I am pleased to announce the appointment of John Kryger, MD, as chief of the Division of Pediatric Urology within the Department of Urology effective January 1, 2012. In this role, Dr. Kryger will provide medical and academic leadership to the Division of Pediatric Urology. He will also serve as specialty practice unit leader for Pediatric Urology within the Children’s Specialty Group and medical director of Pediatric Urology at Children’s Hospital of Wisconsin.

Dr. Kryger grew up in Pulaski, Wis., a small town near Green Bay. He completed his
What’s New in the Department of Urology?

- John Lacey, MD, and Jeffrey Bejma, MD, have joined The Medical College of Wisconsin. Drs. Lacey and Bejma offer general urology services at Froedtert Health clinics and hospitals in West Bend and Menomonee Falls. Dr. Lacey joins us from Froedtert Health Medical Group in West Bend. Dr. Bejma comes to us from Froedtert Health Medical Group in West Bend. Dr. Bejma joins us from Froedtert Health Medical Group in West Bend.

- Congratulations to our June 2011 resident graduates, Nathan Rasmussen, MD, and Paul Tonkin, MD. Both graduates have entered private practice, Dr. Rasmussen in Fairbanks, Alaska and Dr. Tonkin in Duluth, Minn.

- Welcome to our newest residents, Nathan Grunewald, MD, The Medical College of Wisconsin, Dane Johnson, MD, University of Minnesota Medical School, and Justin Benabdallah, MD, Virginia Commonwealth University.

- Michael Mitchell, MD, retired as professor in the department’s Pediatric Section on July 1. The Department of Urology wishes Dr. Mitchell all the best in his retirement, and looks forward to collaborating with him in his new role as emeritus professor.

The Impact of Male Infertility on Men’s Health: Is There a Relationship?

Jay Sandlow, MD, Professor and Vice-Chair, Director of Male Infertility, The Medical College of Wisconsin

Male factor infertility impacts approximately 50 percent of couples who experience difficulty conceiving. The most common cause is varicocele, which is present in up to 40 percent of cases. Other causes, such as obstruction, hormonal dysfunction and genetic factors, account for another significant portion. However, it has become apparent that male infertility may be a harbinger of underlying issues, such as cancer and cardiovascular disease. The following is a short description of the potential health issues that may present with male factor infertility.

Studies have demonstrated that up to 1 percent of men with significant male factor infertility may have an underlying serious illness. Although this does not sound like much, when one considers the following, it affects a significant number of men. There are approximately 5 million men between the ages of 20-45 (what most consider reproductive age) in the United States. It is felt that 20 percent of couples in this age group have fertility problems and half of these will have a male factor involved. This would mean that approximately 10 million men are potentially subfertile. Of these, if 1 percent had a serious underlying illness presenting as infertility, this would mean approximately 100,000 men could be affected. This does not include men urologists see for vasectomy.

Underlying problems include pituitary tumors, which cause hypogonadism (secondary to high prolactin levels which inhibit GnRH release), prostate tumors, which can cause partial blockage of SV/ED, testis tumors, which can have direct impact on spermatogenesis, as well as indirect via hormone (HCG) production. Diabetes can impact erectile and ejaculatory function, which can then impact fertility. Genetic defects, such as cystic fibrosis and PCKD, as well as chromosomal anomalies such as Klinefelter’s syndrome (KS, 47 XXY), can have associated health problems, and can be passed to offspring. More recently, there is evidence that men with fertility problems may have higher incidence of cardiovascular disease.

Testis cancer impacts approximately 4/100,000 men, with highest prevalence between the ages of 18-40. This happens to be the same age group that typically will present with infertility. There is evidence that infertile men have a higher incidence of testis cancer. This is felt to be multi-factorial, including increased awareness and screening in the infertile population, as well as underlying dysgenesis that most likely impacts fertility and testicular dysgenesis. Although most studies have demonstrated that routine scrotal ultrasound is not warranted in subfertile men, those with risk factors, e.g., history of cryptorchidism or significant testicular asymmetry, may benefit from a scrotal ultrasound.

