LGBTQIA+ Health – 2021

The AMA Position

The AMA affirms that…

- Many people who are LGBTQIA+ in Australia live happy and healthy lives. However, people who are LGBTQIA+ can experience unacceptable health inequities when compared to those who do not identify as LGBTQIA+;
- Many of these health inequities are associated with high levels of overt and implicit discrimination against these communities and populations, both socially and within institutions;
- Doctors have an ethical and professional duty to provide evidence-based care impartially and without discrimination, including on the basis of gender identity and expression, sexual orientation, and sex characteristics;
- Shared decision making is a key aspect of the doctor-patient relationship, and people who are LGBQTIA+ bring vital expertise in their lived experience to this process;
- The principles of patient-centred care, consent, non-discrimination, bodily autonomy, and respect are central to healthcare for people who are LGBTQIA+;
- People who are LGBTQIA+ thrive in health care environments where they feel safe, affirmed, respected and understood;
- Public acceptance of, support for, and celebration of, people who are LGBTQIA+, is a vital part of reducing discrimination against these communities and boosting health and wellbeing; and
- Being LGBTQIA+ is normal, healthy, and representative of the diversity in human sexuality, gender identity, and sex characteristics. The historical pathologisation of LGBTQIA+ people is associated with poorer health outcomes at the individual and population level.

Calls on the Australian Government to…

- Prioritise support for mainstream health services, including mental health services, to increase cultural safety in their practices, including by funding training, education and accreditation programs;
- Fund high-quality research on the health outcomes and experiences of people who are LGBTQIA+, including to investigate differences within sub-communities and across various intersections of identity and characteristics/demographics; and to investigate the health impacts of differing service approaches, models of care, and treatment pathways;
- Building from research outcomes, support LGBTQIA+-community led health services to provide targeted, informed and appropriate support for people who are LGBTQIA+;
- Enhance access to beneficial gender-affirming treatment that people who are trans and gender diverse have given consent for, including through the Pharmaceutical Benefits Scheme;

- Through each of the above actions, take specific steps to improve access to LGBTQIA+-inclusive care for people living in rural and remote areas, particularly LGBTQIA+ young people;
- Add sensitive, evidence-based, and community-guided questions on gender, sexual orientation, and intersex variations to the Australian Census, in order to better understand the distribution of people who are LGBTQIA+ and thus provide appropriate services where needed; and
- Improve school-based sexual education curricula to be more inclusive of the sexual and reproductive health needs of people who are LGBTQIA+, and fund targeted sex and relationships education for people who are LGBTQIA+;

Calls on state and territory governments to…

- Ban coercive 'conversion' practices that intend to change, alter or supress a person's sexual orientation or gender identity;
- Facilitate LGBTQIA+-inclusive practice within their health systems, including by ensuring systems and electronic medical records are set up to acknowledge patient-directed names and pronouns.

Calls on medical practitioners to…

- Provide evidence-based, respectful, sensitive, non-discriminatory care to people who are LGBTQIA+, in line with the AMA Code of Ethics (1) and the Medical Board's Code of Conduct 4.8 (2);
- Engage in further learning and education about the health needs of these groups and the benefits of difference models, treatments and approaches to better serve them;
- Actively foster LGBTQIA+-inclusive environments by using patient-directed names and pronouns, avoiding heteronormative language; and supporting patients' rights and perspectives in a culturally safe practice; and
- Affirm Yogyakarta Principle 32 that "no-one should be subjected to invasive or irreversible medical procedures that modify sex characteristics without their free, prior and informed consent, unless necessary to avoid serious, urgent and irreparable harm to the concerned person" (3).

Calls on the Australian Medical Council to…

- Include LGBTQIA+ health knowledge as a graduate outcome for students undertaking medical programs of study in Australia.

Explanatory Notes

1. LGBTQIA+ populations in Australia

1.1 Definitions

'LGBTQIA+' is an umbrella term that brings together a range of diverse identities. It stands for 'Lesbian, Gay, Bisexual, Trans and/or Gender Diverse, Queer, Intersex, Asexual', with the '+'

representing people who identify as part of a sexuality, gender or sex diverse community but who do not identify with one of these specific identities.

In the context of this Position Statement, the term 'LGBTQIA+' is used to communicate the disproportionate health risks and difficulties accessing care that people identifying in these groups experience. The AMA recognises that people identifying as LGBTQIA+ are not a homogenous group, and that experiences between and within these communities vary significantly. Where alternative acronyms are used, this is to reflect the terms used in external sources.

