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OPTIMIZING MEDTECH PRICING FLEXIBILITY IN A DIGITAL WORLD:

SUBSCRIPTION VS. CAPEX

As medtech companies modify their business practices and pricing models to draw out the maximum value of their integrated digital and medical device offerings and respond to customers' concerns about high up-front costs of adopting new technologies, they need to discern the trade-offs and proper use cases.

▶ **WENDY DILLER WITH THOMAS F. BUSBY AND ODED BEN-JOSEPH, PHD, OUTCOME CAPITAL**

The digital revolution, though arguably still in its early stages, is upending medtech industry norms thanks to technological advances, macro conditions accelerated by the pandemic, reimbursement availability, shifting customer expectations, and new commercial strategies enabling low acquisition prices for innovation. While initially slow to realize its potential, executives now have digitization at the top of their minds.

Medtech companies are increasingly incorporating software components into their traditional medical devices, enabling the delivery of additional capabilities and providing an avenue of differentiation for maturing product lines. Across nearly all industry segments, top executives are modifying their business and pricing models to draw value out of these potentially high-margin opportunities.

The stakes are high: digitization offers the promise of enabling mature product lines to remain competitive via data capture and interpretative analytics, which can guide decision making, speed access to care, and ultimately improve patient outcomes. In the future, connectivity capabilities, along with availability of integrated data-driven clinical support tools, will determine the competitiveness of devices as providers carve out their strengths in a more digital era.

Manufacturers of all stripes, no matter how well established, are grappling with how best to capitalize on—and navigate—this transition, which also introduces disruptive strategies for commercializing and pricing products based on these enhancements. Large companies may need to rapidly revamp existing product lines and organizational structures to accommodate such innovation. Venture-backed medical device start-ups face new complexities around the most appropriate model to adopt: one that can simultaneously attract a strong sales team, while also enabling future integration with potential strategic acquirers.

In our experience as life sciences transaction specialists at Outcome Capital, we believe young companies must align R&D projects with "best-fit" commercial strategies. This may mean either including—or eliminating—a "consumable" element from a technology in favor of a monthly subscription data plan. Conversely, this may also mean migrating from a one-time "capex" sale to a razor-razorblade model. Failure to appropriately evaluate these factors will either hamper market adoption or reduce the potential financial gain otherwise possible.

The result of a strong or weak commercial model usually becomes obvious when the business "exits," typically via strategic acquisition. The false belief that acquirers will introduce a befitting commercial model once they obtain an asset leads many medtech executives on quixotic endeavors.

Rather, companies that have thoughtfully melded clinical innovation with complementary sales strategies capture attention on all fronts and, in turn, see this value realized in term sheets. Relying on the tried-and-true capex model for high margins, for example, may be insufficient if competitors have switched to leasing or razor-razorblade models with lower acquisition costs, as high-cost up-front payments for new technologies are an increasing barrier to customer adoption. Alternatives such as the razor-razorblade models, which rely on smaller up-fronts and revenue streams from per unit consumable sales, or even subscription-based service models can be attractive options, each with pros and cons. Clearly, companies need to adopt more flexible commercial models, which include both traditional and newer pricing options. While this was once rightfully unconscionable, given the enormous success of widely used capex and consumables models, the tech industry, followed by COVID-19 considerations, has paved the way for changing medtech mindsets.

Traditional Medtech Players Embrace Digital Solutions

The medical device industry, conservative as it tends to be, has been slow to adopt digital technologies as core to its product offerings: McKinsey & Co. rated the digital maturity of the pharmaceutical and medtech sectors as 28 on a scale of 0 to 100, as measured according to a range of capabilities. This is compared with an average of 34 across all industries, with some leading sectors achieving noticeably higher scores, such as retail's score of 40.3. A pre-pandemic survey of executives from 35 European medical device companies found that their companies had plans to increase the proportion of revenues from digital health solutions from 10% to 50% within five years—a figure that they are far from achieving, in part due to pandemic response priorities.

