Provident Perspectives: Private Equity-Driven Consolidation within Neurosurgery and Neurology

Merger and acquisition activity in the Neuroscience market to accelerate considerably over the next 6-18 months

Provident Healthcare Partners

Executive Summary

Provident's Prospective

The neuroscience space represents one of the few physician specialties to remain relatively untouched by outside investment. With the majority of private practices comprising of 4 physicians or fewer, it remains one of the most fragmented specialties within physician services. Given the wide breadth of ancillary service offerings, increasing outpatient surgical volume, aging population, and the growing importance of neuroscience services to overall healthcare, there is significant opportunity in space for private equity led consolidation.

After experiencing high returns during the first wave of consolidation of physician practice management models in dermatology, ophthalmology, and IPM sub-specialties, investors are now contemplating what the second wave of PPM consolidation will look like. Leveraging our discussions with private equity firms and various neuroscience groups across the country seeking to replicate the success seen in other subspecialties, Provident predicts neurology/neurosurgery will be a major focus for private equity firms within the next 6-18 months.

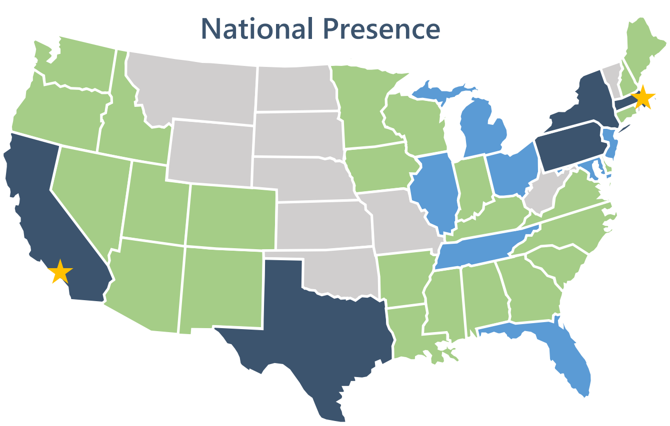
Select Provident Represented Transactions

Musculoskeletal	Early Mover / Musculoskeletal	Early Mover
Orthopedic Practice	**Orthopedic Practice**	**Ophthalmology Practice**
Ortho Bethesda Restoring Function *Has been recapitalized by* Atlantic Street Capital	Southeastern Spine Institute and Ambulatory Surgery Center *Has been recapitalized by* Candescent Partners	Katzen Eye Group *Has been recapitalized by* Varsity Healthcare Partners
**Third private equity investment in orthopedics*	**First private equity investment in orthopedics*	**Second private equity investment in ophthalmology*
Orthopedic ASC	**Interventional Pain Management**	**OB/GYN Practice**
Chevy Chase the surgery center of *Has received a majority investment from* SCA Surgical Care Affiliates®	The Spine Center at The Center for Pain Management *Has been recapitalized by* Sentinel Capital Partners	Women's Health Care Group of PA *Has been recapitalized by* Audax Group
	**Second private equity investment in pain management*	**First private equity investment in clinical OB/GYN*

About Provident

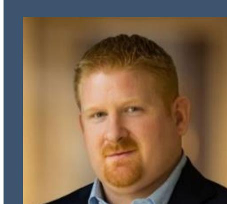
Provident Healthcare Partners' investment banking team works with privately owned healthcare companies to provide advisory services related to mergers and acquisitions. Prior to formal engagement, Provident works with practices to provide the upfront education to shareholders necessary to understand the economics, structure, and motivation of a transaction. Following the education process, if formally engaged, Provident leverages their extensive knowledge of the buyer universe to find the most compatible partner and drive valuations for a practice's previously illiquid stock. Driving the entire transaction process, Provident facilitates and assists with deal structuring, negotiations, exit planning/processing, counseling amongst shareholders, and due diligence.

National Presence



Note: The above map represents states where Provident clients were headquartered. Provident has successfully closed transactions with clients operating in 45 states and Puerto Rico.

