COMMENT

The limited public information on private health insurance coverage of common sexual health services

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INTRODUCTION

The "Transparency in Coverage" Rule from the Employee Benefits Security Administration of the Internal Revenue Service and the Health and Human Services Department took effect on January 11, 2021 [1]. This legislation is intended to increase transparency in coverage, price, and cost-sharing for healthcare treatments. It requires insurers to publish plan details, including cost-sharing information and an estimate of liability for covered medical care, to a public internet site [1]. However, the rule does not necessitate publication of details regarding coverage by condition, and instead insurers must only list general benefits. While usage of resulting price transparency tools by patients has been limited, among price-aware patients utilizing these tools, consumer costs have been reduced [2]. Furthermore, the "Transparency in Coverage" rule encourages information sharing with policy members but does not improve the amount of publicly available information for individuals examining potential private insurance plans.

Previous work by Le et al. in 2017 indicated challenges in public access to coverage information for a small number of male sexual health conditions [3]. In a search of publicly available policy statements, plan coverage information was available in only 39% of cases for advanced treatment of erectile dysfunction (intracavernosal injection and penile prosthesis) and in 62% for treatment of hypogonadism. At the time, Le et al. advocated for increased transparency of publicly available coverage data for potential members. Previous work has characterized coverage by Medicaid for penile prosthesis [4] and we have also previously documented the inconsistency in coverage for penile prosthesis surgery [5]. However, there is overall limited documentation of private insurance coverage for a range of urologic treatments. Here, we sought to assess the public availability of coverage information for other male sexual health conditions in light of this new legislation. Our expanded inquiry included coverage by the top 8 insurers in the United States for Peyronie's disease, hypogonadism, erectile dysfunction, male incontinence, premature ejaculation, and buried penis.

MATERIALS AND METHODS

We developed a list of the top 10 largest private insurers in the United States based on the Securities and Exchange Commission filings. This list was cross-referenced with the National Association of Insurance Commissioners 2020 Market Share report [6]. Medical Policy Bulletins (MBPs), also known as clinical policy bulletins, are documents prepared by insurers that are meant to incorporate current research, society guidelines, regulatory status, and individual opinion to determine which treatments are deemed medically necessary and provide guidelines for how plan benefits may be applied to specific cases. Three authors (M.L.H., E.E.M. and S.E.S.) independently searched the insurer websites for public access to MPBs and characterized the coverage of common men's health treatments, categorized by urologic condition (Table 1). Based on our review, we included the following insurers in our analysis: United, Anthem, Centene, Kaiser, Humana, CVS, Healthcare Service Corporation (HCSC), Cigna, Molina, and Independence Health Group (IBX). Kaiser Permanente and Centene were excluded due to lack of publicly available nationwide MPBs. Treatments were categorized by common urologic conditions (Table 1).

MPBs often categorize treatments as medically necessary, experimental/investigational, or cosmetic. Management options categorized as medically necessary were coded as 'covered' and treatments considered experimental, investigational, or cosmetic were coded as 'not covered'. If we were unable to find a determination by the insurer within the MPB, we coded the treatment as 'unknown'. Fisher's exact tests were performed using BlueSky Statistics software v. 10.3.1 (BlueSky Statistics LLC, Chicago, IL, USA) to compare information availability between providers, urologic conditions and treatment options. This study did not require review per the Mayo Clinic IRB.

RESULTS

We collected 144 data points across 8 U.S. insurance providers. Coverage information was available from MPBs for 54.9% of services ($n = 79$) (Table 1). We identified 60 (41.7%) instances of covered or medically necessary treatments and 19 (13.2%) investigational or cosmetic services. Coverage information availability varied significantly between insurance providers ($p < 0.001$). Coverage information availability was most comprehensive through CVS MPB (88.9% of services, $n = 16$) and least available through IBX MPB (5.6% of services, $n = 1$). Coverage data availability also varied by disease type ($p = 0.019$) and by treatment ($p = 0.008$). By disease, the most coverage data, independent of coverage status, were available for hypogonadism

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Table 1. Distribution of coverage for common sexual health management options by U.S. health insurance providers.

Insurer	Enrollment in Millions (Last year reported)	Peyronie's Disease			Hypogonadism		Nonsurgical Erectile Dysfunction			Male Incontinence								Premature Ejaculation	Buried Penis
		1A	1B	1C	2A	2B	3A	3B	3C	4A	4B	4C	4D	4E	4F	4G	4H	5A	6A
United	26.6 (2021)	U	C	U	C	C	U	U	U	U	U	NC	U	U	C	U	U	U	U
Anthem	21.8 (2021)	NC	NC	U	NC	U	U	U	NC	C	C	C	C	U	NC	NC	U	NC	C
Humana	17.1 (2021)	C	NC	U	C	C	C	C	NC	C	C	C	C	C	C	U	U	U	U
CVS	23.5 (2015)	C	C	U	C	C	C	C	C	C	C	C	C	C	C	C	NC	NC	U
HCSC	17.0 (2021)	C	C	C	C	C	C	C	C	NC	NC	C	C	C	U	U	NC	U	U
Cigna	17.1 (2021)	C	C	U	C	C	C	C	C	C	U	NC	NC	C	C	U	NC	U	U
Molina	5.2 (2021)	U	C	U	C	C	U	NC	U	U	U	U	U	C	U	U	U	U	U
IBX	8.1 (2020)	U	U	U	U	U	U	U	U	C	U	U	U	U	U	U	U	U	U

