding upon all Parties hereto, notwithstanding that all Parties' signatures do not appear on the same page.

[Signatures on Following Page(s)]

IN WITNESS WHEREOF, the Parties have executed this Agreement to be effective as of the Effective Date set forth above.

HMS Holdings Corp.

By: /s/ William C. Lucia
William C. Lucia
Its: Chairman, President and Chief Executive Officer

3/29/2018
Date

Semone Neuman

/s/ Semone Neuman

4/2/2018
Date

Exhibit 10.5

AMENDED AND RESTATED EXECUTIVE EMPLOYMENT AGREEMENT

THIS AMENDED AND RESTATED EXECUTIVE EMPLOYMENT AGREEMENT (the "***Agreement***") is effective March 29, 2018 (the "***Effective Date***"), and is by and between HMS Holdings Corp., a Delaware corporation ("***HMS***"), and Douglas M. Williams, Jr., an individual ("***you***") (and, together with HMS, the "***Parties***") to provide services, as directed, to the entities comprising the "***Company***" (HMS and its respective subsidiaries and affiliates). This Agreement amends, restates and supersedes the Employment Agreement between you and the Company dated November 13, 2013 in its entirety (the "***Prior Agreement***").

WHEREAS, the Company wishes to continue to employ you, and you wish to continue to be employed by the Company.

NOW THEREFORE, in consideration of your acceptance of employment pursuant to the terms set forth in this Agreement, the Parties agree to be bound by the terms contained in this Agreement as follows:

1. ***Engagement.*** As of the Effective Date, HMS will continue to employ you as Executive Vice President, Markets and Product. You acknowledge that the Company organizes itself across multiple entities, and that assigning you to work directly for HMS or for one of its subsidiaries or affiliates will not, in and of itself, breach this Agreement. You will report directly to the Chief Executive Officer, or his or her designee ("***Supervisor***"). You will have the responsibilities, duties, and authorities specified from time to time by your Supervisor, which will generally be commensurate with executives, at a similar level, of entities of similar size and character to the Company. You also agree, if so requested, to serve as an officer and director of subsidiaries of HMS.

2. ***Commitment.*** During the Employment Period (as defined in Section 3 below), you must devote your full working time and attention to the Company. During the Employment Period, you must not engage in any employment, occupation, consulting or other similar activity without your Supervisor's prior written consent; *provided, however,* that you may (i) serve in any capacity with any professional, community, industry, civic (including governmental boards), educational, charitable, or other non-profit organization, (ii) serve on any for-profit entity board, with your Supervisor's prior written consent, and (iii) subject to the Company's conflict of interest policies, make investments in other businesses and manage your and your family's personal investments and legal affairs; *provided* that any such activities described in clauses (i)-(iii) above do not materially interfere with the performance of your duties for the Company and do not otherwise violate this Agreement or any other written agreement between the Company and you. You will perform your services under this Agreement primarily at the Company's offices in Irving, Texas, or at such place or places as you and the Company may agree. You understand and agree that your employment will require travel from time to time in a manner consistent with Company policy.

3. ***Employment Period.*** The Company hereby agrees to continue to employ you and you hereby accept continued employment with the Company upon the revised terms set forth in this Agreement, for the period commencing on the Effective Date and ending when and as provided in Section 6 (the "***Employment Period***").

4. ***Compensation.***

(a) ***Base Salary.*** You will receive an annual base salary at a monthly rate of $42,916.66, annualizing to $515,000.00 (as may be adjusted under this Agreement, the "***Base Salary***"). The Company will pay your Base Salary periodically in arrears not less frequently than monthly in accordance with the Company's regular payroll practices as in effect from time to time (which currently provide for bi-weekly payments). The Board of Directors of HMS (the "***Board***") or its Compensation Committee (the "***Compensation Committee***") will review your Base Salary periodically and may adjust your Base Salary at that time.

(b) ***Bonus.*** You will be eligible to receive bonus compensation (the "***Bonus***") from the Company in respect of each fiscal year (or portion thereof) during the Employment Period, in each case as the Compensation Committee may determine in its sole discretion on the basis of such performance-based or other criteria as it determines appropriate. The target bonus for your position for 2018 is 65% of Base Salary, which will not be prorated. You must be an employee of the Company at the time bonuses are paid to receive a Bonus. The Compensation Committee will review your target bonus periodically and may adjust your target bonus at that time. The Bonus, if any, will be paid when other executives receive their bonuses under comparable arrangements.