Pituitary tumors are rare, but men who have tumors due to prolactinoma may present with infertility, erectile dysfunction, or both. This is typically due to the high prolactin levels that are seen. Prolactin inhibits GnRH, which leads to low LH and FSH, with subsequent hypogonadism. Interestingly, many of these men have reasonable semen parameters; however, their testosterone levels are quite low. Treatment with cabergoline or bromocriptine will typically normalize prolactin and testosterone levels, and rarely, men will need pituitary surgery.

Genetic mutations can alter fertility, directly or indirectly. Mutations, such as deletion of one or more of the AZF genes (azoospermia factor) on the Y chromosome, are...
seen in up to 10 percent to 14 percent of men with azoospermia/severe oligospermia. Although it is now possible to retrieve sperm from many of these men, any male offspring will also carry this mutation. Furthermore, men with deletion in the AZF A or B region do not make mature sperm and to date, no successful sperm retrievals have been documented. Therefore, testing is essential to prevent unnecessary testing and treatment.

Mutations of the cystic fibrosis transmembrane receptor gene (CFTR) are extremely common, particularly in Caucasians of northern European ancestry. This can lead to congenital bilateral absence of the vas deferens (CBAVD), an uncorrectable obstruction. Although sperm acquisition is possible, it is essential that the partner be adequately screened, as female carriers are typically asymptomatic and an unrecognized carrier would lead to a 50:50 chance of having a child with clinical cystic fibrosis. It is thought that men with CBAVD carry two mutations, although at least one is often an atypical mutation. Klinefelter’s syndrome (KS) is the most common chromosomal anomaly seen in men, with an incidence of approximately 1:500. Many men with KS present with infertility, as they are always azoospermic. Typically, these men have low-normal to normal testosterone levels, as the men with KS who have significantly low testosterone will usually present earlier with delayed puberty. It has been shown that men with KS have a higher incidence of breast cancer, extragonadal germ cell tumors, as well as infertility. These men must be made aware of this, and offered long-term testosterone replacement.

Finally, there is newer evidence that men with fertility problems may have a higher incidence of cardiovascular disease. In a recent presentation at the annual AUA meeting, data demonstrated that childless men had a 17 percent (Hazard Ratio 1.17; 95 percent CI 1.03-1.32) increased risk of cardiovascular death after adjusting for sociodemographic and lifestyle factors, and this elevated risk appeared to also extend to men with only one child. Childless men also had a slightly higher risk of all-cause mortality compared to fathers (7 percent, 95 percent CI 0-13 percent). If cardiovascular deaths were eliminated from the analysis, no significant difference in all-cause mortality based on fatherhood was noted. Although this is by no means a cause and effect scenario, it brings up interesting issues regarding the underlying factors that impact male fertility. In conjunction with the strong evidence that connects men with erectile dysfunction to early cardiovascular disease, there appears to be yet another reason for men with fertility problems to be evaluated.

As Dr. See pointed out in his introductory remarks, the urologist is often the only physician a man will see. It is not uncommon for men with infertility to have underlying disorders that may not only impact their fertility, but their overall health, as well. It is often said that a man’s fertility is the “canary in the coal mine” of his health, with altered fertility being the early warning signs of more dire underlying problems. It is up to us as urologists to educate men and other physicians to identify and treat these problems early.

REFERENCES

Men’s Health – Time for a New Paradigm

William See, MD, Professor of Urology, Chairman, Department of Urology

Mickey Mantle once said, “If I had known I was going to live this long, I’d have taken better care of myself.” Regrettably, among our aging demographic, all too many men find themselves voicing a similar lament. Today, men in the United States are living longer than ever. The average life expectancy for a male in this country is 75.4 years. Despite increased longevity, the aging male is commonly beset by chronic health conditions that adversely affect quality of life during the so called golden years. Cardiovascular disease, cancer, pulmonary disease and diabetes are among the leading causes of morbidity and mortality in U.S. males.

In response to Mantle’s quote, one might ask whether it is nature or nurture that results in the prevalence of chronic illness among older men. Is the development of chronic disease inherent in the “state of maleness,” or a consequence of patterns of behavior which are potentially modifiable – or both? While the answer is likely to be “both,” the observation that behaviors contribute to chronic disease development affords an opportunity for intervention by healthcare providers. Many modifiable risk factors are widely recognized for providing health benefits in men. Lipid management, select cancer screenings, weight control, exercise, smoking cessation and limited alcohol use all provide benefits. Are men engaging in these preventative activities?