But the pandemic accelerated much of that thinking, sometimes in unexpected ways. The adoption of telehealth and remote patient monitoring, supported by better reimbursement, has paved the way for greater consumer and provider trust in connected care. At the healthcare system level, some expensive capex categories did surprisingly well, despite COVID-19 related constraints on budgets and labor resources. Notable among these has been placement of surgical robotic platforms, in cases where manufacturers responded with more flexible pricing options. (*See "Hospitals, Strapped for Cash, Are Buying Surgical Robots Despite Pandemic Volatility,"* MedTech Strategist, *November 2021*.)

By now, large, well-established companies are at various stages of digital transformation, either making incremental changes or sometimes transforming entire business strategies. **ResMed** is one of the earliest and most successful examples of a large company that has reinvigorated growth through a combination of technological upgrades, enhanced by digitization, and the introduction of new payment models. The company's aggressive pursuit of digital health assets helped it to navigate away from low reimbursement rates then attached to the CPAP machines sold as home medical equipment (HME) for sleep apnea. Those low reimbursement rates squelched R&D investment in new technologies, setting the sector on a path to commoditization. ResMed reacted in 2014, in a dramatic response to a particularly onerous CMS reimbursement cut by inserting cellular chips into its CPAP machines, thereby enabling technicians to remotely initiate the patient setup and repair of CPAP machines used in patients' homes. The remote capabilities enabled ResMed to offer more efficient services and collect proprietary utilization data, which it could use to benchmark patient progress. These steps allowed it to transition from its reliance on the HME codes to the incorporation of an SaaS (software as a service) model for a portion of its business that is more generously reimbursed and has grown more than 100% since 2018. ResMed's stock has subsequently posted increases that easily beat the performances of the S&P 500 and NASDAQ.

More recently, **Zimmer Biomet**, one of the largest orthopedics device manufacturers, embarked on a series of interesting initiatives, although payment models from these are not entirely clear. In 2018, Zimmer Biomet entered into an unorthodox collaboration with **Apple** using the *Apple Watch* to chart patient recovery from knee and hip surgeries—the first of its kind in orthopedics. In 2021, it launched the *ZBEdge* Connected Intelligence Suite, which offers hospitals and ambulatory surgical centers access to a set of pre-, intra-, and postoperative digital technologies that extract data from orthopedic procedures using ZB implants and equipment. Within *ZBEdge*, it has incorporated robotics, navigation, and remote patient monitoring capabilities.

These companies see their digital offerings as more than mere lip service, but rather as key differentiators and in some cases high-margin and sustainable revenue streams.

ROBUST DEMAND FOR ROBOTS

Intuitive Surgical, Globus Medical, Stryker, and other surgical robotic system manufacturers placed far more systems during the pandemic than analysts expected, given the uncertain state of hospital budgets and volatility of elective procedures. GlobalData, a market forecasting firm, has calculated that although global sales of robots were flat between 2019 and 2020, the first year of the pandemic, they are expected to rise significantly this year as robotic manufacturers adjusted their commercial models and pricing to accommodate customers' constraints.

The Evolving Pricing Model

Regardless of status, companies embarking on digitization face myriad challenges and hard choices regarding where and how to employ different kinds of digital tools, integration of new skillsets into their organization structures, and refining how sales teams are compensated. Hard-and-fast rules do not apply, but for start-ups, these initiatives require a series of trade-offs, built around an assortment of variables, and likely in many cases should lead to adoption of hybrid models.

The capex commercial model has been the foundation of medical device companies' success for decades—and for good reason. In addition to attractive profitability, these arrangements typically lock customers into specified vendors for long periods, due to the high costs associated with switching. Vendors oftentimes benefit from streams of recurring costs from a consumable portion of the equipment or dedicated servicing contracts. Hospitals, however, are increasingly resistant to capex propositions, preferring to retain cash and flexibility to bring in new innovation.