A person's sexual orientation is defined by the Human Rights Campaign as "an inherent or immutable enduring emotional, romantic, or sexual attraction to other people" (4). Lesbian (women or non-binary people who are attracted to women), Gay (men or non-binary people who are attracted to men), Bisexual (people who are attracted to both women and men, or to more than one gender), Pansexual (people who are attracted to people of all genders) Asexual (people who do not experience sexual attraction) and Heterosexual (people who are attracted to people of the opposite gender) are all examples of sexual orientations.

A person's gender identity is defined by the Human Rights Campaign as "one's innermost concept of self as male, female, a blend of both or neither – how individuals perceive themselves and what they call themselves" (4). Trans and gender diverse people are those whose gender identity is different from that assigned to them at birth. For example, trans women are women who were assigned male gender at birth, trans men are men who were assigned female gender at birth, and non-binary people are people whose gender is not exclusively male or female. Aboriginal and Torres Strait Islander people may use the terms 'Sistergirl' (gender diverse people who have a female spirit and take on female roles within the community) and 'Brotherboy' (gender diverse people who have a male spirit and take on male roles within the community) to identify themselves (5). Cisgender is a term used to describe someone whose gender identity is the same as the gender assigned to them at birth.

'Queer' is a term that describes a range of sexuality, gender and sex diverse identities, and has been reclaimed by many LGBTQIA+ people after historically being used as an insult. The Australian Institute of Family Studies notes that "the term queer now encapsulates political ideas of resistance to heteronormativity and homonormativity and is often used as an umbrella term to describe the full range of LGBTQIA+ identities" (6).

The term 'intersex' is defined by the United Nations Human Rights Commission as "people who are born with sex characteristics (including genitals, gonads and chromosome patterns) that do not fit typical binary notions of male or female bodies" (7). Intersex is an umbrella term which covers over 40 variations in sex characteristics, including relating to genitals, gonads, and chromosome patterns. It is important to note that being intersex is different to and independent from gender identity and sexual orientation. People with intersex variations exist across the spectrum of gender and sexual orientation, just as the endosex (non-intersex) population does.

1.2 Data gaps for LGBTQIA+ populations

There is currently no nationally representative measure of the size of LGBTQIA+ populations in Australia, largely because robust data on sexual orientation, gender identity and intersex status are not collected in the Census or other representative research studies from which this measure could be extrapolated with confidence. 2016 Census results counted 0.9% of couples as "same-gender

relationships" and 1260 individuals that selected "other – please specify" in response to the gender question (8, 9). These measures are widely acknowledged as underestimates due to the restrictive wording and criteria of questions.

Non-census estimates of the LGBTQIA+ population vary considerably, from 3.6% of males and 3.4% being part of a "minority sexual identity" (10), to 5.7% of all adults identifying as LGBTIQ+ (11). Intersex Human Rights Australia estimates that approximately 1.7% of the general population are intersex (12).

The lack of nationally representative data on LGBTQIA+ populations makes it difficult for governments to plan and design appropriate health services for these communities. As a result, health groups and community organisations advocated in 2019 for the inclusion of questions about sexual orientation, gender identity and intersex status in the 2021 Australian Census (13). The Australian Bureau of Statistics has now released a *Standard for Sex, Gender, Variations of Sex Characteristics and Sexual Orientation Variable*, which outlines standard questions and answers for these four variables and is designed for use by government, academic and private sector organisations in various research and epidemiological initiatives (14). Full implementation of this standard across federal and state data collection activities, as well as investment in rigorous academic and clinical research, should enhance understanding of the LGBTQIA+ population in Australia.

2.Health Issues for LGBTQIA+ Australians

2.1 Overall Health outcomes

People who identify as LGBTQIA+ experience a range of different health issues, and these vary between and within identity groups. Many people in LGBTQIA+ communities live healthy, happy lives, and these communities are highly adaptable and resilient. However, LGBTQIA+ people do face disproportionate health risks in a number of areas. These include:

- A higher current smoking rate among both LGBTIQ adults (15) and LGBTQA+ young people (16), compared to the general population;
- A higher likelihood of exceeding alcohol use guidelines among people who are homosexual or bisexual (17), and among LGBTIQ adults (15), compared to the general population;
- Higher levels of substance abuse disorders among LGBTIQ adults, including struggling to manage alcohol and drug use, and higher use of drugs for non-medical purposes, compared to the general population (15);
- Higher rates of mental ill-health, including psychological distress, mental health diagnoses, suicidal ideation, and suicide attempts, among both LGBTIQ adults (15) and LGBTQA+ young people (16), compared to the general population; and
- Higher rates of experiencing family violence among LGBTIQ+ adults, across all categories of violence (11), and higher rates of experiencing intimate partner violence among LGBTIQ adults (15), compared to the general population (18).