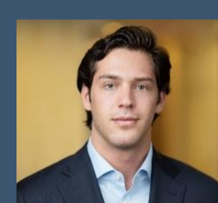
Neuroscience Deal Team



Michael Patton
Managing Director

Scott Davis
Vice President

Robert April
Senior Associate



Jake Vesely
Analyst

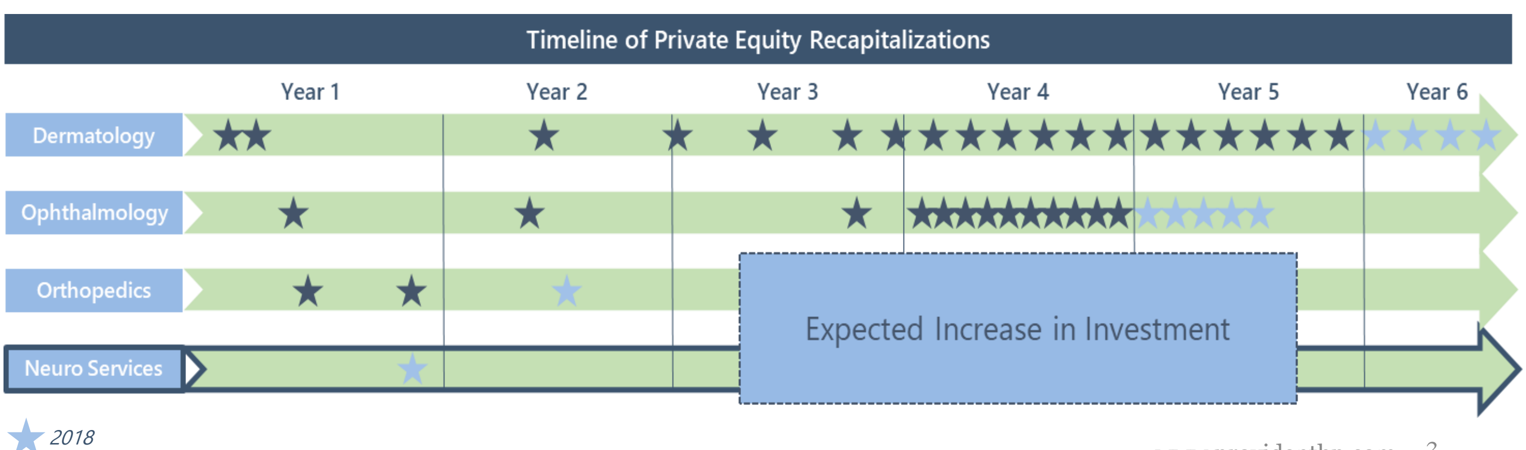
Combined 30+ Years of Deal Experience

Introduction

The first wave of consolidation within physician practice management enabled private equity investors to generate high returns in specialties such as dermatology, ophthalmology, and IPM sub-specialties. These investors are now exploring what the second wave of PPM consolidation will look like. The neuro services space represents one of the few physician specialties to remain relatively untouched by outside investment. In fact, the industry saw its first major recapitalization by a private equity group when Lorient Capital recapitalized Atlantic Neurosurgical Specialists in early 2018. Although the space has yet to see significant outside investment, there are a number of factors that make neurosurgery and neurology a highly attractive opportunity for private equity groups. Given the wide breadth of ancillary services offerings, increasing outpatient surgical volume, aging population, and the growing importance of neuroscience to overall healthcare, there is significant opportunity in space for private equity led consolidation.

As rates across healthcare remain volatile and the industry continues to transition from a fee-for-service to an outcome based care model, neurosurgery and neurology practices are starting to see that the future viability of their business model hinges on size and scale. The ability to provide the entire continuum of neurological care and negotiate rates with major payors' value based care programs will determine the future of private practices. Although there are a few regional providers in the space, the number of multi-state providers is minimal. The vast majority of the industry is comprised of small (1-5 provider) practices. As smaller providers feel the pinch on margins due to falling reimbursement, they will need to make proactive business decisions in order to remain viable in the increasingly competitive landscape. For many practices the only apparent option may be joining the local health system. The majority of private practitioners have no interest in becoming an employee of a hospital, and would view joining a private equity-backed private practice as a much more favorable option.

Provident has monitored private equity consolidation in many subspecialties of the healthcare industry, including GI, OB/GYN, and most recently, orthopedics. We have participated in two of the three private equity transactions in the orthopedics sector thus far and fully expect investment to continue to grow similar to the trends seen in the other two specialties. We see many similarities between orthopedic and neurosurgery platforms and expect this trend to be replicated in neuro services platforms within the next 6-18 months. The stars on the timeline below represent private equity platform investments in the 5 years following the initial investment within each respective specialty.



Private Equity Investments Explained

Private equity (PE) refers to investors and funds of capital that seek to make direct equity investments in privately-owned businesses. General Partners (GP) invest the fund's capital in businesses that align with their investment theses, seeking to exit their investments within three to seven years for substantial returns. Upon investment, or a recapitalization, a private equity firm will acquire a stake in a private business, providing the shareholders with significant liquidity in the form of cash proceeds as well as retained equity in the newly recapitalized company. Post-transaction, private equity firms provide access to capital and expertise as they seek to improve their investments both financially and operationally by building out the infrastructure to provide a foundation for future growth.