While some men are active participants in their health care, many are not. Common excuses for failing to do so include: “I feel fine;” “I don’t like doctors;” “I’m sure it will get better;” and “I’m too busy.” Unwillingness on the
Benign Prostate Disease  Robert F. Donnell, MD, Associate Professor of Urology

The approach to benign prostate disease has evolved significantly since most of us completed training. This year, the latest update to the American Urologic Association (AUA) guidelines for benign prostate hyperplasia (BPH) was published, concluding almost three years of intense evaluation of the literature. The AUA guidelines panel, under the guidance of the AUA board of directors, employed new techniques that ranked publications for their quality of study methods, as well as data reported. I was asked to serve on the committee, where I worked with thought leaders from around the country interested in benign diseases of the prostate. We were dedicated to publishing guidelines based on robust information all practitioners could use in daily practice. As a result of this effort, I believe you will now find it easier to identify recommendations based on level 1, level 2 and level 3 data. Further, the committee spent many hours carefully crafting the document to retool the thought processes of those who see and evaluate BPH. It is clear that not all men with enlarged prostates have symptoms and not all men with symptoms have enlarged prostates. There is now a strong focus on lower urinary tract symptoms (LUTS) to increase awareness that not all symptoms in the aging male are necessarily from a prostatic origin.

The committee universally agreed that the term benign prostate hyperplasia is a histology term and efforts to correctly use terminology would help better classify patients and help better direct therapies. In our effort to move to LUTS, it is believed we will increase awareness of non-prostate etiologies and the complexities of treating men who have voiding complaints. Disease management options were updated to include new data-driven treatment options, while therapies that are no longer commercially available were omitted. Similar to previous guidelines, no one therapy was mandated and the treatment algorithm based on absolute/relative indicators still remains a valuable tool when counseling a patient about treatment options. I hope you will find the new AUA guidelines valuable.

This year will also see the publication of our work as a member of the National Institutes of Health (NIH) steering committee for minimally invasive therapies. When we first wrote the NIH research outline, we were intrigued by this historical observation: it is rare that spinal cord injury patients develop histologic BPH. The article, which will be published in the September issue of Journal of Urology, highlighted successful outcomes when the neurotoxin botulinum toxin serotype A was injected into the prostate. In a double blind, multicenter randomized trial, botulinum injection into the prostate using office-based ultrasound guidance was safe, typically required 10 minutes to complete under a local anesthetic and was durable for the typical man for eight to 18 months. Interestingly, men also reported improved sexual function, although the etiology for this is unclear. Following the success of the NIH trial, a commercially sponsored multinational trial is under way. This larger study will provide valuable insight into the use of this new agent. We are honored that The Medical College of Wisconsin Department of Urology is a continued leader in this intriguing research. If you are interested in learning more about this research for one of your patients, please feel free to contact us. ■

Robert F. Donnell, MD
Managing Urinary Incontinence After Prostate Cancer Treatment

Michael Guralnick, MD, Associate Professor of Urology
and R. Corey O’Connor, MD, Associate Professor of Urology

Urinary incontinence is a well recognized and potentially devastating complication of prostate cancer treatment (surgery, radiation) that can have a significantly negative impact on quality of life. Typically, incontinence is activity-related (e.g., stress urinary incontinence) and caused by injury/weakness of the urethral sphincter muscle. Fortunately, less than 10 percent of patients treated for prostate cancer have urinary incontinence significant enough to warrant aggressive medical or surgical therapy. Several treatment modalities exist to help patients with post-prostatectomy stress urinary incontinence, including physical therapy/behavior modification, duloxetine, urethral bulking, male slings and artificial urinary sphincters.

Physical Therapy

Initial therapy for managing post-prostatectomy stress incontinence includes behavior modification (managing fluid intake, timed urination) and pelvic floor physical therapy (Kegel exercises). The exercises are performed to strengthen the urinary sphincter muscle to minimize/prevent incontinence. Published studies have demonstrated that men who perform pelvic floor exercises have an earlier return of continence when compared to patients who do not following prostate surgery. Some patients benefit from a more aggressive form of therapy involving biofeedback to help teach proper exercise technique.