2.2 Health issues for specific groups

In addition to these health risks, some sub-populations of the LGBTQIA+ community experience particular health risks specific to their circumstances and experiences.

Gay, bisexual and other men who have sex with men experience a higher risk of sexually transmissible infections, including HIV, when compared to the general population (19). Men who have sex with men also have a higher risk of some cancers, including anal cancer (20).

Lesbian, bisexual and other women who have sex with women experience a higher risk of some cancers than heterosexual women, including breast and gynaecological cancers (21). This higher risk has been attributed to the higher use of alcohol and tobacco among women in these communities, as well as evidence of lower rates of cancer screening (22).

People who are asexual report the lowest level of alcohol, tobacco and other drug use, when compared to people of other sexual orientations, although they are also the least likely to rate their overall health as very good or excellent (15).

In general, people who are trans or gender diverse experience poorer health outcomes than people who are cisgender, including cisgender people within LGBQIA+ communities. Poorer mental health outcomes among trans and gender diverse people are particularly notable. Trans women, trans men, and people who are non-binary all reported significantly higher levels of mental ill-health, including suicidal ideation and attempts, psychological distress, and mental health diagnoses than cisgender respondents to the Private Lives 3 Survey (15). Further, 86% of trans women, 91% of trans men, and 90% of non-binary respondents reported having ever considered suicide, compared to 76% of cisgender women respondents, 64% of cisgender men respondents, and 13% of the general population (15).

People with intersex variations report a range of negative health outcomes, although 79% report that they are extremely, very or moderately healthy (23). Common physical health conditions experienced by people with intersex variations include bone issues (some related to their variation, some related to hormone therapies), overweight and obesity, heart problems, and diabetes (23). 42% of respondents to an Australian survey of intersex people reported considering self-harm on the basis of issues related to their sex variation, and 60% had considered suicide on this basis (23). Of 117 respondents who had undergone a medical intervention for their variation, 83% reported a negative health impact, including scarring, loss of sensation, trauma and anxiety, complications from surgery, decreased bone density, weight gain and suicidal ideation (23).

2.3 Intersectionality

Many people who identify as LGBTQIA+ in Australia also face disadvantage in other areas of their lives, and this intersectionality has significant implications for their health issues and experiences. People who are LGBTQIA+ and have a disability, are Aboriginal and/or Torres Strait Islander, come from a culturally and linguistically diverse background, live in rural or remote areas, or are socio-economically disadvantaged, for example, face exacerbated health risks as a result of multiple levels of disadvantage (15).

For example, LGBTIQ adults from multicultural backgrounds are more likely to experience very high psychological distress than their Anglo-Celtic peers, and reported higher rates of suicidal ideation and attempts (15). LGBTIQ people with mild, moderate or severe disability are also more likely to experience high or very high psychological distress, and this risk increases with the severity of disability (15).

LGBTIQ people living in rural and remote areas are significantly more likely to rate their health as poor or fair, and significantly less likely to rate their health as very good or excellent, when

compared to LGBTIQ people living in urban areas (15). People who are LGBTQIA+ and living in rural and remote can face difficulties finding connection with LGBTQIA+ communities, and may face greater levels of discrimination, prejudice and social isolation (24). Access to LGBTQIA+-inclusive services can be particularly difficult in rural and remote areas, meaning that LGBTQIA+ people may avoid or delay seeking care, or need to travel significant distances to do so (24). For Aboriginal and Torres Strait Islander people who live in rural and remote areas, leaving country to access inclusive care is an added barrier.

While intersectionality is an important consideration in terms of disadvantage, many LGBTQIA+ people draw strength, resilience, and belonging from their experience of intersectionality.

3.Health risk factors for LGBTQIA+ Australians

3.1 Minority Stress Model and Discrimination

Factors contributing to poorer health outcomes among people who are LGBTQIA+ are complex, but there is a general consensus that discrimination and stigma in the community, as well as within formal institutions, play a significant role.