The type of growth initiative varies from model to model; In most cases private equity firms will infuse their portfolio companies with capital to increase geographic density organically through de novo initiatives and inorganically by executing add-on acquisitions to enter into new geographies and increase market share. By expanding through acquisition, these investors create platforms used to integrate practices under one brand name.

A few decades prior, private equity investors sought to buy out practices entirely accumulating all the profits created by providers. All physicians were paid a salary based on their production levels, which created a fair amount of unrest with their provider base. As the market evolved, general partners realized they needed to find ways to keep providers incentivized.

Now, when a practice chooses to accept an investment from a private equity group, physician shareholders will be expected to rollover part of their ownership into the new company. This provides individuals with a large up front payment, taxed at the capital gains rate, along with equity ownership in the new company. This new business model allows each provider to share in the profitability of the practice as they expand through acquisition and de novo initiatives. After a three to seven year holding period, it is anticipated that the practice will have grown in size tremendously, prompting the general partners to likely sell the platform to a larger private equity group. During this second transaction, physicians have the ability to roll additional equity into the newly formed company, providing neurologists and neurosurgeons with a second liquidity event.

The Four Stages of the Private Equity Investment

Why Are Practices Interested in Private Equity Partnerships?

The Attractiveness of Private Equity Led Consolidation

Neurologists and Neurosurgeons in large group practices are able to enjoy the benefits of scale as well as the benefits of private practice. Financially, this option typically includes bonuses tied to ancillary distributions, such as infusion, pain management, physical therapy, and a wide array of others. Most importantly, private practice physicians are able to maintain clinical autonomy and work with a much more nimble organization as compared to a health system. These factors are what make private equity consolidation such an attractive alternative for neurologists and neurosurgeons looking to alleviate the administrative burden and mitigate risks of their private practices. Through partnering with a larger, privately-held entity, physicians will be able to enjoy the benefits of aligning with a management services organization while also sharing in the financial success of the enterprise through their compensation and equity appreciation.

For investors, post-closing growth enhancement of add-on acquisitions can be realized through providing more efficient care, driving procedural volume into company-owned ambulatory surgery centers versus hospital operating rooms, adding full sub-specialty coverage, and scaling ancillary services to practices that haven't fully invested into them.

Provident Case Studies: Tracking Post-Transaction Growth

KATZEN EYE GROUP

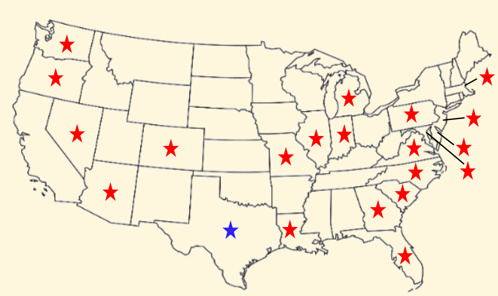
	May 2014 Initial Transaction	May 2017 Secondary Transaction
Operating Metric	Katzen Eye Group	Eyecare Services Partners
Physicians	30	120+
Clinics	4	46
Surgery Centers	1	7
States	1	5
Revenue	~$35 million	~$125-175 million*
EBITDA Multiple	NA	15x+*

THE SPINE CENTER at THE CENTER FOR PAIN MANAGEMENT → NATIONAL Spine & Pain CENTERS

	2011	2017
Number of Clinics	9	69
States	D.C., MD	CT, D.C., MD, NC, NJ, NY, VA, WV

epic HEALTH SERVICES

#	Deal Type	Date	Amount
6	**Exit – Bain Capital**	**Dec-16**	**$1.0B**
5	Senior Debt, Secured	Mar-16	$185.0M
4	Leveraged Recapitalization	Nov-13	$110.0M
3	Debt - General	Mar-12	$36.0M
2	Debt - General	Jan-12	$108.0M
1	**Platform Investment**	**Aug-10**	**$42.0M**



★ Pre-transaction state in August 2010

★ Post-transaction states as of December 2016

Neuroscience Macroeconomic Trends

Provident has identified several factors that will drive future procedural volume growth within neurosurgery and neurology. Two of the major factors are the aging population and increasing prevalence of obesity. The geriatric population is prone to various central nervous system associated disorders such as Schizophrenia, Alzheimer's, and Parkinsonism. According to data published by the United Nations in 2012, the global geriatric population is estimated to reach nearly 1.13 billion by 2020. Approximately 5.1 million of the estimated 5.3 million Americans with Alzheimer's are 65 years of age or older. Such a large geriatric patient base is expected to be one of the critical factors for growth in the neuroscience market over the forecast period shown in figure 1.