5. ***Employee Benefits.***

(a) ***Employee Welfare, Equity Compensation, and Retirement Plans.*** You will, to the extent eligible, be entitled to participate at a level commensurate with your position in all employee equity compensation plans and welfare benefit and retirement plans and programs the Company provides to its executives in accordance with the terms thereof as in effect from time to time. The Company may change or terminate the benefits at any time.

(b) ***Business Expenses.*** Upon submission of appropriate documentation in accordance with Company policies, the Company will promptly pay, or reimburse you for, all reasonable business expenses that you incur in performing your duties under this Agreement, including travel, entertainment, professional dues and subscriptions, as long as such expenses are reimbursable under the Company's policies. Any payments or expenses provided in this Section 5(b) will be paid in accordance with Section 7(c).

(c) ***Paid Time Off.*** You will accrue paid time off (**"*PTO*"**) at the rate of 18 hours per month (annualized to 27 days per year), or such greater number as the Company determines from time to time for its senior executive officers, provided that any accrual caps, carryover from year to year, and payment for accrued and unused PTO upon termination of employment will be subject to the Company's generally applicable policies.

6. Termination of Employment.

(a) ***General.*** Subject in each case to the provisions of this Section 6 and the other provisions of this Agreement relating to the Company's respective rights and obligations upon termination of your employment, nothing in this Agreement interferes with or limits in any way the Company's or your right to terminate your employment at any time, for any reason or no reason, with or without notice, and nothing in this Agreement confers on you any right or obligation to continue in the Company's employ. If your employment ceases for any or no reason, you (or your estate, as applicable) will be entitled to receive (in addition to any compensation and benefits you may be entitled to receive under Section 6(b), (d) or (e) below): (i) any earned but unpaid Base Salary and, to the extent consistent with general Company policy, accrued but unused PTO through and including the date of termination of your employment, to be paid in accordance with the Company's regular payroll practices and with applicable law, but no later than the next regularly scheduled pay period, (ii) unreimbursed business expenses in accordance with the Company's policies for which expenses you have provided appropriate documentation, to be paid in accordance with Section 7(c), and (iii) any amounts or benefits to which you are then entitled under the terms of the benefit plans then sponsored by the Company in accordance with their terms (and not accelerated to the extent acceleration does not satisfy Section 409A of the Internal Revenue Code of 1986, as amended ("***Section 409A***" of the "***Code***")). Notwithstanding any other provision in this Agreement to the contrary, you will be entitled to severance, if any, solely through the terms of this Section 6, unless another Board (or Compensation Committee) approved written agreement between you and the Company expressly provides otherwise.

(b) ***Termination Without Cause or Resignation With Good Reason.*** If, during the Employment Period, the Company terminates your employment without Cause (defined below) or you resign with Good Reason (defined below), in addition to the amounts described in Section 6(a), the Company will pay to you the following, subject to compliance with Section 6(b)(iii):

(i) *Cash Severance*. The Company will pay to you in cash an amount equal to 12 times your monthly Base Salary, paid ratably in equal installments over a 12 month period beginning in the first payroll period following the Release Effective Date (as defined below) (or such later date required by Section 7) in accordance with the Company's standard payroll policies and procedures and in a manner consistent with Section 7;

(ii) *Benefits*. The Company will pay you a lump sum amount equal to 12 times the difference between the monthly COBRA coverage premium for the same type of medical and dental coverage (single, family, or other) in which you are enrolled as of the date your employment ends and your then-monthly employee contribution. This payment will be taxable and subject to withholding. You may use the amount received for any purpose.

(iii) *Release*. To receive any severance benefits provided for under this Agreement or otherwise, you must deliver to the Company a separation agreement and general release of claims in the form the Company provides (releasing all releasable claims other than to payments under Section 6 or outstanding equity and including obligations to cooperate with the Company and reaffirming your obligations under the Restrictive Covenants Agreement (as defined below)), which agreement and release must become irrevocable within 60 days (or such earlier date as the release provides) following the date of your termination of employment. Benefits under Section 6(b)(i) and (ii) will be paid or commence in the first regular payroll beginning after the release becomes effective, subject to any delays required by Section 7; *provided, however*, that if the last day of the 60-day period for an effective release falls in the calendar year following the year of your date of termination, the severance payments will be paid or begin no earlier than January 1 of such subsequent calendar year. The date on which your release of claims becomes effective is the "***Release Effective Date***." You must continue to comply with the Restrictive Covenants Agreement to continue to receive severance benefits.