Covered = C (white), Not covered = NC (black), unknown = U (hatched). 1A: Plaque excision and grafting; 1B: Collagenase clostridium histolyticum; 1C: Verapamil injection; 2A: Testosterone injectables; 2B: Testosterone pellets; 3A: Injectables (Alprostadil); 3B: PDE5 inhibitors; 3C: External devices (vacuum); 4A: Biofeedback; 4B: Artificial urinary sphincter; 4C: Periurethral bulking agents; 4D: Percutaneous tibial nerve stimulation; 4E: Sacral nerve stimulation; 4F: Sling procedures; 4G: Cunningham clamp; 4H: Collagen implant; 5A: Cryoablation, pulsed radiofrequency and acupuncture 6A: Buried penis repair.

treatments (81.3%, $n = 13$) and least for buried penis (12.5%, $n = 1$). By treatment, the most insurers provided data for collagenase clostridium histolyticum and testosterone injectables ($n = 7$ insurers, 87.5%). The least insurers (12.5%, $n = 1$) provided information for verapamil injections and buried penis repair. Of available data, 75.9% ($n = 60$) of services were deemed medically necessary, and therefore have a higher likelihood of being covered under any individual plan. Statistical comparison of coverage between insurers, conditions and treatments was not performed due to the high level of unavailable data.

DISCUSSION

We identified significant variation in the amount of publicly available information on insurance coverage for treatment of various men's health conditions. Consider a hypothetical 59-year-old man with Peyronie's disease as an example patient. He has recently discussed management options with his urologist. It is now the insurance open-enrollment period, and he is interested in exploring which insurance providers offer coverage for these management options. Through an initial internet search, he learns that the best way to find this information online is to search through MPBs.

The first step to utilizing MPBs is to find them, which can pose a significant challenge. MPBs are often buried deep in an insurer's website (if available publicly at all). Interpretation of these guidelines can be complex and often requires medical knowledge. Many diseases and treatments are often not included. Furthermore, coverage is not guaranteed by the MPBs and is often dependent upon the patient's benefit level and state of residence. Even as healthcare experts, we encountered significant challenges in identifying and interpreting MPBs to develop this dataset. A patient without medical training has less likelihood of successfully identifying and interpreting MPBs. Moreover, there was significant heterogeneity among insurance providers with respect to the availability of information on service coverage, and data were entirely unavailable for over half of treatment instances at the largest private insurers. While further data can often be found by contacting the insurer directly [7], online publicly available data is likely the most helpful to patients and providers performing a broad search.

Our hypothetical patient with Peyronie's disease would find varied coverage information based on the type of treatment. For example, if he were considering plaque excision and grafting, information is available for 5/8 (62.5%) insurers and indicates medical necessity and coverage by four (50%). For intralesional collagenase, MPB guidance on its coverage is available for 6/8 (75%) of insurers and is deemed medically necessary by five (62.5%). In contrast, if he were to be interested in verapamil injections, guidance is only publicly available for one insurer (12.5%). The lack of consistent information compromises patients' abilities to make informed decisions using a shared decision-making model with their treating clinicians. This difference is even starker for coverage of less common conditions such as buried penis or premature ejaculation. Patients may experience challenges with access to care for men's sexual health conditions due to lack of publicly available coverage data during the time of enrollment. There are further layers obscuring access to accurate coverage data for these conditions, including state, health history, and individual plan level. Consistent with further research in this area [3, 8], we support increased transparency in coverage data to improve navigation of the insurance system.

There are important limitations to our analysis. A high number of treatments for some of the included conditions, such as Peyronie's Disease, were covered within available data (76.9%). However, it is challenging to draw conclusions regarding coverage considering the large amount of missing data from insurance coverage websites. Furthermore, additional differences in coverage introduced by tiered and individual member plan benefits were neither discussed here nor readily available online. The interpretation of MBPs into actual out-of-pocket costs to patients are thus further obscured. Coverage dependence on individual plans may lead to additional challenges in understanding and choosing the best plan or treatment for patients. Further differences in coverage within a provider may be related to state of residence and personal health history. While these factors were not analyzed here, our findings underline the overall need for

increased publicly available coverage data for common men's health treatments.

The "Transparency in Coverage" Rule is intended to increase healthcare cost transparency to the public, and increasing public accessibility towards a better understanding of coverage by condition and treatment is a key next step. A clearer picture of insurance coverage of these common male sexual conditions would certainly improve our ability as providers to advise patients and provide the best care possible.

DATA AVAILABILITY

All data generated for this article can be found in Table 1 of this manuscript.

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AUTHOR CONTRIBUTIONS

MSG and MJZ conceived of the presented ideas and supervised the project. MLH, EEM, and SS collaborated to draft the Brief Communication. All authors provided critical feedback and finalized the draft.

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COMPETING INTERESTS

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ETHICAL APPROVAL

No ethical approval was required for this project – it involved no interaction with human subjects, human material, or human data.