



# Sizing the Opportunity

September 2020

**CORDIS**  
ASSET MANAGEMENT

# UNDER-PENETRATION: A HUGE OPPORTUNITY

**Our adage at Cordis of “Age, Health, Wealth and Geography” alludes to the undeniable tailwinds that we believe will continue to drive impressive investment returns for the Medical Device sector over the long-term. Our confidence in the return profile is attributed to our deep understanding of the size and growth of the total addressable markets that Medical Device companies operate in.**

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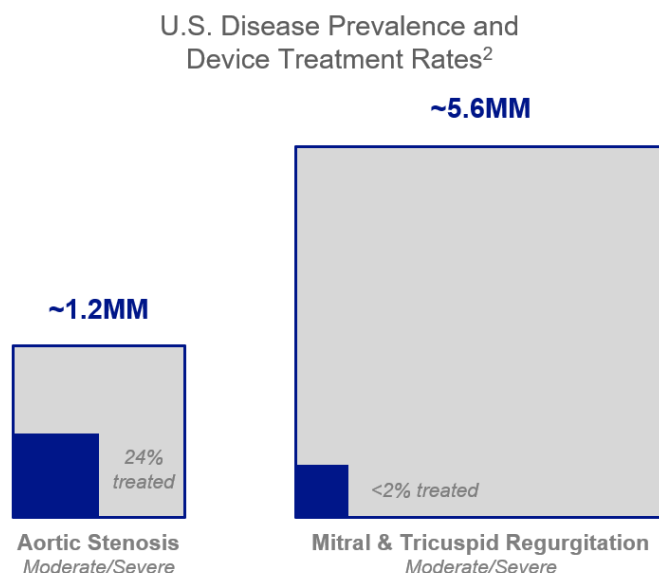
The treatments that many of us take for granted are not as readily used as one may think, even in developed countries such as Australia or the U.S., let alone in the rapidly emerging middle classes of developing economies. Life-saving interventions, such as heart valve repair and replacement, are used in less than a quarter of valvular heart disease patients. Life-improving treatments, such as automated insulin delivery systems for diabetics, remain in their infancy, and patient populations are expanding faster than device penetration. Robotic assisted surgery's rapid growth over the past decade still has not yet seen it expand into many possible new surgical frontiers.

## Valvular Disease

Cardiovascular disease represents the highest cause of mortality globally, at 1 out of 3 deaths<sup>1</sup>. One of the most critical conditions in the cardiovascular space is valvular heart disease. Recent clinical trial outcomes have consistently demonstrated the efficacy and safety of new medical device therapies, which has shifted treatment paradigms from medical management with drugs, to open heart surgery, to transcatheter based interventions. However, these interventional procedures still have extremely low penetration to the overall population of patients suffering valvular conditions, with many doctors and patients alike still getting comfortable with their use and the emphasis on earlier intervention.

Not only is the current market significantly under-penetrated, as seen in the diagram on the right, but the size of the total addressable market continues to expand as the companies involved in these therapies study and publish the benefits of their technologies. The Partner 3 trial (sponsored by

Edwards Lifesciences) and the Evolut low-risk trial (sponsored by Medtronic) both showed transcatheter aortic valve replacement to be as effective, and perhaps safer, than surgery in patients who are considered low risk for surgery, thus greatly expanding the addressable population. A similar story is playing out for the repair and replacement of mitral and tricuspid valves, which is widely recognised as a much greater market opportunity due to the larger prevalence of conditions of these valves. Based on results of the COAPT trial (sponsored by Abbott), the population indicated for mitral intervention expanded to include the much larger indication of heart failure patients with mitral regurgitation. Technologies for the treatment of valvular heart disease markets have seen immense growth off a low base, but under-penetration still presents huge opportunities for the companies involved to grow long into the future.