(c) ***Termination for Cause, Resignation without Good Reason.***

(i) *General*. If, during the Employment Period, the Company terminates your employment for Cause or you resign from your employment (other than for Good Reason), you will be entitled only to the payments described in Section 6(a), unless applicable law otherwise requires payment. You may resign from your employment (other than for Good Reason), at any time, by giving at least 30 days' prior written notice to the Company (the "***Notice Period***"). The Company may choose to respond to such notice of resignation by limiting your access and reducing your duties during the Notice Period, in which event you would remain an employee of the Company through the remainder of the Notice Period and continue to receive your Base Salary, less applicable deductions, and continue vesting under any outstanding equity grants through the end of the Notice Period. You will have no further right to receive any other compensation or benefits after such termination or resignation of employment, except as determined in accordance with the terms of the employee benefit plans or programs of the Company or as required by law.

(ii) *Cause*. For purposes of this Agreement, "***Cause***" means any of the following: your (i) fraud with respect to the Company; (ii) material misrepresentation to any regulatory agency, governmental authority, outside or internal auditors, internal or external Company counsel, or the Board concerning the operation or financial status of the Company; (iii) theft or embezzlement of assets of the Company; (iv) your conviction, or plea of guilty or nolo contendere to any felony (or to a felony charge reduced to a misdemeanor), or, with respect to your employment, to any misdemeanor (other than a traffic violation); (v) material failure to follow the Company's conduct and ethics policies that have been provided or made available to you; (vi) material breach of this Agreement or the Restrictive Covenants Agreement; and/or (vii) continued failure to attempt in good faith to perform your duties as reasonably assigned by your Supervisor at the time. Before terminating your employment for Cause under clauses (v) – (vii) above, the Company will specify in writing to you the nature of the act, omission, refusal, or failure that it deems to constitute Cause and, if the Company reasonably considers the situation to be correctable, give you 30 days after you receive such notice to correct the situation (and thus avoid termination for Cause), unless the Company agrees to further extend the time for correction. You agree that the Company will have discretion exercised in a reasonable manner to determine whether your correction is sufficient. Nothing in this definition prevents the Company from removing you from your position with the Company at any time and for any reason.

(iii) *Good Reason*. For purposes of this Agreement, "***Good Reason***" means, the occurrence, without your prior written consent, of any of the following events: (i) any material diminution in your authority, duties or responsibilities with the Company; (ii) a requirement that you report to an officer other than your then current Supervisor if the result is that your new Supervisor has materially diminished authority, duties, or responsibilities in comparison with your prior supervisor; (iii) a material reduction in your Base Salary; (iv) the Company requiring you to perform your principal services primarily in a geographic area more than 50 miles from the Company's offices in Irving, Texas (or such other place of primary employment for you at which you have agreed to provide such services); or (v) a material breach by the Company of any material provision of this Agreement. No resignation will be treated as resignation for Good Reason unless (x) you have given written notice to the Company of your intention to terminate your employment for Good Reason, describing the grounds for such action, no later than 90 days after the first occurrence of such circumstances, (y) you have provided the Company with at least 30 days in which to cure the circumstances, and (z) if the Company is not successful in curing the circumstance, you end your employment within 30 days following the cure period in (y). If the Company informs you that it will not treat your resignation as for Good Reason, you may withdraw the resignation and remain employed (provided that you do so before the original notice of resignation becomes effective) or may proceed and dispute the Company's decision.

(d) ***Death or Disability.*** Your employment hereunder will terminate immediately upon your death or Disability. "***Disability***" means the Chief Executive Officer, in consultation with the Chairman of the Compensation Committee or the Board, based upon appropriate medical evidence, determines you have become physically or mentally incapacitated so as to render you incapable of performing your usual and customary duties, with or without a reasonable accommodation, for 180 or more days, whether or not consecutive, during any 12 month period. You are also disabled if you are found to be disabled within the meaning of the Company's long-term disability insurance coverage as then in effect (or would be so found if you applied for the coverage or benefits). Employment termination under this subsection is not covered by Section 6(b) or 6(c), and you or your heirs will receive only the benefits and compensation in Section 6(a) (together, as applicable, with any life or disability insurance payments). Nothing in this Section 6(d) prevents the Company from removing you from your position with the Company or, under Section 6(b) or 6(c), from terminating your employment at any time, subject to compliance with those subsections.