The minority stress model proposes that poorer health outcomes in minority groups can be partially attributed to stressors caused by living in a hostile, heteronormative culture (25). Minority stress arises from external factors, such as discrimination, or internal factors, such as internalised homophobia or identity concealment. Research conducted following the marriage equality postal vote in Australia has built strong evidence for this model – there was a clear association between areas with higher proportions of 'no' voters and poorer life satisfaction, mental health, and overall health among lesbian, gay and bisexual people (26).

A high proportion of LGBTQIA+ Australians report experiencing discrimination, both generally and in health setting specifically. 57% of respondents to the Private Lives 3 survey reported being treated unfairly in the past 12 months based on their sexual orientation, and 77.5% of trans and gender diverse respondents reported being treated unfairly based on their gender identity (15). Just 43.4% of LGBTIQ respondents felt accepted a lot or always when accessing health services (15). In the Victorian Population Health Survey, 34% of LGBTIQ+ adults experiences discrimination in the last 12 months, compared to 16% of the non-LGBTIQ+ population. 25.2% of LGBTIQ+ respondents to this survey reported experiencing discrimination by doctors, nurses or other staff at hospitals or doctors surgeries (11).

Labelling LGBTQIA+ identities as "illnesses" or "diseases" has led to negative health outcomes. 'Homosexuality' was included in the International Classification of Diseases until 1990, and language referring to diverse gender identities as 'disordered' was removed in 2018 (27). Intersex advocates note that pathologising language is commonly used in relation to people with variations in sex characteristics, including terms like "disorders of sex development" (27). United Nations bodies agree that this pathologisation has driven harmful behaviour such as conversion practices, involuntary treatments, criminalisation of and discrimination against LGBTQIA+ communities and individuals (28).

In the education system, lack of visibility of LGBTQIA+ identities can also contribute to poor health outcomes for students who are LGBTQIA+. School-based sexual and reproductive health education curricula often excludes messages and information about LGBTQIA+ relationships, with gender and

sexuality diverse young people reporting that sex education at school is heteronormative, irrelevant, confusing, and stigmatises LGBT behaviours and communities (29). In a survey of Australian school students, students who were bisexual, questioning, genderqueer, and gay felt negatively about their sex education experiences, preferring to seek out information online, and feeling like their identities were excluded from educational material – both in terms of sexual health and healthy relationships (30). Higher risks of sexual and reproductive ill-health and family and domestic violence among people who are LGBTQIA+ would benefit from inclusive, sensitive and targeted education programs.

3.2 Health-seeking behaviours

Previous experience or fear of being treated negatively in healthcare settings may discourage people who are LGBTQIA+ from seeking health services. 66% of LGBTIQ adults report having a regular General Practitioner, compared to 81% of females and 73% of males in the general population (15). 38% of LGBTQA+ young people who had experienced suicidal or self-harm ideation in the last 12 months reported accessing a professional health service to address it; and 71% of LGBTI+ people aged 16 to 27 did not access a crisis support service during their most recent mental health crisis – 33% of whom attributed this to anticipated discrimination (31).

3.3 Social determinants

As outlined in the AMA's existing Position Statement, *Social Determinants of Health – 2020*, a person's health is shaped by the social, economic, cultural and environmental conditions they live in, including their income, education, employment, and level of social support (32). People who are LGBTIQ in Australia are more likely to have a bachelor degree when compared to the general population, but are more than twice as likely to report being unemployed or unable to work (15). 43% of LGBTIQ people report earning less than $400 per week, with trans men and people who are non-binary more likely than cisgender people in LGBQI communities to report this (15).

4.LGBTQIA+ populations and medical care

4.1 Barriers to accessing health care

People who are LGBTQIA+ experience a range of barriers to accessing healthcare. Having experienced stigma or discrimination in healthcare settings before is strongly related with reluctance to seek care in the future (33, 34). Being treated disrespectfully by health staff – including the use of incorrect names and pronouns; assumptions about gender identity, sexual orientation, and sex characteristics; and offensive comments or language, can discourage people who are LGBQTIA+ from accessing health services. For people who are intersex, negative experiences with health services, including receiving inadequate information about treatment and medical history, being excluded from treatment decisions, and experiencing complications from surgery can also result in mistrust and reluctance to seek care from health services (23). Expected experiences of stigma and discrimination can also impede care, including among LGBTQIA+ people who have not personally experienced this (35).