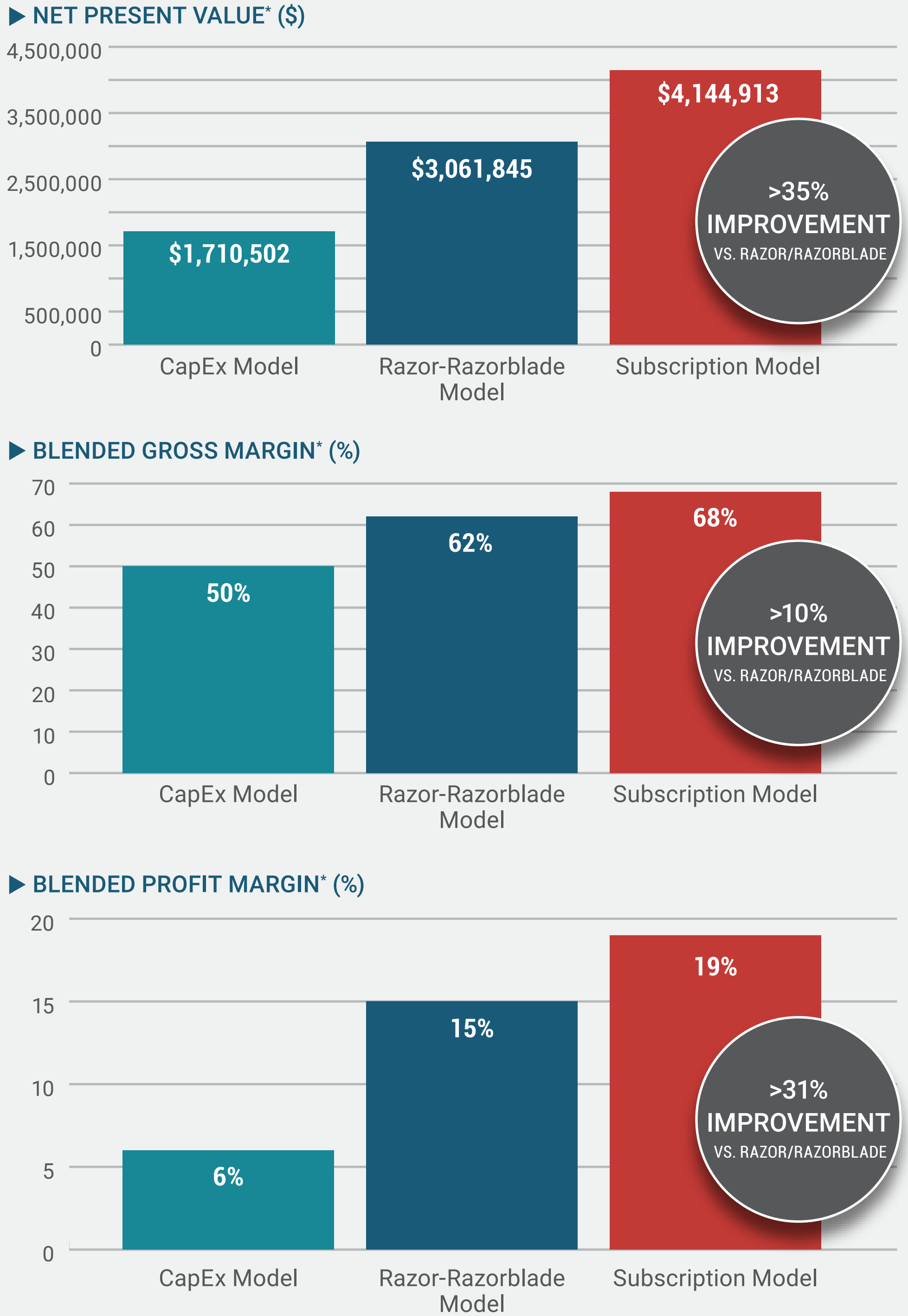
In response, traditional capex models are evolving, as companies increasingly rely on service contracts as a percentage of their revenue streams from large equipment sales, and those service packages in turn are incorporating digital technologies with remote capabilities and predictive analytics. This is leading to adoption of account-based, long-term relationships.