(e) ***Change in Control.*** If, within 24 months following a Change in Control, the Company terminates your employment without Cause or you resign for Good Reason, in addition to the benefits described in Section 6(b)(ii) and subject to the release required under Section 6(b)(iii), you will receive the cash severance described in Section 6(b)(i), paid in a single lump sum on the Release Effective Date in accordance with the Company's standard payroll policies and procedures (or such later date as either Section 6(b)(iii) or 7(a) requires). For purposes of this Agreement, "***Change in Control***" means:

(i) the acquisition by an individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Securities Exchange Act of 1934 (the "***Exchange Act***") (a "***Person***") of beneficial ownership of any capital stock of HMS if, after such acquisition, such Person beneficially owns (within the meaning of Rule 13d-3 under the Exchange Act) 50.01% or more of either (x) the then-outstanding shares of common stock of HMS (the "***Outstanding Company Common Stock***") or (y) the combined voting power of the then-outstanding securities of HMS entitled to vote generally in the election of directors (the "***Outstanding Company Voting Securities***"); *provided, however,* that for purposes of this subsection (i) any acquisition directly from the Company will not be a Change in Control, nor will any acquisition by any individual, entity, or group pursuant to a Business Combination (as defined below) that complies with subclauses (x) and (y) of clause (ii) of this definition;

(ii) the consummation of a merger, consolidation, reorganization, recapitalization or share exchange involving HMS or a sale or other disposition of all or substantially all (i.e., in excess of 85%) of the assets of HMS (a "***Business Combination***"), unless, immediately following such Business Combination, each of the following two conditions is satisfied: (x) all or substantially all of the individuals and entities who were the beneficial owners of the Outstanding Company Common Stock and Outstanding Company Voting Securities immediately prior to such Business Combination beneficially own, directly or indirectly, more than 50% of the then-outstanding shares of common stock and the combined voting power of the then- outstanding securities entitled to vote generally in the election of directors, respectively, of the resulting or acquiring corporation in such Business Combination (which shall include a corporation that as a result of such transaction owns HMS or substantially all of HMS's assets either directly or through one or more subsidiaries (such resulting or acquiring corporation is referred to herein as the "***Acquiring Corporation***") in substantially the same proportions as their ownership of the Outstanding Company Common Stock and Outstanding Company Voting Securities, respectively, immediately prior to such Business Combination and (y) no Person beneficially owns, directly or indirectly, 50.01% or more of the then-outstanding shares of common stock of the Acquiring Corporation, or of the combined voting power of the then-outstanding securities of such corporation entitled to vote generally in the election of directors (except to the extent that such ownership existed prior to the Business Combination); or

(iii) a change in the composition of the Board that results, during any one year period, in the Continuing Directors (as defined below) no longer constituting a majority of the Board (or, if applicable, the Board of Directors of a successor corporation to HMS), where the term "***Continuing Director***" means at any date a member of the Board (x) who was a member of the Board on the Effective Date or (y) who was nominated or elected subsequent to such date by at least a majority of the directors who were Continuing Directors at the time of such nomination or election or whose election to the Board was recommended or endorsed by at least a majority of the directors who were Continuing Directors at the time of such nomination or election; *provided, however,* that there shall be excluded from this clause (y) any individual whose initial assumption of office after the Effective Date occurred as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents, by or on behalf of a person other than the Board; *provided* that, where required by Section 409A, the event that occurs is also a "change in the ownership or effective control of a corporation, or a change in the ownership of a substantial portion of the assets of a corporation" as defined in Treasury Reg. § 1.409A-3(i)(5).