In addition to seeing increased procedural volume due to an aging population and increasing prevalence of obesity, Neurosurgery is also uniquely positioned to benefit from technological trends, where advancement in surgical technologies will directly improve patient outcomes. In regard to neurosurgery procedures involving the spine, it is estimated that 60 million people suffer from chronic musculoskeletal pain, resulting in over $100 billion in medical expenditures per year. The rising demand for neuroscience procedures is projected to outpace the supply of neuro practitioners as shown in figure 2. Additionally, the aging population is only going to exacerbate the shortage of neuro practitioners. Due to the continuing rise in life expectancy in the U.S., demand for neuroscience services will only continue to grow.

Figure 1: Percent of American Population >65 Years of Age

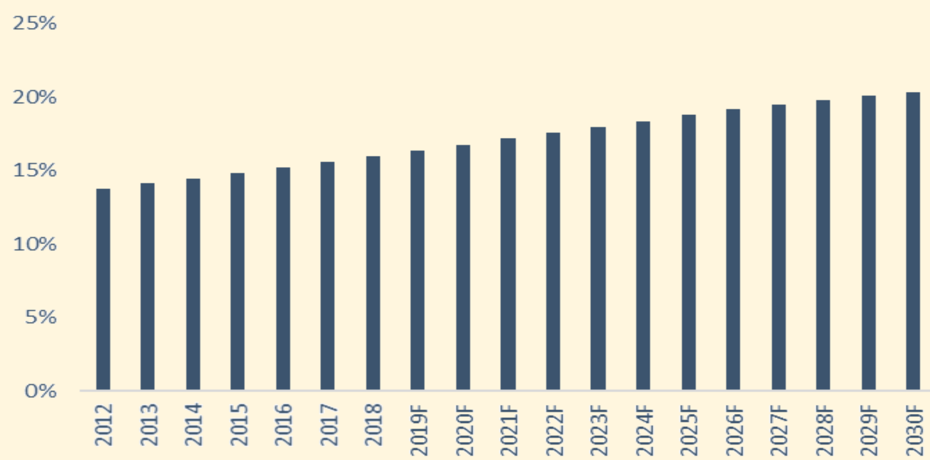
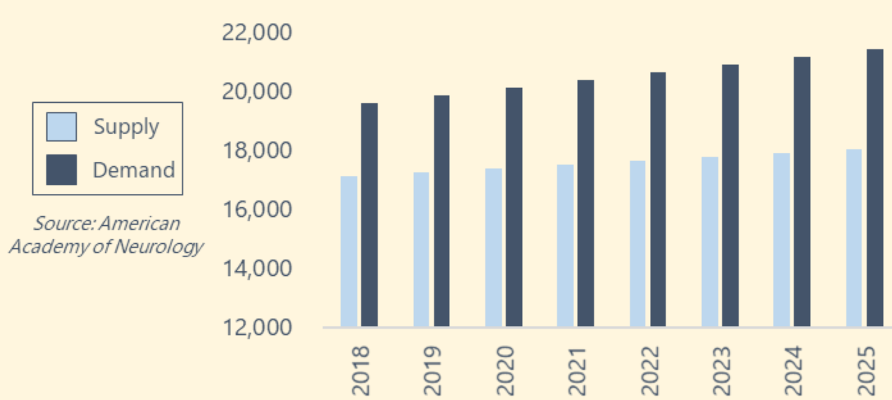


Figure 2: Neurology Workforce Shortage



Private Equity Led Consolidation Opportunity

The current landscape of neuroscience service providers is comprised of a fragmented universe of regional and local providers (figure 3). Although the neuroscience market is valued at over $28 billion in revenue, there are less than 3,700 practicing board certified neurosurgeons and less than 16,500 practicing neurologists in the United States. This presents an opportunity to quickly gain significant market share. While the vast majority of private practices consist of 5 or less providers, private equity firms see an opportunity to embark on a roll-up strategy in the industry. Fragmentation is very evident in the industry given that only 3 private practices nationally have more than 34 providers. Private equity groups that partner with one of the leading platforms in the sector have an opportunity to consolidate fragmented regional markets through add-on acquisitions.

Furthermore, the neuroscience services industry is attractive to PE firms for a several other reasons. Coupled with the favorable macro tailwinds discussed previously, neurosurgeons, on average, greatly outsize other physicians in terms of profitability, evident by figure 4. As the neurosurgeon population continues to age (figure 5), private equity firms will seek to capitalize on the near non-existent exit opportunities typically available to physicians in private practice by offering significant cash considerations and rolled equity post acquisition. While only 160 new neurosurgeons enter the work force each year, private equity firms will be able to take advantage of the increasing demand for neurosurgical procedures.

