

## The American Joint Replacement Registry: Improving Joint Replacement

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*Ten years ago if you would have asked most people in the orthopedics industry if a nationwide US joint registry was possible, the answer most likely would have been a resounding "No!" While much smaller countries such as Sweden and Australia have successfully established registries for tracking total joints, compiling this data for the US is on a scale significantly greater. Fast-forward to early 2016, and the unlikely has turned into a reality. The American Joint Replacement Registry (AJRR) reached the milestone of having over 600 hospitals and approximately 10 Ambulatory Surgery Centers (ASC) on board as registry participants representing all 50 states. In late 2015, AJRR published their 2nd Annual Report focusing on data from 2012-2014 derived from nearly 212K hip and knee replacements performed at 236 hospitals. According to BioMedGPS' SmartTRAK US Total Joints Market Overview, nearly 1.3MM hip and knee replacement procedures were performed in the US during 2014.*

Even though the registry currently captures only 17% of large joint procedures, AJRR expects to capture data on 90% of all US procedures by 2019 furthering its cause of improving patient care. To reach this goal, the Organization estimates it will need between 2,800 and 3,000 hospitals on board. While this goal may seem lofty, the rapid rate at which healthcare providers are signing up to become part of the registry brings them closer to attaining it. According to AJRR, by the end of 2016, the number of participating healthcare facilities is expected to double. This is an even more impressive accomplishment when one considers that joining the registry is not required in the United States as it is in many other countries.

Dr. Daniel Berry, Chair of the Board of Directors of the American Joint Replacement Registry, recently shared that, as a qualified clinical registry, CMS will be providing the Organization with Medicare claims data. Dr. Berry pointed out this access adds longitudinal data for all Medicare patients that are covered in the registry and for those not yet a part of AJRR. Integrating this data into the registry brings AJRR even closer to their goal of capturing the majority of US hip and knee replacement procedures.

Beyond enrollment, AJRR's key goal is to provide actionable information to its stakeholders that could lead to improvements in patient care pathways. Dr. Berry explained surgeons and healthcare providers can benchmark against what is happening in the real world with regards to implant selection and surgical techniques so they can make course adjustments if needed. In fact, AJRR monitors outliers and can alert hospitals to issues with their particular organization. Or, in the case of broader matters such as implant related failures, AJRR will alert the appropriate parties such as FDA, manufacturers, etc. Identifying outliers and managing revision risks could reduce the overall cost burden of joint replacement surgery in the US. However, Dr. Berry noted that AJRR stakeholders could match registry data with their own to perform cost-benefit analysis studies.

Dr. Berry conveyed two other objectives are of importance to the success of the registry. One is the compilation of very granular data about all the implant characteristics and product codes of the devices used in the US, estimated at around 100K codes. This information will enable reporting on the success or problems with various implants over time. In addition, manufacturers that are AJRR members could access all data specific to their company and products giving them the ability to analyze results of specific implant components in relation to patient demographics, risk factors, etc. Dr. Berry expects this data set will be available by the end of 2016.

The other objective is to promote the collection of patient-reported outcomes measures. At AAHKS 2015, AJRR launched its Level III patient-reported outcomes platform that is now available for use by participating hospitals. One of Dr. Berry's personal goals for AAJR in 2016 is promoting the use of the Level III PRO platform which was designed to make collection of this data as simple and straightforward as possible. For annual fee of \$3,000, participant entities can license AJRR's dynamic system. As more and more hospitals join and a statistical average is reached, institutions will gain access to national averages for the Level III PRO data and Level II risk adjustment data.

In conclusion, the various AJRR stakeholders ranging from medical device companies to surgeons to healthcare institutions aligned around the goal of improved care for joint replacement patients should drive continued success of the Organization. Dr. Berry summed it up well when he stated providing a feedback loop to stakeholders about what's working well and what's not working has a very rapid effect on their behavior and a very beneficial effect on them choosing technologies that are most successful — resulting in reduced costs and improving the quality of care.