

The Role of Minimally Invasive Urology In the New Millennium

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The field of urology has experienced tremendous advances in the new millennium. Technological innovations in optics and instrumentation have helped shape the area of **minimally invasive urologic surgery (MIUS)**. In the past, operations for prostate cancer, kidney cancer and stone disease involved large incisions, significant blood loss and long hospitalizations with high patient morbidity. The evolution of laparoscopy, robotics and percutaneous surgery has propelled a paradigm shift.

Traditionally, the Rhode Island health care arena has dedicated more attention and resources to surgical subspecialties such as cardiac, vascular, orthopedics and neurosurgery. Recently, the focus has shifted, with much more investment in urology. The transition is likely due to a number of factors, including the aging population, the high incidence of prostate cancer diagnosis, stone disease and **benign prostatic enlargement (BPE)**.

The importance of a regional investment in the field of urology is sensible when considering that 250,000 cases of prostate cancer will be diagnosed this year in the United States; more kidney disease

will be detected with the increased improvement in radiographic imaging; and an estimated 2 billion dollars will be spent in the management of kidney stones. In addition, the number of persons aged 90 years or older is expected to increase from 9.3 million to 19.5 million between 2000 and 2030 in the United States. This will likely lead to a further rise in the incidence of urologic health issues.

Since my arrival in Rhode Island in 2005, robotics has had the greatest impact locally, with over 600 robotic prostate procedures performed in a 2 year period. Rhode Island has the fastest growing robotic surgery program in the United States. Furthermore, laparoscopy has also experienced tremendous growth, with over 200 laparoscopic kidney procedures performed in the last 2 years. In the area of stone disease, 99% of cases are managed utilizing MIUS techniques. BPE has also undergone significant change, with an armamentarium of minimally invasive techniques for patients who have failed medical therapy. Finally, the introduction of novel treatments such as penile rehabilitation have further enhanced care for men.

In this issue of *Medicine & Health/Rhode Island*, we provide an update on the various MIUS techniques and clinical experiences, with a focus on laparoscopic-assisted robotic urologic surgery, BPE therapy and the minimally invasive management of stone disease. The reader is provided with a special report on Men's Health, concentrating on post prostate surgery penile rehabilitation. The goal of this issue is to educate the reader on the advances in MIUS and to emphasize the cutting edge urologic medicine practiced in Rhode Island.

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The author has no financial interests to disclose.

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