Figure 3: Distribution of Neurosurgeons Among the United States

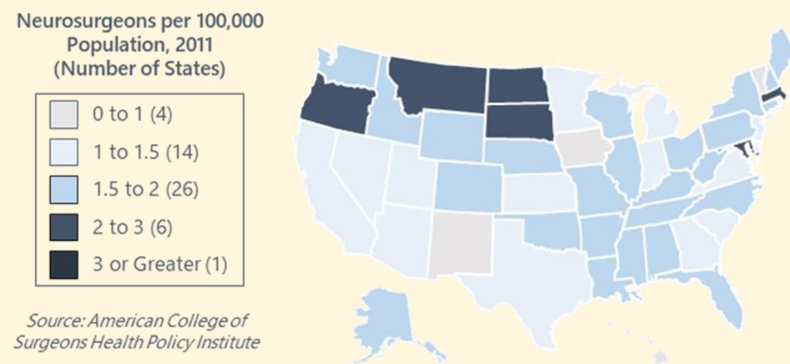


Figure 4: Neurosurgery Practices Have Outsized Physician Profitability

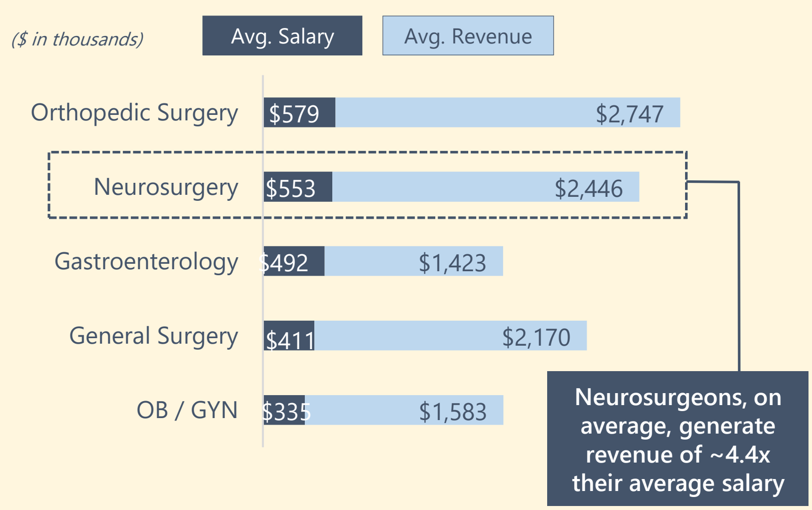
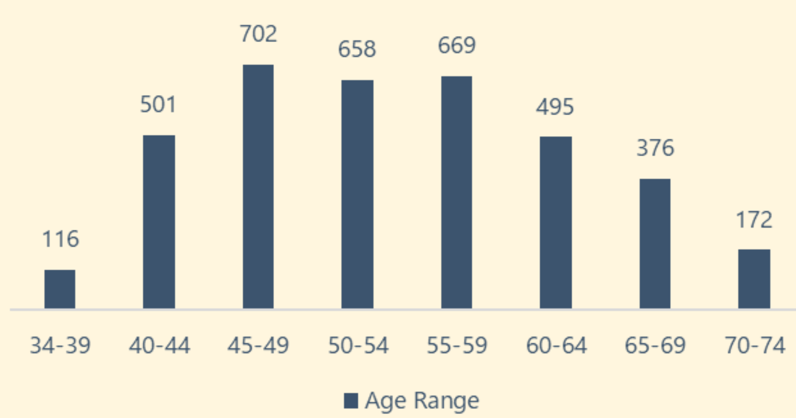


