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## Platinum Opinion

# Male Life Expectancy is Still Inferior to That of Women: Urologists Must Refine and Develop the Concept of Men's Health

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A recent World Health Organization (WHO) report [1] described a significant gender gap in life expectancy, with the global average life expectancy 5.1 yr less for men than for women [2]. This discrepancy has been attributed to a higher frequency of preventable and premature male death (deaths occurring between the ages of 30 and 69 yr). The main causes of male mortality are cardiovascular disease (CVD), cancer, diabetes, and chronic respiratory diseases. Moreover, it has been demonstrated that CVD is a significant contributor to male morbidity. The disability-adjusted life year (DALY) is a surrogate marker of disease burden, with 1 DALY equating to one healthy year of life lost. CVD is the leading cause of DALY loss, with an estimated 36 million DALYs lost in 2015 [1].

The main risk factors for the aforementioned diseases, such as smoking, hypertension, and elevated body mass index (BMI), are more prevalent among men than women [1], but are also largely modifiable and amenable to lifestyle changes. However, it is well established that men are less likely than females to engage in primary health care services and screening programmes and have a higher hospital admission rate [3]. This can be partly explained by masculinity conventions and stereotypes of self-reliance, as well as by dissatisfaction with current health promotion [1].

Unfortunately, in contrast to female health care services, which are gender-specific (ie, gynaecological medicine) men's health care is neither tailored nor streamlined. While access to health care and provision should be gender-equal, it is widely recognised that men and women have different

health care concerns and needs. Men prefer services with a clear objective that support patient autonomy [1].

The gender inequality in life expectancy was identified as early as 1955 [3] and while there has been room for optimism due to the formation of charities such as The Men's Health Forum and campaigns such as Movember, the recent WHO report highlights that a change of health care policy is urgently needed. Furthermore, there is a paucity of data on the provision of sexual and reproductive health services for men.

Given that the urological speciality deals with male-specific benign and malignant diseases, the urological fraternity is in a prime position to facilitate a change in the current infrastructure of men's health care services. This is reinforced when we consider that disorders of male sexual and reproductive health are intrinsically associated with CVD and cancers. For example, several meta-analyses have confirmed an association between erectile dysfunction (ED) and CVD [4]. Furthermore, ED is recognised as one of the earliest signs of atherosclerotic disease [4]. It has been shown that smoking cessation, weight loss, and appropriate treatment of hypertension and hypercholesteraemia improve erectile function [5]. Therefore, it is intuitive that urologists could not only screen for CVD in men with ED but could also focus on male lifestyle, diet, and general health changes. This would not only provide an opportunity for CVD screening and health modification but would also be cost effective for health economies. Thus, the concept of a streamlined, medically comprehensive assessment would

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be appealing to patients, as optimisation of CVD risk factors would be seen to treat any ED [5]. Moreover, there is compelling evidence that ED is associated with other major comorbidities, including respiratory, metabolic, and gastroenterological diseases [4], all of which places urologists as a potential vanguard for men's health.

It is also of note that both male infertility and testosterone deficiency in adults are associated with CVD, metabolic syndrome, and type 2 diabetes (T2DM) [6]. Furthermore, outcome data on testosterone replacement therapy (TRT) have clearly demonstrated improvements in insulin sensitivity, cholesterol levels, body fat composition, and sexual health in hypogonadal men with T2DM [6].

Further contemporary evidence strongly suggests that men with infertility are at higher risk of mortality in comparison to the general population, and this may be related in part to the higher risk of cancer in this cohort of men. For example, Choy and Eisenberg [7] reported that men with two abnormal semen parameters had significantly higher mortality risk compared to those with normal semen parameters. Furthermore, male infertility has been associated with a higher risk of developing ischaemic heart disease and incident diabetes [7].

Optimisation of lifestyle factors would be hugely beneficial to infertile men; not only would potentially reduce their CVD burden but it also has been shown that weight loss improves semen parameters [8]. Moreover, identification of infertile men with hypogonadism [9] would allow risk stratification for CVD and potential treatment of modifiable risk factors, including the use of TRT in men after fertility intervention to improve quality-of-life outcomes and CVD risk [6].

These findings support the concept that a dedicated, gender-specific, and holistic approach to men's health would be an effective and viable opportunity for screening for CVD risk factors and urological cancers and could potentially reduce the gender gap in life expectancy.

While it is accepted that the most prevalent male cancer is prostate cancer (PCa), there is now compelling evidence that aggressive PCa is associated with obesity [9]. Moreover, emerging data suggest that TRT may confer a significantly lower risk of high-grade PCa [10]. This highlights that PCa screening should be integrated with lifestyle modification advice, CVD risk adjustment, and screening for hypogonadism. Indeed, interventions for all urological malignancies have late effects and survivorship concerns that are of great importance to patients.

Although mortality rates are higher for men than for women, disability and comorbidity rates are higher among women [3]. This male-female health-survival paradox implies that gender behaviours and health care utility may be contributing to the gender inequality in mortality. It is therefore imperative that urologists target men's health care with a more systematic approach that tailors for

lifestyle optimisation (smoking cessation, weight loss, and diet), cancer screening, and medical therapies (eg, treatment of hypertension, screening for diabetes) with psychological and survivorship support. We also believe that men with sexual and reproductive health problems should be comprehensively investigated for CVD and cancers.

The concept of a personalised and comprehensive approach to men's health offering a multidisciplinary team involving urologists, cardiologists, endocrinologists, dietitians, physiotherapists, and psychologists is advocated. This targeted and bespoke approach would further engage men with health care services and potentially ameliorate the significant burden of premature male mortality.

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