The razor-razorblade structure is another popular commercial option. Traditionally, companies sell the "razor" element of their technology at a small margin—or, on occasion, even at a small loss—and lock their customers in to buy much higher margin "blades" or consumables. Like the capex model, this straightforward arrangement provides for clear contracting and charges. However, by adding a single-use disposable to a technology, medtech executives risk physicians or hospitals weighing clinical benefits against economic burden and dampening usage. At the same time, any potential for consumable re-use is also likely to erode earnings quickly. Taken together, executives deploying a razor-razorblade pricing model must carefully align price points and usage with market demand.

Finally, companies that embrace digitalization need to choose whether and how to transition their digital products from nice-to-have value-adds to revenue-generating core

Figure 1

Alternative Medtech Pricing Models: Value Comparison



*Assumes same number of instrument/razor placements; 5 Year forecast, same instrument COGS, consumable COGS apply only to Razor-Razorblade Model, annual data charges apply only to Subscription Model; CapEx Model assumes $10,000 ASP (upfront capital outlay); Razor-Razorblade Model assumes $8,000 device ASP and $100 consumable ASP; Subscription Model assumes $5,000 device ASP (sold at cost) and $1,000 monthly subscription ASP; same operating, depreciation and tax rate expense assumptions in all models; all models assume 10% discount factor, 1.00x salvage value revenue multiple.

Source: Outcome Capital

offerings. Among the most interesting options for medical device companies are flat-fee subscription models, which dominate the tech industry and are emerging as alternatives for medical devices. In tech, software subscription models give users the right to use the software while paying according to a pre-determined schedule. Healthcare vendors are only recently pivoting to this option, attracted by lifetime value compared with traditional license agreements.

These arrangements are attractive for vendors, especially for young companies looking for consistent revenue streams and more rapid adoption of new technologies, including greater

A Subscription Model Helps Innara Health Showcase the Value of Ntrainer Innovation

Innara Health exemplifies how small companies grounded in traditional medical devices are shifting their strategies to incorporate digital technologies, and in doing so, embracing new kinds of commercial models. Innara's transition, which is ongoing, has helped it to optimize the value of its assets for potential partners and investors. This became important last year, when the company hired Outcome Capital to seek collaborators, ultimately resulting in a partnership with **Cardinal Health** (*see Figure 1.)*

Premature infants often rely on feeding tubes to safely receive nutrition due to the lack of coordination in their sucking, swallowing, and breathing patterns. Innara's *Ntrainer* System, which has been on the market since 2009, is the only FDA-cleared medical device designed to improve oral coordination for newborns and infants born prematurely, helping them advance to oral feeding and meet neonatal intensive care unit (NICU) discharge criteria sooner. The cart-based technology uses a disposable combined with a pacifier that assesses and stimulates oral coordination. The *Ntrainer*'s oral stimulation delivers a gentle pneumatic pulse mimicking the sucking patterns of a healthy newborn, training the infant to suck in an organized, paced manner. This pneumatic pulse also emits a frequency that stimulates the trigeminal nerve, which is a cranial nerve responsible for facial muscular activity. Numerous clinical studies demonstrate the *Ntrainer*'s efficacy in improving oral coordination and feeding outcomes for newborns and infants born prematurely.

Initially, Innara sold the *Ntrainer* as capital equipment, with a list price of $125,000, a tough sell to healthcare systems that typically do not have a budgetary line item for neonatal feeding development, says CEO Chris Mathia, who joined the company in 2017 with a background in healthtech sales leadership. In 2015, prior to his arrival, the company introduced a leasing option, charging customers a much lower up-front fee for the basic platform, along with a onetime per-patient fee for a disposable therapy kit dedicated to that patient. That shift generated interest, but response to the product was still lukewarm, and utilization of the consumable, that is, the pacifier, was "lumpy," leading to unpredictable revenues, Mathia says. He was charged with changing the product's value proposition.