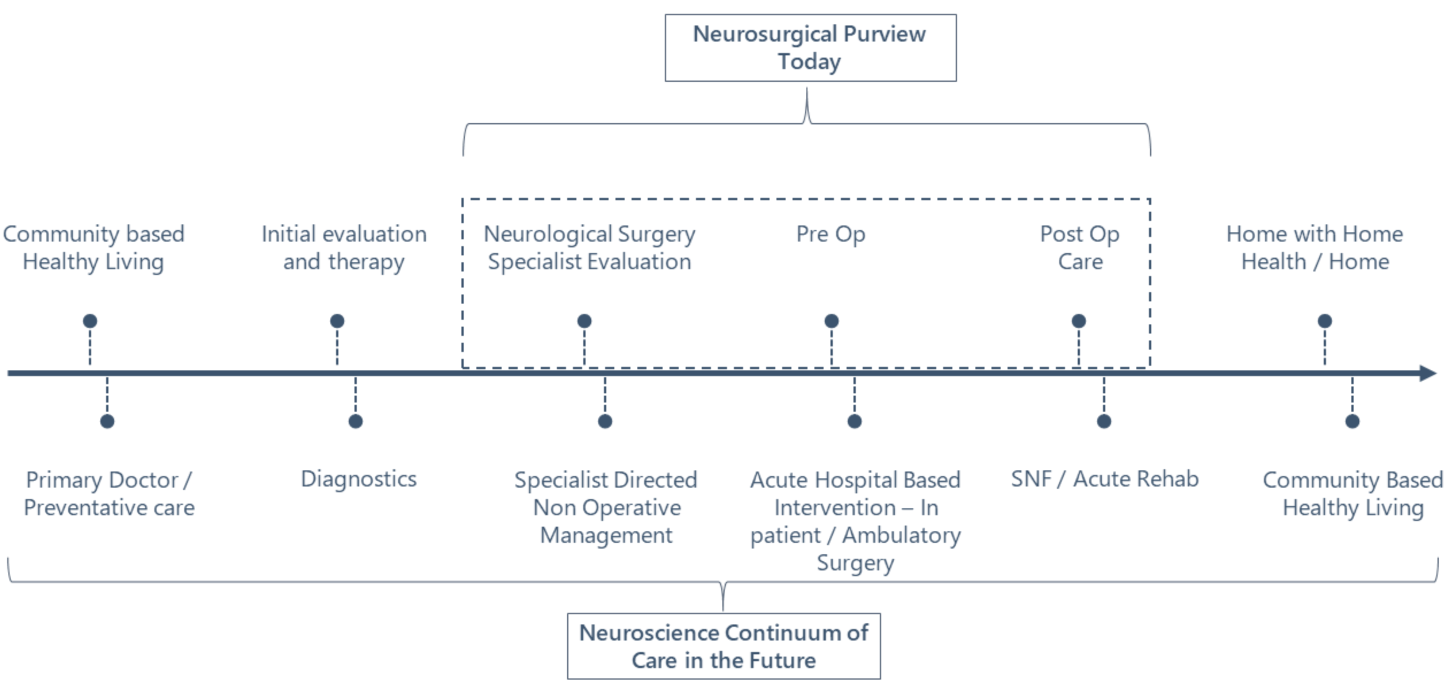
Figure 5: Aging Neurosurgeon Population



Capturing the Continuum of Neuroscience Care

As rates across healthcare remain volatile and we transition from a fee-for-service to an outcome based care model, neurosurgery and neurology practices are starting to see that the future viability of their businesses hinges on the ability to provide the entire continuum of neurological care. As they exist today, many neurology or neurosurgery practice is very limited in spectrum of care that they provide. Most neurology practices are specializing in a few areas of practice, such as Botox or trigger point injections. Others have more concentration in their imaging centers, such as EEG, EMG, or MRI. On the other end of the spectrum of neurological care, many neurosurgery practices are only doing procedures, and not capturing the pre-op and post-op opportunities (figure 6). Furthermore, the majority of these firms are significantly lacking in regard to data capabilities and EHR systems. Many anticipated that widespread implementation of EHR would dramatically facilitate patient care, including continuum of care efforts. For a variety of reasons, however, this goal has remained unrealized throughout private neuroscience services practices. Private equity firms are seeking to build out ancillary services, infrastructure, and data capabilities to create platforms that provide the entire continuum of care, including the often overlooked early and late stages.

Figure 6: The Continuum of Care for a Neuroscience Services Patient



Still largely overlooked in continuum of care efforts are posthospital interventions and patient management. Few value-based systems integrate pre-op and post acute care, thus limiting incentives to ensure patients are placed in an appropriate setting after surgery to optimize their recovery and reduce 30-day readmission rates. Such settings might be rehabilitation centers, skilled nursing facilities, LTACs, or home care. Later in the continuum of neurological care, neurologists and neurosurgeons are key to supporting effective postoperative care and rehabilitations so that more patients may go on to live healthy, productive lives without the need for hospital readmission or future surgical procedures.

Transition Towards Outcome Based Care

In addition to building out the ancillary services and increasing geographical presence through acquisitions and de novo growth opportunities, private equity firms can add significant value on the infrastructure and administrative aspects of the practice as well. This can range from implementing key C-suite personnel that may currently be missing from the practice, to funding and implementing outcome-based EMR systems.

In light of newer value-based payment models, there are also several risks facing the neuroscience industry. Under MACRA, capturing patient outcome metrics will demand higher quality reporting from neuroscience organizations, resulting in an increased emphasis on investments in IT systems. Likewise, as the industry transitions towards an outcome based care model, an inability to adapt to the new bundled payments and capitation/risk based contracts present a potential threat to the future profit margins. Currently, the majority of private physician practices have little to no experience in negotiating bundled payments and capitated or risk based contracts as evidenced by figure 7 and 8.