## Diabetes

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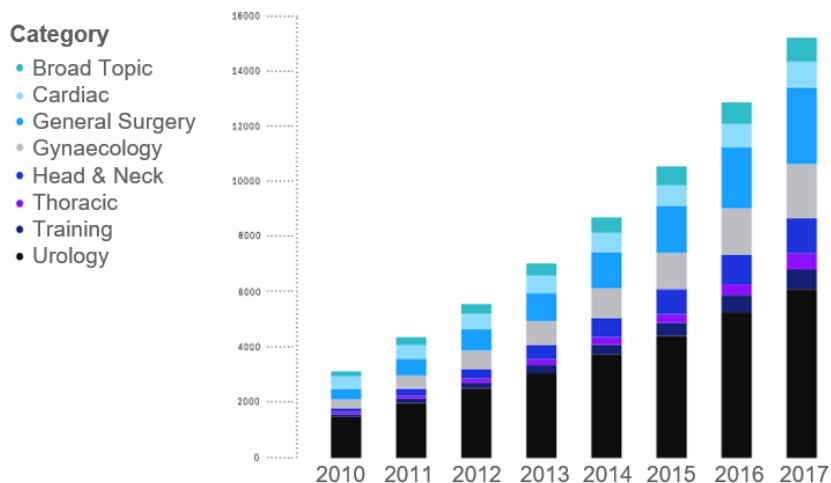
Diabetes is a condition which is becoming more prevalent in our modern society due to increasingly sedentary lifestyles and access to refined, calorie-rich food. Previous standards of care were laborious and inconvenient to patients, leading to a majority not effectively managing their condition. New standards of care such as 14-day patches have begun to replace daily finger sticks and have dramatically improved patient outcomes. DexCom estimates that only half of the diabetes patient population has been diagnosed, which in the U.S. alone is ~35m diabetics, or over 10% of the population. The company also states that only 25% receive any care at all, just 12.5% achieve recommended glucose levels, and only 6% are able to achieve the ultimate outcome of a life free from diabetes related complications<sup>3</sup>. This is all before considering the ~88m pre-diabetics estimated by the U.S. Centers for Disease Control<sup>4</sup>. This massive under-penetration leaves scope for companies like DexCom to continue

to grow into these expanding patient populations as prescribing doctors and patients become more comfortable with this new normal.

## Robotic Assisted Surgery

Under-penetration is also seen in surgical operating equipment. As noted at this year's virtual Society of Robotic Surgery in July, penetration of robotic assisted surgery (RAS) is still extremely low at only 2% of all surgical procedures. We are firm believers in the expansion of surgical procedure use cases, because the people that know these procedures best – the hospitals and doctors who provide them – have shown willingness to incur heavy up-front capital and training costs, indicating their belief, and a desire, to see RAS succeed. In contrast to the under-penetration in use cases, Intuitive Surgical, the leader in the RAS market with their da Vinci system, has achieved strong market penetration from their first mover advantage, and is now installed in over 71% of large hospitals\* in the U.S. The key to expanding the market for use cases is now in research and clinical data, where Intuitive are not resting on their laurels. Since 1998, over 15,000 peer-reviewed publications using Intuitive's da Vinci Surgical System have appeared in various clinical journals, and the number is growing.

Number of Scientific Publications on da Vinci Technology<sup>5</sup>



These include randomized studies, systematic reviews, real world evidence analysis, prospective and retrospective comparison studies and pre-clinical studies. An increase in surgical use cases will in turn increase Intuitive's recurring revenue streams generated by disposable instruments, as opposed to the lumpy capital sales of system installs. As the penetration of RAS increases, Intuitive's business model will allow it to reap the rewards of its first mover advantage and market leading install base. While it is no guarantee that RAS will become the standard of care in all operations, it is a brave investor who is willing to bet against automation in any industry.

At Cordis we are not reliant on penetration rates hitting full capacity in any of the patient populations we invest in, and we do not believe they will. But it will be the wider adoption of new technologies, paired with ever-growing total addressable markets, driven by technology innovation and demographic tailwinds, which will support the industry for years to come.

What we try to do is understand why these markets are under-penetrated and which medical technologies are likely to change treatment paradigms and generate the rapid adoption we are looking for. If we succeed, which we believe we are able to more often than not, we will be able to participate in the upside of some incredible shifts in the way patients receive treatments that will save and improve lives.

**Cordis is an unlisted Australian Unit Trust that provides an active, global fund of listed equities targeting medical devices that provide treatments for chronic disease.**

**For more information and enquiries, please visit [www.cordisam.com](http://www.cordisam.com)**

\*classified as those with >1,000 beds

1. Ritchie, H., Roser, M., *Our World in Data, Causes of Death*, <https://ourworldindata.org/causes-of-death#what-do-people-die-from>. Accessed 15/8/2020
2. Abbot an Edwards company data
3. DexCom, *Transforming Global Diabetes Care*, April 2020
4. Centers for Disease Control and Prevention, *National Diabetes Prevention Program*, <https://www.cdc.gov/diabetes/prevention/about-prediabetes.html>. Accessed 10/09/2020
5. Intuitive company data