Mathia found that clinicians who were routinely using the *Ntrainer* were resistant to adoption in large part due to costs and often found it easier to resort to the manual stimulation techniques learned during their training on how to stimulate sucking in premature infants. "This was a tremendous opportunity for Innara to pivot, as I learned early in my career that when you are trying to impact a standard of care, you cannot let price become a barrier," states Mathia.

Additionally, the *Ntrainer*, while supported by a significant amount of clinical evidence, was also limited due its cumbersome size and outdated platform. Under Mathia's direction, the company began a transition that includes a redesign of the device and a rollout of a new pricing model to better address providers' financial concerns. The transformation, which is in its final stages, will result in a product that is easier to use, has a smaller footprint for the space-constrained NICU, and has a platform that will support Wi-Fi-enabled connectivity, electronic medical record (EMR) integration, and the ability to better analyze data. The next-generation *Ntrainer* is expected to be available in late Q4 of 2022.

As a part of the transition, in late 2019 Mathia introduced a subscription-based model, which he believed would address prospects' and customers' concerns about cost and help further justify adoption. The flat-fee subscription model has been well received by Innara's clients as well as the NICU community. The new model ability to scale within healthcare systems. Their low up-front pricing also enables sellers to circumvent the unwieldy and time-consuming capex purchasing process.

At the same time, customers gain access to continual, low-cost upgrades and new technologies while maintaining predictable expenses linked to utilization and scale. They also benefit from the data-driven insights and clinical decision support features offered by vendors. Further, subscription models offer more flexible scalability within a healthcare system, as individual customer needs change.

has increased utilization while also providing Innara with more predictable revenue streams, a key consideration for a small company with limited resources. Since rolling out the subscription model, use of the *Ntrainer* has expanded to more infants and a broader population both inside and outside of the NICU. The clinical evidence demonstrates a direct benefit, and the subscription model controls costs for the NICU while also providing an incentive to use it with more patients. "By providing an easy-to-understand pricing model that supports expanded use, not only will more premature infants and their parents benefit from the *Ntrainer*'s technology, but we've also unlocked the potential for NICUs to justify acquiring additional *Ntrainers* once a return has been recognized," states Mathia.

While this approach may not necessarily shorten the sales cycle, it is easier for clients to understand and justify as decisions regarding low up-front expenses can be made at the department level, using discretionary funding, potentially eliminating the need for customers to go before a healthcare system's Value Analysis Committee (VAC).

"For a small young company like Innara, the predictability of revenues from subscriptions has established stability and helped grow our revenues year over year," says Mathia. "While certainly an oversimplification, the subscription model turns the path toward profitability into a simple math equation. The clinical evidence supporting the *Ntrainer* shows that not only does the *Ntrainer* improve feeding outcomes, but also that the ability to feed is about much more than just receiving nutrition. The transition to independent oral feeding marks a significant developmental milestone for the preterm infant and is a large contributor to a healthy trajectory posthospitalization," he says. "Aside from keeping the lights on, our goal is to provide every baby with their best opportunity to develop, grow, and thrive. We believe the subscription model is helping us achieve both of these goals simultaneously."

Figure 1

Medtech Case Study: Innara Health

innara HEALTH — TARGET | OUTCOME CAPITAL — STRATEGIC & FINANCIAL ADVISOR | CardinalHealth™ — PARTNER

BUSINESS DESCRIPTION

Industry
Medical Device

Vertical
NICU/Patient Monitoring

Product
The NTrainer is the only FDA-cleared device to improve feeding outcomes in premature infants.

Differentiation
The NTrainer objectively assesses oral coordination & provides consistent, therapeutic pulses for improved feeding outcomes.

TRANSACTION CHALLENGES

Status
Having a differentiated product with clear therapeutic function, Innara Health required additional capital for redesigning the NTrainer to better integrate into NICU floorplan & enhance usability.

Challenges
Limited salesforce & large-format device inhibited NICU adoption. With minimal commercialization & no similar devices on the market, partners struggled to evaluate future market opportunity of the NTrainer.

