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## Commercial Insurance Coverage for Inflatable Penile Prosthesis at a Tertiary Care Center

John M. Masterson\*, Bruce Kava, Ranjith Ramasamy

Department of Urology, University of Miami Miller School of Medicine, Miami, Florida

### Abstract

**Introduction:** Inflatable penile prosthesis has become an important treatment modality for men with erectile dysfunction that is refractory to medication. Despite high levels of patient satisfaction following inflatable penile prosthesis placement and inflatable penile prosthesis coverage by Medicare, coverage by commercial insurance providers is unknown. The purpose of this study was to determine the coverage of inflatable penile prosthesis by commercial insurance providers.

**Methods:** Following institutional review board approval all men with erectile dysfunction interested in obtaining inflatable penile prosthesis at our tertiary care center between January 2016 and December 2017 were evaluated. We reviewed billing records for CPT code 54405 during the study period to evaluate the insurance provider for all men who received an inflatable penile prosthesis. We also reviewed a manually maintained record of excluded or denied inflatable penile prosthesis claims for men who desired inflatable penile prosthesis but could not obtain it. Through medical record review we recorded the etiology of erectile dysfunction and the specific type of insurance policy for each man.

**Results:** Medicare is the most common insurer for inflatable penile prosthesis, insuring 87 of 220 (39.5%) men seeking inflatable penile prosthesis between 2016 and 2017. Among the remaining 127 men seeking inflatable penile prosthesis with commercial insurance coverage 61 (48.0%) were unable to obtain the device due to exclusions in their coverage or denials. Among commercially insured men seeking inflatable penile prosthesis 77 (62.6%) and 37 (30.0%) had health maintenance organization and preferred provider organization plans, respectively. The most prevalent indications for inflatable penile prosthesis among the entire study population were radical prostatectomy (30.9%), organic erectile dysfunction (30.5%) and diabetes mellitus (20.9%).

**Conclusions:** The largest insurer for inflatable penile prosthesis in the Miami region is Medicare. While some patients seeking inflatable penile prostheses can receive insurance coverage, a large percentage (48.0%) are not able to receive coverage despite having a medical necessity for the treatment of erectile dysfunction.

### Keywords

insurance; penile prosthesis; erectile dysfunction

\*Correspondence: 1150 NW 14th St., Miami, Florida 33136 (telephone: 484-620-1133; Jmm557@med.miami.edu).

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Since the early 1970s the inflatable penile prosthesis has been available for the treatment of erectile dysfunction that is refractory to treatment with oral and injectable medications.<sup>1</sup> Thanks to advances in IPP technology and surgical techniques, patient satisfaction after IPP has been reported to be higher than that of patients treated with oral sildenafil or intravenous prostaglandin E1.<sup>2</sup> Tefilli et al found that patients reported decreased feelings of sadness, depression, anxiety, anger, frustration and embarrassment related to sexual activity after IPP implantation.<sup>3</sup> This same study also showed that there was an increase in the frequency of sexual activity and an improvement in satisfaction with sex life. Interestingly, a 2014 study showed that use of IPP increased among patients with ED older than 65 years between 2001 and 2010, but decreased in the ED population overall.<sup>4</sup> A handful of factors may represent barriers to utilization of IPP, not the least of which is cost. The out-of-pocket cost of IPP is between \$10,000 and \$20,000 without insurance.<sup>5</sup> The increase in utilization by the population older than 65 years is largely attributable to the fact that IPP is a covered benefit by Medicare. However, coverage of IPP by commercial insurance providers is more difficult to predict, likely contributing to the overall decrease in use. In this study we identified trends in insurance coverage of IPP among patients at the University of Miami.

## Materials and Methods

Following institutional review board approval (IRB No. 20170849) we retrospectively reviewed all billing records at the University of Miami between January 2016 and December 2017 based on CPT code 54405. Based on this search we were able to identify the insurers for all men who received an IPP at the University of Miami during the specified period. We also identified the insurers of men for whom an IPP claim was submitted but was excluded during the same time frame by searching a manually maintained file of denials and exclusions during the specified time. Indications for IPP were identified for all patients in the population via medical record review. The type of commercial insurance policy was identified for 123 of 127 men with commercial insurance coverage via medical record review. We excluded men who received malleable implants due to the low volume of malleable implantations during the study period.

## Results

A total of 220 men had been considered for IPP surgery between January 2016 and December 2017. Approximately a third of these men (30.9%) had undergone radical prostatectomy, a third (30.5%) had organic ED and 20.9% had diabetes mellitus (table 1). Of the 220 men who sought to have an IPP 87 (39.5%) were insured by Medicare or a government insurance policy and their surgery was covered (table 2). All men with Medicaid were denied coverage (6). Of the remaining 127 (57.7%) men who had commercial insurance 66 (52.0%) received an IPP while 61 (48.0%) men were denied IPP coverage. Overall 11 commercial insurance providers were identified in our study population and their respective coverage percentages of men seeking IPP surgery are shown in figure 1. PPO plans provided coverage for 21 of 35 (60.0%) commercially insured men seeking IPP while HMO plans provided coverage for 38 of 75 (50.7%) commercially insured men seeking IPP (fig. 2). During the study period there was only 1 recorded denial of coverage for IPP, by the

United Healthcare and Neighborhood Health Partnership HMO plan. All remaining uncovered claims were due to exclusions of CPT code 54405 in the policy.