Duloxetine

Duloxetine, a selective serotonin (5-HT) and norepinephrine (NE) reuptake inhibitor, has been shown to decrease incontinence by increasing urethral sphincter contractility. The drug is routinely used in Europe for stress urinary incontinence, but is only FDA approved in the United States as an antidepressant. However, daily (off-label) use of the medication has been demonstrated to improve urinary control in more than 60 percent of men with post-prostatectomy urinary incontinence. Approximately 40 percent of men report side effects such as drowsiness, lightheadedness, nausea or dry mouth.

Urethral Bulking

Transurethral injections of bulking agents (collagen, DuraspHERE®, Coaptite®, Macroplastique®) are routinely used in women with stress urinary incontinence. The procedure has also been utilized in men with post-prostatectomy stress incontinence for decades. The injected materials bulk the urethral lining at the level of the bladder neck to create a better “seal” and thus, improve closure of the urinary sphincter muscle. Success rates are often short-lived and patients usually require repeat injections. Complications are rare.

Transobturator Male Sling (Advance Male Sling™)

The transobturator male sling has been commercially available for treating mild to moderate post-prostatectomy stress incontinence since 2004. The surgically implanted mesh supports the proximal urethra to allow for better external sphincter contractility. The result is improved continence. Ideal patients for male slings use three or fewer absorptive pads per day, are able to voluntarily contract the external sphincter and have not had pelvic radiation. The procedure can be performed as outpatient.

Men's Health continued from page 3

part of men to see a physician absent some debilitating symptom is often portrayed as a sign of “toughness” in our society. Think about the statements we have all heard during our youth. No pain no gain! Tough it out! Don’t be a girly-man! Somehow, toughness has been misconstrued to imply that “real men” don’t need to see a physician. To do so is a sign of weakness and vulnerability. Ironically, if one carefully considers this philosophy, it becomes apparent that machismo “toughness” predisposes to “health vulnerability.”

How do we change the current model? Who has assumed the role of advocate for men’s health? In contrast to the role of obstetrics and gynecology in women’s health, no single group of specialists has taken a leadership role in promoting men’s health. The time has come for a new paradigm. Leadership in men’s health is an unmet need for which I argue the field of urology is ideally suited. Benign prostatic enlargement, andropause, infertility, erectile dysfunction and prostate cancer are among male-specific diseases already managed by our specialty. The scope of male health management by urologists could be easily expanded to include other preventive activities.

The current issue of Urology News focuses on issues specific to men’s health. This focus should not be misinterpreted as an abandonment of our interest in women’s and pediatric health issues. Rather, through current and planned activities, our department is striving to address an unmet health need for the male gender and our society. In closing, as an encouragement for men to play a more proactive role in their health, I remind the reader of a quote by yet another famous American, Benjamin Franklin: “An ounce of prevention is worth a pound of cure.”
physicians linked to local communities and their system referral base can continue to provide high quality, on-site care. Community-based specialists can take advantage of the expertise of academic specialists for tertiary/quaternary needs in a manner that serves the best interests of the patient, and does so without disadvantage to the organization.

Through this model, the patient and the community specialist have access to the full range of care delivery sites and expertise. One would anticipate that the majority of care would be delivered by the community specialist at a community site. On those occasions where care can be delivered within the community, but the involvement of a subspecialist benefits the patient, the subspecialist and community specialist can partner for on-site treatment. In instances where technology or resources are limited to the academic medical center, the community specialist and academic subspecialist can partner for patient care at the academic medical center. Ultimately, the community specialist can choose to refer complex patients for whom the provision of care by the academic subspecialist is warranted.

We are in the process of putting this philosophy into action. As of September 2011, in partnership with our Clinical Ventures Group, we have put in place a Community Division of Urology supported by two Medical College urologists Jeffrey Bejma, MD, and John Lacey, MD. These outstanding urologists will provide care to patients in Menomonee Falls and West Bend in affiliation with Froedtert Health Community Memorial and St. Joseph’s hospitals respectively. With Jeff and John functioning as the cornerstone of urologic care at these sites, patients who are referred from them, or who have already seen an outside urologist and desire a subspecialty opinion, will have local access to a urologist with focused expertise in cancer care, voiding dysfunction, female urology and infertility. Patient care may be coordinated between community and subspecialty urology faculty in a way that links physician skills, hospital resources, and patient needs to serve the best interest of the patient.