THE OUTCOME WAY

Strategic Insight
In conjunction with management, Outcome realized the true market potential for Innara by identifying a range of commercial models and transaction options toward maximizing adoption and clinical impact.

Process
Outcome developed a market-based perspective to identify key value drivers for the NTrainer & engaged a strategic partner to fund the continued improvements to the device as well as expand commercial efforts.

Source: Outcome Capital

> Ultimately, for medtech executives balancing the benefits or drawbacks of certain commercial strategies, higher-margin offerings will nearly always be preferred to alternatives.

The downside is that vendors run the risk of lower margins than they might have anticipated by signing customers up on a per-use basis. Razor-razorblade models based on charging a smaller up-front for equipment and higher per unit pricing for consumables tend to be very lucrative for device manufacturers. Also, vendors are vulnerable to customers having more freedom to switch to competing alternatives.

Multiple Flavors of Subscription Pricing Models

That said, different kinds of subscription models exist. Options include a set fee for unlimited use, pay-per-patient pricing, or a hybrid, depending on volume ranges, with a small up-front fee.

Each of these has trade-offs. Set fees for unlimited-use offerings are likely too expensive for low-volume users and disincentivize vendors regarding high-volume users. Pay-per-patient options are more attractive for low-volume users, but disincentivize high-volume users to take full advantage of the services. Hybrid models include pricing negotiated to suit client needs, based on a range of high- and low-volume utilization or a small up-front fee in addition to regular subscription-like payments, enabling unlimited use for clients, with upside and up-front costs for the seller.

A theoretical impact of these different commercial strategies is most striking when embarking on a comparative valuation exercise (see *Figure 1*). Between a capex and a razor-razorblade model, a 79% difference in net present value can be seen over a five-year period, to the benefit of the vendor. Likewise, comparing razor-razorblade to subscription models over the same time period can yield a 35% improvement in favor of the subscription alternative. Ultimately, for medtech executives balancing the benefits or drawbacks of certain commercial strategies, higher-margin offerings will nearly always be preferred to alternatives, provided the sale can recur month over month, year over year. Because of this, nearly any subscription-type model that provides reliable and sustained cash flows is given a premium by strategics.

One notable example of these nuanced digital-forward commercial strategies is **Butterfly Network**'s *iQ+* ultrasound technology. Leveraging mobile screens already used by Butterfly customers, the *IQ+* ultrasound probe device connects via USB or Lightning cables to Android or Apple devices. Touting a $2,399 cost for the probe, Butterfly offers a comprehensive "Pro" subscription plan for $420 per year, or an *a la carte* plan starting at $199 per year. Given Butterfly's probes work exclusively with its software interface, the company is smartly locking in customers to its digital ecosystem with ample opportunities for direct up-selling with future high-margin software add-ons.

Beyond New Payment Models for Enabling Technologies

Convergence of medical devices and digital technologies will change pricing considerations, as customers want more intelligent, better-connected products with lower price points. Incorporating enabling technologies into the medical device world requires more than just pricing model adjustments, however. Enabling technologies broaden the marketing case beyond just that of a device purchase to one that also contributes to data-analytics-driven planned treatment decisions, opening up new ways to think about the continuum of care. The introduction of more nuanced, real-time data analytics also could lead to reassessment of performance-based contracting, long a tantalizing, albeit highly elusive, opportunity for companies to gain a competitive advantage.

The incorporation of digital technologies into traditional medical devices also requires new ways to compensate the sales force and the need to find new decision makers who are responsible for purchasing decisions at different budgets and price points within healthcare systems. Younger companies look to physicians for buying preferences, but they are not the arbiters in healthcare systems.

Medical device companies across the board are making these shifts with varying degrees of urgency. Within large companies, near-term, narrow changes are easier to implement and offer good starting points. Some companies are more receptive, even embracing these new types of service and subscription models, while others are struggling. Barriers include leadership, culture, sales force compensation and accounting, and lack of benchmarks. In this shifting environment, CEOs of all stripes need to stay strategic and flexible. MTS

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