(f) ***Further Effect of Termination on Board and Officer Positions.*** If your employment ends for any reason, you agree that you will cease immediately to hold any and all officer or director positions you then have with the Company, absent a contrary direction from the Board (which may include either a request to continue such service or a direction to cease serving upon notice). You hereby irrevocably appoint the Company to be your attorney-in-fact to execute any documents and do anything in your name to effect your ceasing to serve as a director and officer of the Company, should you fail to resign following a request from the Company to do so. You will not be required to sign, and the Company will not sign on your behalf without your consent, documents effecting your ceasing to serve as a director that characterize your cessation of employment differently than the manner in which it is effected through Section 6 above. A written notification signed by a director or duly authorized officer of the Company that any instrument, document, or act falls within the authority conferred by this subsection will be conclusive evidence that it does so. The Company will prepare any documents, pay any filing fees, and bear any other expenses related to this Section 6(f).

7. ***Effect of Section 409A of the Code.***

(a) ***Six Month Delay.*** If and to the extent any portion of any payment, compensation or other benefit provided to you in connection with your employment termination is determined to constitute "nonqualified deferred compensation" within the meaning of Section 409A and you are a specified employee as defined in Section 409A(a)(2)(B)(i), as determined by the Company in accordance with its procedures, by which determination you hereby agree that you are bound, such portion of the payment, compensation or other benefit shall not be paid before the earlier of (i) the expiration of the six month period measured from the date of your "separation from service" (as determined under Section 409A) or (ii) the tenth day following the date of your death following such separation from service (the "***New Payment Date***"). The aggregate of any payments that otherwise would have been paid to you during the period between the date of separation from service and the New Payment Date shall be paid to you in a lump sum in the first payroll period beginning after such New Payment Date, and any remaining payments will be paid on their original schedule.

(b) ***General 409A Principles.*** For purposes of this Agreement, a termination of employment will mean a "separation from service" as defined in Section 409A. For purposes of this Agreement, each amount to be paid or benefit to be provided will be construed as a separate identified payment for purposes of Section 409A, and any payments that are due within the "short term deferral period" as defined in Section 409A or are paid in a manner covered by Treas. Reg. Section 1.409A-1(b)(9)(iii) will not be treated as deferred compensation unless applicable law requires otherwise. Neither the Company nor you will have the right to accelerate or defer the delivery of any such payments or benefits except to the extent specifically permitted or required by Section 409A. This Agreement is intended to comply with the provisions of Section 409A and this Agreement shall, to the extent practicable, be construed in accordance therewith. Terms defined in this Agreement will have the meanings given such terms under Section 409A if and to the extent required to comply with Section 409A. In any event, the Company makes no representations or warranty and will have no liability to you or any other person if any provisions of or payments under this Agreement are determined to constitute deferred compensation subject to Code Section 409A but not to satisfy the conditions of that section.

(c) ***Expense Timing.*** Payments with respect to reimbursements of business expenses will be made in the ordinary course in accordance with the Company's procedures (generally within 45 days after you have submitted appropriate documentation) and, in any case, on or before the last day of the calendar year following the calendar year in which the relevant expense is incurred. The amount of expenses eligible for reimbursement, or in-kind benefits provided, during a calendar year may not affect the expenses eligible for reimbursement, or in-kind benefits to be provided, in any other calendar year. The right to reimbursement or in-kind benefits is not subject to liquidation or exchange for another benefit.

8. ***Restrictive Covenants.*** You have previously signed a Noncompetition, Nonsolicitation, Proprietary and Confidential Information and Developments Agreement (the "***Restrictive Covenants Agreement***"), which addresses your responsibilities to the Company in connection with confidentiality, transfer and protection of intellectual property, noncompetition, nonsolicitation of employees and customers, and nondisparagement. You agree that the Restrictive Covenants Agreement remains in effect and shall survive the termination of this Agreement and termination of your employment with the Company.

9. ***Cooperation.*** Following your separation of employment from the Company, you agree to cooperate with the Company in regard to the transition of the business matters you handled on behalf of the Company. You also agree to reasonably cooperate with the Company and its counsel in the defense or prosecution of any claims or actions now in existence or which may be brought in the future against or on behalf of the Company which relate in any way to events or occurrences that transpired while you were employed by the Company, subject to your right to initiate communications with, or participate or cooperate in any investigation conducted by, any Federal, State or Local government agency or regulatory authority. Your cooperation in connection with such claims or actions will include, but not be limited to, participating in interviews and discussions with the Company and/or its counsel, meeting with the Company's counsel to prepare for discovery, trial, or any legal proceeding, appearing and preparing for deposition or testimony at trial, and otherwise cooperating with HMS and its legal counsel, as requested. Nothing in this Agreement is to be construed as instructing you to testify in any particular manner, other than truthfully. To the extent possible, the Company will provide you with reasonable advance notice of the request for your cooperation. The Company will reimburse you for all reasonable, pre-approved out-of-pocket costs and expenses (but not including attorneys' fees and costs) that you incur, and compensate you at an hourly rate based on the base salary paid to you at the time of your separation (which is intended to be a fair and reasonable estimate of the total value of your lost time) in connection with your performance of your obligations under this paragraph of the Agreement, to the extent permitted by law.