By providing the right care, at the right location, by the right physician, this model is patient-centric and cost effective. It leverages economies of scale, prevents the need for duplicative services, limits the extent to which financial incentives drive care decisions, and allows for “just-in-time” expansion of provider inventory, while providing the full breadth of expertise within the system. Finally, an acknowledgement of and respect for cultural differences between community and academic components is being integrated into the model in a way that values the importance of different roles.

Our world is changing; how we confront that change is up to us. I would argue that it is our professional imperative to participate in a way that serves the interests of our most important constituency – our patients. Our ongoing efforts to provide seamless urologic care across the community/academic continuum in southeastern Wisconsin are intended to meet this imperative.

New Chief continued from page 4

Urology. He is the Wisconsin representative to the North Central Section of the American Urology Association. He is past president of the Wisconsin Urologic Society and its current secretary/treasurer. His research interests include the impact of environmental toxins on reproductive tract development, and the cause and effects of urinary tract infections in patients with neurologic bladder disorders. His clinical expertise extends into all aspects of pediatric urology, especially surgical management of ambiguous genitalia and other genital birth defects, pediatric kidney stones, and the management neurologic bladder and bowel disorders. He teaches at many levels in training programs at UW for medical students, residents, nurse practitioners and physician assistants.

He has been married to his wife, Lynn, for 15 years. She is a retired surgical technician. They have two dogs, Bear and Oscar, and two rabbits, Sammi and Sasha. They enjoy boating and water skiing, and are avid Wisconsin sports fans. They also enjoy trying new restaurants, especially Friday night fish fries.

I would like to thank the leadership of Children’s Hospital of Wisconsin and Children’s Specialty Group for their support of this recruitment. Please join me in congratulating Dr. Kryger in his new role, and welcoming him to the Department of Urology, Children’s Specialty Group, Children’s Hospital of Wisconsin and The Medical College of Wisconsin.
Prostate Cancer Screening for the Individual: A Patient-based Approach
Jessica Motl, PA-C, Physician Assistant

Prostate cancer is the most common non-cutaneous malignancy and the second leading cause of cancer-related deaths in men. It was estimated that 217,730 men would be diagnosed with and 32,050 men would die of cancer of the prostate in 2010. Overall prevalence in 2008 was more than two million men currently with active disease or cured of disease. Since prostate specific antigen (PSA) was first introduced in 1987, there has been a significant increase in the overall diagnosis of prostate cancer. An estimated 85 percent of these diagnoses represent clinically localized disease (diagnosed from an elevated PSA alone or a prostate nodule without evidence of spread beyond the prostate).

Controversy regarding PSA screening has been long standing. Two large studies released in 2009 sparked a resurgence of the debate, suggesting prostate cancer is likely overdiagnosed and overtreated in the PSA era. In fact, about 90 percent of men diagnosed with prostate cancer elect some type of intervention such as radical prostatectomy, cryotherapy, high frequency ultrasound ablation, radiation therapy, or androgen deprivation therapy. The American Urologic Association (AUA) recommends PSA screening for well-informed men who wish to pursue early diagnosis. Prostate cancer screening is to include a PSA and digital rectal exam to screen for those rare, but often more aggressive malignancies which do not result in an elevated PSA. Most recent guidelines recommend a baseline PSA at age 40. Overall, men with a life expectancy of less than 10 years are discouraged from prostate cancer screening. Other important factors to consider are family history (positive family history in a first degree relative) and race (African American men are at increased risk of prostate cancer).

An age-adjusted PSA is a valuable reference range to allow for early, baseline PSA screening as an overall assessment of risk of prostate cancer at a relatively young age.

The American Urologic Association (AUA) recommends PSA screening for well-informed men who wish to pursue early diagnosis.

PSA for men ages 40-49 should be less than 1.5; ages 50-59 less than 2.5; ages 60-69 less than 4.5; and ages 70-79 less than 7.5. These reference ranges better account for higher PSA due to higher prostate volume in an aging population.