Considering these threats, Provident expects increased consolidation in the industry as practices realize the benefit of economies of scale, aligning with larger organizations, and centralizing back-office functions, such as IT systems, revenue cycle management, accounting, billing, and HR. Providers can also look to combat reimbursement pressures by gaining negotiating leverage with payors as part of a larger organization.

Figure 7: Private Physician Practices that Participate in Bundled Payments

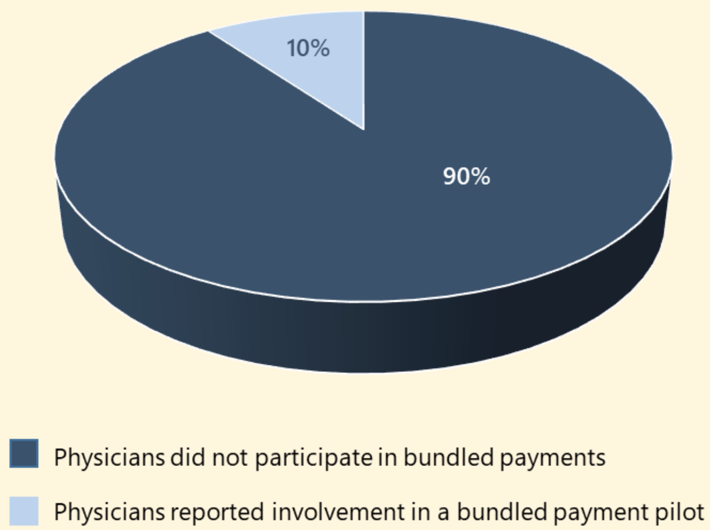
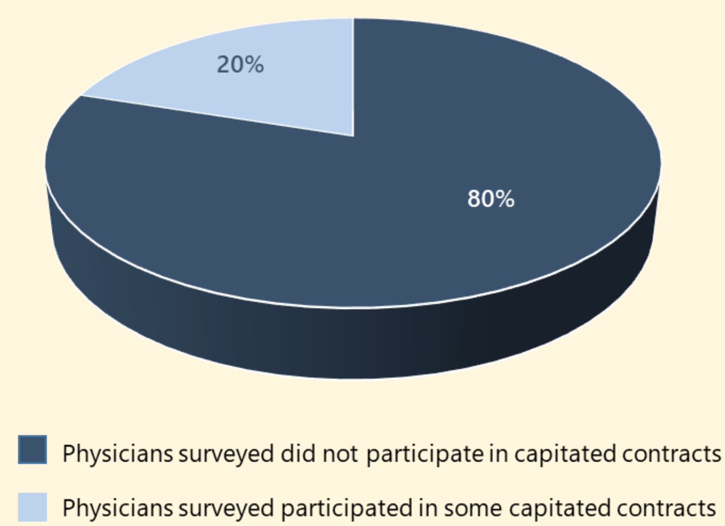


Figure 8: Private Physician Practices that Participate in Capitated or Risk Based Contracts



Consolidation Trends In Parallel Specialties

Driven largely by the regulatory environment, reimbursement pressures, and extreme fragmentation, physician services organizations across a wide range of specialties have found that the best way to stay competitive in the modern healthcare environment is to gain size and scale. Private equity has been a key driver of the consolidation occurring within healthcare through implementing a “buy and build” or “roll-up” investment strategy in fragmented sectors. The strategy starts by partnering with an established “platform” organization that possesses talented management, a strategic vision, and a base infrastructure to scale the business. Following further internal investment, organizations aligned with a private equity firm will then look to perform “add-on” acquisitions of smaller physician groups at lower valuations than the platform investment received. The practice of increasing enterprise value through acquiring smaller organizations is known as “multiple arbitrage”. As the platform organization grows, its value increases in tandem with each subsequent addition to the platform. A return is realized through a subsequent transaction, at which point the organization can see a higher exit multiple because of the premium that is typically paid for the larger entity upon exit. In addition, each add-on acquisition that was performed is subsequently exited as part of the platform organization at the higher valuation. The opportunity to implement this buy and build investment strategy as a first-mover in the fragmented neuroscience market is what makes partnering with a private equity partner an attractive option for groups that possess the qualities of a platform organization.