10. ***Miscellaneous*****.**

(a) ***Notices.*** All notices required or permitted under this Agreement must be in writing and will be deemed effective upon personal delivery or three business days following deposit in a United States Post Office, by certified mail, postage prepaid, or one business day after it is sent for next-business day delivery via a reputable nationwide overnight courier service in the case of notice to the Company at its then principal headquarters, and in the case of notice to you to the current address on file with the Company. Notice to the Company must include a separate notice to the General Counsel of HMS. Either Party may change the address to which notices are to be delivered by giving notice of such change to the other Party in the manner set forth in this Section 10(a).

(b) ***No Mitigation*****.** You are not required to seek other employment or otherwise mitigate the value of any severance benefits contemplated by this Agreement, nor will any such benefits be reduced by any earnings or benefits that you may receive from any other source. Notwithstanding any other provision of this Agreement, any sum or sums paid under this Agreement will be in lieu of any amounts to which you may otherwise be entitled under the terms of any severance plan, policy, program, agreement or other arrangement sponsored by the Company or an affiliate of the Company.

(c) ***Waiver of Jury Trial.*** TO THE EXTENT NOT PROHIBITED BY APPLICABLE LAW THAT CANNOT BE WAIVED, THE PARTIES HEREBY WAIVE, AND COVENANT THAT THEY WILL NOT ASSERT (WHETHER AS PLAINTIFF, DEFENDANT OR OTHERWISE), ANY RIGHT TO TRIAL BY JURY IN ANY ACTION, SUIT OR OTHER PROCEEDING ARISING IN WHOLE OR IN PART UNDER OR IN CONNECTION WITH THIS AGREEMENT OR THE RELEASE IT CONTEMPLATES, WHETHER NOW EXISTING OR HEREAFTER ARISING, AND WHETHER SOUNDING IN CONTRACT, TORT OR OTHERWISE, THE PARTIES AGREE THAT ANY PARTY MAY FILE A COPY OF THIS PARAGRAPH WITH ANY COURT AS WRITTEN EVIDENCE OF THE KNOWING, VOLUNTARY AND BARGAINED-FOR AGREEMENT AMONG THE PARTIES IRREVOCABLY TO WAIVE THEIR RIGHTS TO TRIAL BY JURY IN ANY PROCEEDING WHATSOEVER BETWEEN THEM RELATING TO THIS AGREEMENT OR TO ANY OF THE MATTERS CONTEMPLATED UNDER THIS AGREEMENT, RELATING TO YOUR EMPLOYMENT, OR COVERED BY THE CONTEMPLATED RELEASE.

(d) ***Severability.*** Each provision of this Agreement must be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be prohibited by or invalid under applicable law, such provision will be ineffective only to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Agreement. Moreover, if an arbitrator or a court of competent jurisdiction determines any of the provisions contained in this Agreement to be unenforceable because the provision is excessively broad in scope, whether as to duration, activity, geographic application, subject or otherwise, it will be construed, by limiting or reducing it to the extent legally permitted, so as to be enforceable to the extent compatible with then applicable law to achieve the intent of the Parties.

(e) ***Assignment.*** This Agreement will be binding upon and will inure to the benefit of (i) your heirs, beneficiaries, executors and legal representatives upon your death and (ii) any successor of the Company. Any such successor of the Company will be treated as substituted for the Company under the terms of this Agreement for all purposes. The Company may assign this Agreement without your consent, and such an assignment will not terminate your employment for purposes of triggering your entitlement to severance; *provided, however,* that if such an assignment provides a basis for you to resign for Good Reason after a Change in Control, you may resign for Good Reason, and you will be entitled to severance, if any, subject to the terms of Section 6. You specifically agree that any assignment may include rights under the Restrictive Covenants Agreement without requiring your consent; *provided*, *however*, that an assignment that occurs after the termination of your employment will not expand in any manner the scope of the Restrictive Covenants Agreement. As used herein, "successor" will mean any person, firm, corporation or other business entity that at any time, whether by purchase, merger or otherwise, directly or indirectly acquires all or substantially all of the assets or business of the Company. Any attempted assignment, transfer, conveyance or other disposition of any interest in your rights to receive any form of compensation hereunder will be null and void.