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Clinical Trials Update Holly Kelly, RN, Clinical Research Manager

A Randomized, Double-blind, Phase 3 Efficacy Trial of PROSTVAC-V/F ± GM-CSF in Men With Asymptomatic or Minimally Symptomatic Metastatic, Castrate-Resistant Prostate Cancer.

BNIT-PRV-301 is a randomized, placebo-controlled, multicenter, Phase 3 efficacy trial of PROSTVAC-V/F in men with asymptomatic or minimally symptomatic, metastatic, castrate-resistant prostate cancer. It is a three-arm study and will evaluate overall survival in two separate comparisons: PROSTVAC plus adjuvant dose GM-CSF versus control and PROSTVAC without GM-CSF versus control.

Patients will be randomized with equal probability into one of three double-blind arms. The intended interventions for randomized patients are:
1. (Arm V+G) PROSTVAC-V/F plus adjuvant dose GM-CSF
2. (Arm V) PROSTVAC-V/F plus GM-CSF placebo
3. (Arm P) Double placebo (empty fowlpox vector/plus GM-CSF placebo)

This study is sponsored by BN Immuno Therapeutics, Inc. BB-IND 13946.

An age adjusted PSA is a valuable reference range to allow for early, baseline PSA screening as an overall assessment of risk of prostate cancer at a relatively young age.

The study is sponsored by Astellas Pharma Global Development, Inc. (APGD). IND 74,563.
Peyronie’s Disease: Help May Be on the Way

By Jon L. Pryor, MD, MBA, Professor of Urology, Chief Executive Officer, Medical College Physicians

The startling symptom of penile curvature, often accompanied by a penile mass and pain, are the hallmarks of Peyronie’s disease. Though initially described more than 200 years ago, the progress in treatment has not been impressive. However, The Medical College of Wisconsin Department of Urology is participating in a study involving collagenase clostridium histolyticum, which hydrolyzes the triple helix of collagen, has been approved by the FDA for use in decreasing the scarring in Dupuytren’s contractures. In a double blind, randomized Phase II trial involving 147 patients, collagenase clostridium histolyticum or placebo was injected into the plaques. The medication was well tolerated and resulted in greater than 25 percent improvement in penile curvature in 60 percent of patients as reported at the American Urological Association in 2009. This initial success was the impetus for a new, large placebo controlled randomized study to further evaluate the efficacy of intralesional collagenase clostridium histolyticum. We are one of the sites participating in this study. Though the study is now closed to patients, we eagerly await the results to see if there is finally a good, well-documented, evidence-based treatment for Peyronie’s. Until then, we have no access to the medication, so we continue to use verapamil as our primary medication for intralesional treatment.

Once the plaque has stabilized, which means the pain has resolved and there is no worsening of the curvature, there are surgical treatments that work well to correct palpable plaque and sometimes worsening of the quality of erections. Pain typically goes away and the curvature stops getting worse and stabilizes in approximately 12 to 18 months.

Given that we do not understand the etiology of Peyronie’s disease, it is not surprising that there is a myriad of oral “cocktails” that have been touted for its medical management. These include vitamin E, Potaba, tamoxifen, colchicines, L-arginine, carnitine, pentoxifylline, and phosphodiesterase type-5 inhibitors (e.g., Cialis, Levitra, and Viagra). Unfortunately, there are very few randomized studies in humans and virtually all of them show no clinical benefit.

Another non-surgical treatment that has been used over the past couple of decades is injecting medications into the plaque to decrease inflammation and scar formation. Initially, steroids were tried. Steroids are anti-scarring, so their use makes biologic sense, but unfortunately, this method did not work well. Injection of verapamil, which has been shown to decrease the growth of fibroblasts and extracellular matrix production, is probably the most widely used medication for intralesional plaque injection. There have been few randomized studies, but several retrospective studies show the curvature improves between 15 to 30 degrees in about half of patients. There has been one large randomized trial on intralesional plaque injection that used alpha interferon; I was one of the authors of this study, and we showed some improvement in curvature, but the improvement was minimal (9 degrees better than placebo) and alpha interferon is expensive.