Sample Overview of Multiple Arbitrage

Company	Valuation Range	Rationale	“Profitability” EBITDA	Multiple	EV
Private Equity Platform Investment	9x-11x	• Regional dominance • Established infrastructure	$10M	10.0x	$100M
Add-On Acquisition	4x-6x	• First-mover advantage ensures less competition	$2M	5.0x	$10M
Combined Organization	10x-12x +	• Value of add-on is enhanced as the organization benefits from premium demanded for the platform company • Combined organization leverages the infrastructure and regional dominance of platform • Synergies from centralizing back-office functions and increased leverage with payors enhance the EBITDA of the combined organization	$12M + $500K in synergies = $12.5M	11.0x	$137.5M

Footnote: EBITDA (“Profitability): Earnings before interest, taxes, depreciation, and amortization. EBITDA is the fundamental metric that groups use to arrive at the valuation, or enterprise value of a group. Enterprise Value (“EV”): is most commonly calculated based on a multiple of EBITDA

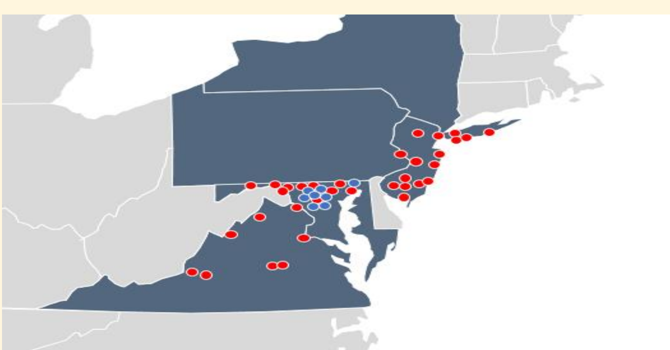
First-Mover Advantage

As the leading middle-market merger and acquisition advisory firm within physician services, Provident possesses unique insight into the current trends facing the practice management industry and how these trends will likely drive future consolidation activity. Provident also has a reputation for representing early-movers in specific physician specialties through landmark transactions with private equity firms. Past examples of these recapitalizations include Women's Health Care Group of PA with Audax Group, National Spine & Pain Center with Sentinel Capital Partners, Katzen Eye Group with Varsity Healthcare Partners, and most recently Southeastern Spine Institute with Candescent Partners. Similar fragmentation exists within the neuroscience services sector and, to date, there has only been a single private equity platform. This has created a significant and lucrative opportunity to become a first mover in the space.

Provident Case Study: National Spine & Pain Centers

The Spine Center was a single-state provider of interventional pain management services with nine locations in Maryland at the time of engaging Provident Healthcare Partners to manage a private equity-focused transaction process. The management of The Spine Center saw the opportunity to rapidly expand the organization by utilizing the capital and transaction expertise of a private equity firm to execute on a roll-up strategy. Sentinel Capital Partners emerged as the best fit after a competitive process for The Spine Center in terms of both strategic vision and valuation. The Spine Center's physician owners collectively chose to reinvest a significant portion of equity into the go-forward entity. After acquiring Capitol Spine & Pain in Virginia shortly after the initial investment from Sentinel, the size of the organization nearly doubled, and The Spine Center rebranded itself as National Spine & Pain Centers. Today, National Spine & Pain has a dominant presence on the eastern seaboard and has expanded from a single-state provider with nine clinical facilities to 63 locations in six states as well as Washington D.C. National Spine's partnership with Sentinel was the second platform investment into the interventional pain management sector, which resulted in a wave of subsequent investment and consolidation. National Spine & Pain was able to leverage its position as a first-mover to establish itself as the premier consolidator within the marketplace, with minimal competition for add-on deals. In executing upon this strategy, the physician-shareholders of National Spine & Pain have seen a substantial increase in the value of their reinvested equity, which was realized in the subsequent sale to Avista Capital Partners on June 5th, 2017.

Growth of National Spine & Pain in Partnership with Sentinel Capital Partners 2011-2017



Pre-transaction clinics*

Post-transaction clinics

*All pre-transaction clinics are still in operation post-transaction

Concluding Thoughts

As evidenced by the recent investment in Atlantic Neurosurgery Specialists, based on the significant market fragmentation, attractive macroeconomics tailwinds, and transition towards value-based care, the neuroscience services sector will continue to experience increasing investment and consolidation activity within the next 12-36 months. Neuroscience physicians across the country are seeing this as an opportunity to capitalize on the opportunity to be one of the first movers in the space, mitigate against reimbursement/regulatory risk, and as an opportunity to stay in private practice as opposed to merging with a health system.

To the extent that it is of interest, members of the Provident team would be happy to elaborate on any of these trends & provide specific insights on healthcare niches, specialties, and industry verticals. Please contact us at (617) 742-9800 for additional information.

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Provident is the leading investment banking firm specializing in merger and acquisition advisory, strategic planning, and capital formation for middle-market and emerging growth healthcare companies.

The firm has a vast network of senior industry relationships, a thorough knowledge of market sectors and specialties, and unsurpassed experience and insight into the investment banking process.

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