(f) ***No Oral Modification, Waiver, Cancellation or Discharge.*** This Agreement may only be amended, canceled or discharged or any obligations thereunder waived through a writing signed by you and any executive officer of the Company (other than you) duly authorized either by the Board or the Compensation Committee.

(g) ***No Conflict of Interest.*** You confirm that you have fully disclosed to the Company, to the best of your knowledge, all circumstances under which you, your immediate family and other persons who reside in your household have or may have a conflict of interest with the Company. You further agree to fully disclose to the Company any such circumstances that might arise during your employment upon your becoming aware of such circumstances.

(h) ***Other Agreements.*** You hereby represent that your performance of all the terms of this Agreement and the performance of your duties as an employee of the Company does not and will not breach any agreement to keep in confidence proprietary information, knowledge or data acquired by you in confidence or in trust prior to your employment with the Company. You also represent that you are not a party to or subject to any restrictive covenants, legal restrictions, policies, commitments or other agreements in favor of any entity or person that would in any way preclude, inhibit, impair or limit your ability to perform your obligations under this Agreement, including noncompetition agreements or nonsolicitation agreements, and you further represent that your performance of the duties and obligations under this Agreement does not violate the terms of any agreement to which you are a party. You agree that you will not enter into any agreement or commitment or agree to any policy that would prevent or hinder your performance of duties and obligations under this Agreement.

(i) ***Disclosure of this Agreement.*** You acknowledge that the Company may provide persons or entities who may employ or engage you with a copy of the Restrictive Covenants Agreement (or portions thereof) to highlight your continuing obligations to the Company. You also acknowledge that the Company may be obligated to disclose the entire Agreement, or any portion thereof, to satisfy applicable laws and regulations.

(j) ***Survivorship.*** The respective rights and obligations of the Company and you hereunder will survive any termination of your employment to the extent necessary to preserve the intent of such rights and obligations.

(k) ***Withholding.*** The Company will be entitled to withhold, or cause to be withheld, any amount of federal, state, city or other withholding taxes or other amounts either required by law or authorized by you with respect to payments made to you in connection with your employment or the termination of your employment.

(l) ***Company Policies.*** References in this Agreement to Company policies and procedures are to those policies and procedures in effect at the Effective Date, as the Company may amend them from time to time.

(m) ***Governing Law; Dispute Resolution.*** The Parties agree that the enforcement of this Agreement shall be governed by the Federal Arbitration Act ("FAA"), 9 U.S.C. §1 et seq. The laws of the State of Texas and the National Rules (as defined below) shall apply to the interpretation of this Agreement, pursuant to section 2 of the FAA. The laws of the State of Texas shall govern the substantive merits of any legal dispute set forth herein, without regard to conflicts of law provisions. In case of any controversy or claim arising out of or related to this Agreement or relating to your employment or the termination of your employment (including claims relating to employment discrimination), except as expressly excluded herein, each Party agrees to give the other Party notice of an intent to seek arbitration under this Agreement and 10 days to reach a resolution. Should resolution of any controversy or claim not be reached following provision of notice and a reasonable opportunity to cure, then the dispute (including the arbitrability of the dispute itself, and the formation or enforceability of this Agreement) shall be settled by arbitration under the American Arbitration Association's Employment Arbitration Rules and Mediation Procedures (the "***National Rules***"). A single arbitrator shall be selected in accordance with the National Rules. The dispute will be arbitrated in Dallas, Texas, absent mutual agreement of the Parties to another venue. Any claim or controversy not submitted to arbitration in accordance with this Section 10(m) (other than as provided under the Restrictive Covenants Agreement) will be waived, and thereafter no arbitrator, arbitration panel, tribunal, or court will have the power to rule or make any award on any such claim or controversy. In determining a claim or controversy under this Agreement and in making an award, the arbitrator must consider the terms and provisions of this Agreement, as well as all applicable federal, state, or local laws. The award rendered in any arbitration proceeding held under this Section 10(m) shall be final and binding and judgment upon the award may be entered in any court having jurisdiction thereof. The following claims are not covered by this Section 10(m): (1) claims for workers' compensation or unemployment compensation benefits; (2) administrative charges to any federal, state or local equal opportunity or fair employment practices agency; (3) administrative charges to the National Labor Relations Board; (4) agency charges or complaints to exhaust an administrative remedy; or (5) any other charges filed with or communication to a federal, state or local government office, official or agency. Also not covered by this Section 10(m) are claims by the Company or by you for temporary restraining orders, preliminary injunctions or permanent injunctions ("equitable relief") in cases in which such equitable relief would be otherwise authorized by law or pursuant to the Restrictive Covenants Agreement. The Company will be responsible for paying any filing fee of the sponsoring organization and the fees and costs of the arbitrator; provided, however, that if you initiate the claim, you will contribute an amount equal to the filing fee you would have incurred to initiate a claim in the court of general jurisdiction in the State of Texas. Each party will pay for its own costs and attorneys' fees, if any, provided that the arbitrator or court, as applicable, may award reasonable costs and expenses in favor of the prevailing party. The Company and you agree that the decision as to whether a party is the prevailing party in an arbitration, or a legal proceeding that is commenced in connection therewith will be made in the sole discretion of the arbitrator or, if applicable, the court.