For a disease that affects so many men and was initially described more than 200 years ago, the progress in treatment has not been impressive.
the curvature. If the curvature is less than 60 degrees, we can surgically plicate the opposite side of the penis from where the plaque is located, which basically curves the penis in the opposite direction, thus straightening it. This procedure, called a Nesbit, is safe and tends to be very effective. The only drawback to a Nesbit is that it can shorten the penis around 1-2 centimeters. If the curvature is greater than sixty degrees, we incise the plaque, stretch the penis straight (which opens up a space in the plaque incision), and suture a graft into the space. The incision and grafting procedure has the advantage of minimizing any penile shortening, but can worsen erections, particularly in those who have some erectile dysfunction (ED) to begin with. In patients with significant curvature from Peyronie’s and significant ED, we typically insert an inflatable penile prosthesis, which corrects the curvature and ED.

It’s easy to see why the treatment, especially in early stages, is non-standardized and often frustrating for patients and their physicians. Our goal is to provide reassurance to the patient. It starts with the diagnosis, so that any worry about cancer or other concerns are put to rest. We provide educational material about what we do know about this disease. Though there is little evidence that oral therapy does any good, it generally does not hurt, so patients who feel that they have to try something can. If they are really bothered, we usually suggest verapamil intralesional injections, which require an injection every two weeks for a total of six injections. Most importantly, in these early stages, we encourage patience for the process to stabilize. At that point, we can work with the patient to tailor the right therapy, whether it is a plication (Nesbit), a plaque incision and patch, a prosthesis or nothing. In the meantime, we will stay on the forefront through clinical trials and hope some encouraging results will give us a better alternative to treat this problem.

Prostate Cancer Screening continued from page 7

The United States Preventative Services Task Force does not recommend prostate cancer screening for men older than age 75, which is roughly based on life expectancy for the average 75-year-old man. However, elderly patients who are deemed to be in excellent health, have no-comorbid conditions, and have a family history of longevity may still benefit from screening as the incidence of high risk prostate cancer does increase with age.

Prostate cancer is not the sole cause of PSA elevation. The three most common diseases of the prostate (prostate cancer, benign prostatic hyperplasia, prostatitis) can all cause PSA elevation. Additionally, recent infection or traumas (including catheterization) of the urinary tract are possible causes. These factors need to be considered by practitioners prior to obtaining a PSA.

The overall goal of screening is to decrease morbidity and mortality of disease. The art of medicine as it applies to prostate cancer entails recommending active treatment to patients at risk of morbidity or mortality of disease, and surveillance for those who are not. Patients diagnosed with low risk prostate cancer are generally good candidates for active surveillance. Active surveillance involves a protocol of regular PSA tests, annual digital rectal exams, and repeated prostate biopsies to ensure no or little progression of disease over time. Increased consideration for active surveillance has the potential to avoid the perceived over-treatment of prostate cancer, resulting in less treatment side effects and better quality of life for patients.

REFERENCES
2. The Prostate, Lung, Colorectal, and Ovarian (PLCO) Cancer Screening Trial
3. European Randomized Study of Screening for Prostate Cancer (ERSPC)
5. AUA Best Practice Guidelines

Urinary Incontinence continued from page 5

surgery and typically requires overnight urethral catheterization. Cure rates in appropriately selected patients approach 85 percent in our institution. Potential complications include urinary retention (usually transient), infection (rare) and sling erosion (rare).

Artificial Urinary Sphincter (AMS 800)

The current gold standard for treating post-prostatectomy incontinence is the artificial urinary sphincter (AMS 800). The implantable, fluid-filled prosthesis consists of three components: a cuff, a control pump and a pressure-regulating balloon. The fluid-filled cuff encircles the bulbourethra and gently compresses the urethra closed during bladder storage. The patient squeezes the pump, located in the scrotum, to open the cuff and allow for bladder emptying. Overall patient satisfaction is high, with 90 percent of patients reporting 90 percent or better continence improvement. This is generally the treatment of choice in patients with severe incontinence. Potential complications include infection (~5 percent) and cuff erosion into the urethra (5 percent to 10 percent). While a history of pelvic radiation therapy may increase the risk for these complications, it is not a contraindication to the procedure. Incontinence after prostate cancer therapy is a greatly feared condition that can adversely affect a patient’s quality of life. The reconstructive urology team at Froedtert & The Medical College of Wisconsin offers multiple therapeutic modalities to manage this condition and allow patients to lead more normal lives.
The Integrated Curriculum: Increasing Medical Student Awareness of Men’s Health Issues