## Discussion

IPP has proven to be an effective option for men with ED in whom primary therapy has failed. However, its prohibitive out-of-pocket cost makes insurance coverage a necessity for most men seeking this treatment. In this study we sought to determine how often men are able to receive IPP coverage at our tertiary center and which commercial insurers tend to provide coverage for this surgery. We found that Medicare is the single largest coverer of IPP among our study population. In addition, a significant proportion of men in our population with commercial insurance who desire IPP and have medically necessary indications are not able to obtain IPP. This raises questions about whether commercial insurers should be mandated to cover these costs, particularly if deemed medically necessary by a physician. As price remains a significant barrier to access for men desiring IPP, lack of coverage by commercial insurance providers creates an insurmountable barrier for these patients, who will likely be deprived of a procedure that addresses an individual right, based on the WHO consensus statement on erectile dysfunction. Our finding that PPO plans approve IPP at a rate similar to HMO plans, 60% and 50%, respectively, only muddles the picture of which commercial insurer and policy type is best for men seeking IPP.

The number of men facing these commercial insurance practices is undoubtedly not trivial, given that 35% of men may progress to second line treatment options for ED.<sup>6</sup> It also reflects an underlying gender bias that is highlighted in a 2017 study investigating the degree of transparency surrounding policies of more than 80 popular insurance plans regarding ED and hypogonadism, using breast reconstruction following mastectomy as a control. The authors found publicly available policies for advanced ED treatment in only 39% of plans examined while breast reconstruction policies were publicly available for 94%.<sup>7</sup> We believe that these policies unfairly force men to wait until they reach age 65 to be able to resume sexual activity, which not only adversely impacts quality of life for these men, but pushes the responsibility for health care costs back to government agencies. This is reflected by the increasing trend in IPP use among the population older than 65 years, for whom IPP is covered by Medicare, and decreased use overall, suggesting that access to IPP coverage may have a role in use.

To our knowledge this study is the first to assess coverage of IPP by specific commercial insurance providers at a tertiary academic center. Our study adds to the existing literature that has assessed the demographics of men receiving an IPP with commercial insurance coverage and has investigated the transparency of commercial insurance plans regarding coverage of advanced ED treatment.<sup>2,7</sup> While the findings reported here are the experience in Miami and South Florida, we encourage other institutions to perform similar analyses to compare findings regionally, particularly pertaining to the high rate of commercial exclusions of IPP coverage vs denials of coverage.

Our study has several limitations. It is likely that our Medicaid population is underrepresented given that IPP is a known Medicaid exclusion. Additional Medicaid

recipients were likely not captured in our manually maintained file of exclusions as claims were never submitted on their behalf. We also did not include malleable implant surgeries performed during the study period due to the exceedingly low volume but instead limited our data to CPT code 54405. Additional limitations include small sample size.

## Conclusions

The majority of IPP insurance coverage in the Miami and South Florida region is provided by Medicare. However, a large proportion of men with ED who desire IPP are unable to obtain it due to exclusions in their commercial insurance coverage. It is imperative that we improve IPP access by increasing transparency into which commercial insurers are the most likely to provide coverage for IPP. Urologists should familiarize themselves with the common commercial insurance companies among their study population that provide coverage for IPP in order to counsel their patients on this topic.