Any action, suit or other legal proceeding with respect to equitable relief that is excluded from arbitration above must be commenced only in a court of the State of Texas (or, if appropriate, a federal court located within the State of Texas), and the Company and you each consent to the jurisdiction of such a court. With respect to any such court action, the Parties hereto (a) submit to the personal jurisdiction of such courts; (b) consent to service of process by the means specified under Section 10(a); and (c) waive any other requirement (whether imposed by statute, rule of court, or otherwise) with respect to personal jurisdiction, inconvenient forum, or service of process.

(n) ***Interpretation.*** The parties agree that this Agreement will be construed without regard to any presumption or rule requiring construction or interpretation against the drafting party. References in this Agreement to "include" or "including" should be read as though they said "without limitation" or equivalent forms.

(o) ***Entire Agreement.*** This Agreement and any documents referred to herein, including, but not limited to, the Restrictive Covenants Agreement referenced in Section 8, represent the entire agreement of the Parties and will supersede any and all previous contracts, arrangements or understandings between the Company and you, including, without limitation, the Prior Agreement.

(p) ***Counterparts.*** This Agreement may be executed in counterparts, and all so executed shall constitute one agreement which shall be binding upon all Parties hereto, notwithstanding that all Parties' signatures do not appear on the same page.

[Signatures on Following Page(s)]

IN WITNESS WHEREOF, the Parties have executed this Agreement to be effective as of the Effective Date set forth above.

HMS Holdings Corp.

By: /s/ William C. Lucia
William C. Lucia
Its: Chairman, President and Chief Executive Officer

3/29/2018
Date

Douglas M. Williams, Jr.

/s/ Douglas M. Williams, Jr.

3/29/2018
Date

Exhibit 31.1

Certification

I, William C. Lucia, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of HMS Holdings Corp.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 7, 2018

/s/ William C. Lucia
William C. Lucia
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

Certification

I, Jeffrey S. Sherman, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of HMS Holdings Corp.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 7, 2018

/s/ Jeffrey S. Sherman
Jeffrey S. Sherman
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

Certification Pursuant To 18 U.S.C. Section 1350 As Adopted Pursuant To Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the Quarterly Report of HMS Holdings Corp. (the "*Company*") on Form 10-Q for the period ended March 31, 2018 as filed with the Securities and Exchange Commission (the "*Report*"), I, William C. Lucia, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ William C. Lucia
William C. Lucia
Chief Executive Officer
(Principal Executive Officer)

May 7, 2018

Exhibit 32.2

Certification Pursuant To 18 U.S.C. Section 1350 As Adopted Pursuant To Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the Quarterly Report of HMS Holdings Corp. (the "*Company*") on Form 10-Q for the period ended March 31, 2018 as filed with the Securities and Exchange Commission (the "*Report*"), I, Jeffrey S. Sherman, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Jeffrey S. Sherman
Jeffrey S. Sherman
Chief Financial Officer
(Principal Financial Officer)

May 7, 2018