Anthony Balcom, MD, Assistant Professor of Pediatric Urology

The old days of a medical student doing nothing but reading books and attending lectures, without seeing a patient for the first two years of medical school are falling by the wayside. Along with approximately 68 percent of United States medical schools, The Medical College of Wisconsin is revamping the entire four years of medical student education to an integrated curriculum. In the old days, medical students would read textbooks and attend lectures on anatomy, physiology, biochemistry, pathophysiology, pathology, pharmacology and embryology for two years before they ever saw a patient.

The key concept of the integrated curriculum involves education modules grouped by organ systems. For example, in a typical day, medical students learn the embryology and anatomy of the urinary tract and then have application exercises that integrate anatomy, physiology, embryology, pharmacology, pathology and biochemistry in a clinical scenario. The day’s session would typically have application exercises. An example would be the evaluation and diagnosis of a 55-year-old man who had an elevated prostate specific antigen (PSA) followed by a prostate needle biopsy. This case would be used as a springboard to discuss prostate conditions such as benign enlargement and cancer.

Urology has been grouped into the reproductive module, which includes urology, obstetrics and gynecology, and male reproductive endocrinology. In the first two years, medical students focus on establishing a diagnosis; they are not typically tested yet on treating diseases and conditions. Integrated curriculum sessions are run by having basic scientists, who have classically taught first- and second-year medical students, and clinicians, who can put the information into a much more patient-oriented, clinical perspective.

An essential component of the new integrated curriculum is called team-based learning, or TBL. Many studies show that when groups of students work through and discuss a new topic or concept together and are then tested on it, the retention rate of the learned material is much higher. The ideal group size is between six and eight students, and the format is quite different than the classic medical school format. Students are assigned pre-readings, which are typically two or three hours of material. When they arrive for TBL sessions, they take individual reading assessment tests (IRAT). This is typically six or 10 questions that come directly from the reading material, and the instructors can quickly get an idea of what material in the pre-reading made sense, and what was more complex and in need of further explanation.

The integrated curriculum also exposes medical students to patients in physicians’ clinics starting three months into their first year of medical school. This has proven to be a very popular change and was likely the reason nearly 80 students volunteered to be part of this trial curriculum (only 28 slots were available and students were chosen at random). Students spend three or four hours a week in a small group with a primary care physician mentor seeing real patients and discussing their medical conditions.

The first integrated curriculum pilot group of 28 medical students started in 2010. Over the next four years or so, the plan is to transition the entire group of 196 medical students to an integrated curriculum.

Along with approximately 68 percent of United States medical schools, The Medical College of Wisconsin is revamping the entire four years of medical student education to an integrated curriculum.

The Department of Urology at The Medical College of Wisconsin was led by Tony Balcom, MD, and also represented by Jay Sandlow, MD, Charles T. Durkee, MD, Michael Guralnick, MD, and Ken Jacobsohn, MD. This has been a very rewarding experience over the past year. We have been impressed with how eager medical students are to learn, and how hungry they are for knowledge. It has been somewhat challenging to figure out how to address first-year medical students at an appropriate level, as in the past, we interacted frequently with third- and fourth-year students. However, the students have provided positive feedback regarding the curriculum, particularly in regards to clinical correlation and early patient exposure.

Dr. Sandlow and I are confident the integrated curriculum presents a marvelous opportunity to help expose medical students to men's health issues, and educate them about this genre at a much earlier stage than previously. This has been a gratifying and rewarding improvement in medical education. We are hopeful that by increasing medical students’ awareness of men’s health issues early in medical school, they will have a better overall knowledge base when they graduate from medical school and attend residency.
# Medical College of Wisconsin

**DEPARTMENT OF UROLOGY FACULTY AND CLINICAL STAFF**

<table>
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<tr>
<th>Name</th>
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<td>Anthony Balcom, MD</td>
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<td>Charles Durkee, MD</td>
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<td>Jay Sandlow, MD</td>
<td>Male Infertility</td>
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<td>William See, MD</td>
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<td>Heidi Vanderpool, APNP</td>
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