## Acknowledgments

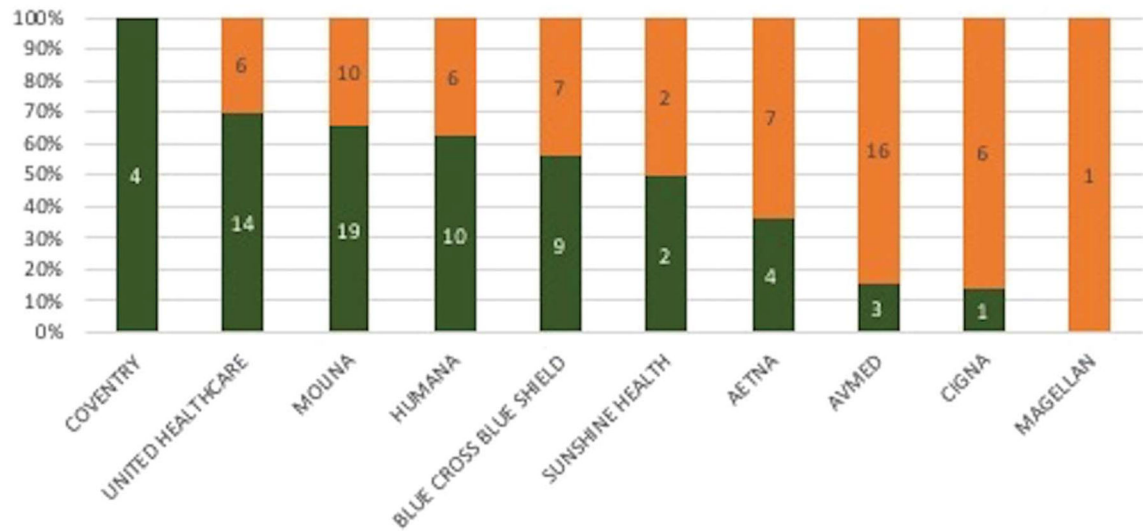
The corresponding author certifies that, when applicable, a statement(s) has been included in the manuscript documenting institutional review board, ethics committee or ethical review board study approval; principles of Helsinki Declaration were followed in lieu of formal ethics committee approval; institutional animal care and use committee approval; all human subjects provided written informed consent with guarantees of confidentiality; IRB approved protocol number; animal approved project number.

## Abbreviations and Acronyms

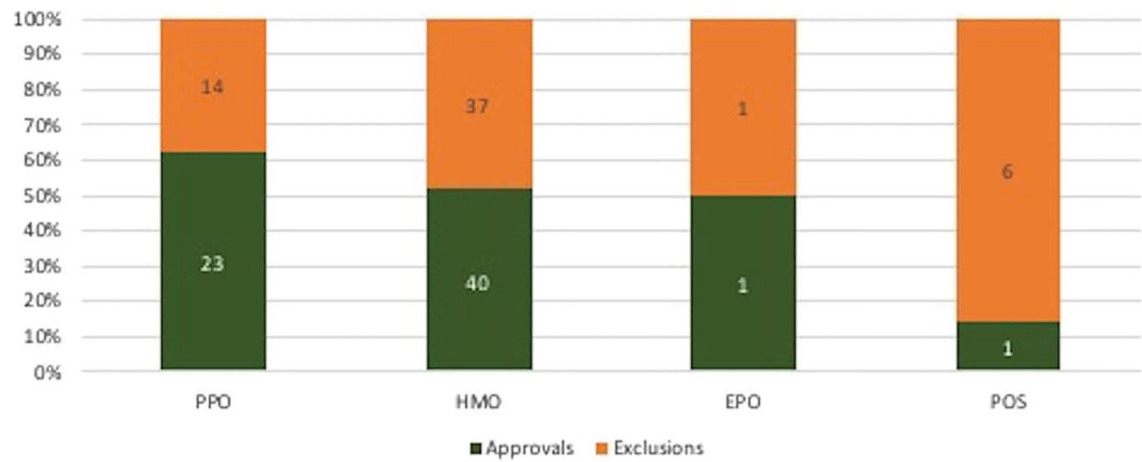
<b>ED</b>	erectile dysfunction
<b>HMO</b>	health maintenance organization
<b>IPP</b>	inflatable penile prosthesis
<b>PPO</b>	preferred provider organization

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**Figure 1.**  
Percentage of men approved for IPP by commercial insurance provider



**Figure 2.**

Percentage of men approved for IPP by commercial insurance policy type. *EPO*, exclusive provider organization. *POS*, point of service.

**Table 1.**

Approvals and exclusions for IPP listed by indication for IPP

Indication for IPP	No. Approvals	No. Exclusions	% Approved	No.
Prostatectomy	45	23	66.2	68
Organic ED	48	19	71.6	67
Diabetes mellitus	29	17	63.0	46
Radiation therapy	5	2	71.4	7
Venous leak	2	2	50.0	4
Spinal cord injury	2	1	66.7	3
Cystectomy	4	2	66.7	6
Penectomy	2	0	100.0	2
Perineal trauma	1	1	50.0	2
Remove/replace	15	0	100.0	15
Overall	153	67	69.5	220

**Table 2.**

Insurance approvals and exclusions for men seeking IPP between January 2016 and December 2017

	No. Approvals	No. Exclusions	% Approved	No.
Medicare	87	0	100.0	87
Medicaid	0	6	0.0	6
Coventry	4	0	100.0	4
United Healthcare	14	6	70.0	20
Molina	19	10	65.5	29
Humana	10	6	62.5	16
Blue Cross Blue Shield	9	7	56.3	16
Sunshine Health	2	2	50.0	4
Aetna	4	7	36.4	11
AvMed	3	16	15.8	19
Cigna	1	6	14.3	7
Magellan	0	1	0.0	1
Commercial insurance overall	66	61	52.0	127
All overall	153	67	69.5	220