Insufficient knowledge about LGBTQIA+ health and behavioural competencies in order to provide respectful, sensitive, non-discriminatory care among health and medical professionals is also a barrier to seeking care. Trans and gender diverse community members have highlighted education for health professionals as a key priority for improving access to care, with many having educated their own health care providers on trans health issues (36). People with intersex variations also

report a lack of understanding among the medical profession as a clear barrier to care (23). Exposure to education material about LGBTQIA+ health, including via brief sessions, has been shown to increase the knowledge and confidence of health professionals in this area (36, 37).

Financial and structural barriers also make it harder for people who are LGBTQIA+ to access health care. For some people who are trans and gender diverse, access to gender-affirming medications and surgery can be cost-prohibitive (38), especially considering higher rates of unemployment and lower incomes among people who are LGBTQIA+. Lack of access to subsidised gender-affirming care under Medicare can exacerbate this barrier (39). Limited availability of LGBTQIA+-friendly services, especially in rural and remote areas, can make it very difficult for people who are LGBTQIA+ to access care that is appropriate and sensitive (34).

4.2 Gender-affirming care

Gender-affirming care is a model of healthcare that centres on non-judgemental acknowledgement and recognition of a person's gender identity (40). Fundamentally, gender-affirming care involves an understanding that trans and gender diverse people "tell the truth about who they are" (40). Gender-affirming treatments, including puberty blockers, hormone treatments, and gender affirmation surgeries, may form part of this care for trans and gender diverse people, but these are not sought by all patients. 50% of trans women, 50% of trans men, and 26% of non-binary people in Australia report that they were able to access gender-affirming care when they needed it (15).

Gender-affirming care is linked with a range of positive health outcomes for people who are trans and gender diverse. Cross-sectional data of more than 27,000 participants indicates that having a health provider that understands someone's gender identity and treats them with respect is associated with significant reductions in depression and suicidal thoughts (41, 42). Receiving gender-affirming care is also associated with decreased substance use, improved HIV medication adherence and reduced harms from self-prescribed hormones (43). Recent systematic reviews have found evidence of increased quality of life following both gender-affirming hormone treatment (44) and gender-affirming surgery (45), however this evidence remains constrained by risk of bias and confounding. Further high-quality, long-term research is needed to fully understand the both the benefits and the risks of treatment options.

The provision of gender-affirming treatment, like all medical care, should include discussion with patients about the risks and benefits of each potential treatment pathway, including acknowledging areas and treatments for which evidence is still emerging. Where the long-term effects of treatments are unknown, this should be clearly communicated with patients along with information about identified short- and medium-term effects. Treatment and legal guidelines are important resources that doctors should use to guide their provision of gender-affirming treatments (46, 47, 48).

The provision of gender-affirming care is beneficial to trans and gender diverse people in all medical contexts, including if they are seeking care for reasons unrelated to their gender. Using patient-directed names and pronouns, being respectful of gender identity, and facilitating a culturally safe environment reflect genuine respect and sensitivity.

4.3 Care for people with intersex variations

In Australia, people born with inherent variations in sex characteristics have a range of experiences with medical and health services, but a significant number report negative experiences. While some intersex variations do require medical intervention because of significant health risks, many intersex people report undergoing early medical interventions primarily for 'normalising' purposes – to assign them a binary sex as an infant, child or adolescent (49, 15). These experiences are associated with a range of harms, including experiencing anxiety and trauma in medical settings, loss of sensation and sexual function, shame and low self-esteem, higher rates of mental ill-health, and physical health complications from surgeries and hormone treatments (23). 83% of intersex respondents to a 2016 Australian survey who had undergone a medical intervention related to their variation reported experiencing at least one of these negative impacts, and just 9% had experienced only positive impacts (23).

Intersex people in Australia report being excluded from treatment decisions about their own bodies, including by being too young to participate in consent processes, being given insufficient information about treatment risks and benefits, not being offered alternatives or no treatment, and not being given access to their own medical records (23). Therefore, the concepts of bodily autonomy and integrity are of central importance to many intersex people (50).

Intersex people who report positive interactions with medical providers say that this was due to their doctor either having good knowledge about their variation, or making active attempts to educate themselves about it (23). Supporting people with intersex variations to be involved in treatment decisions, providing training for staff on intersex variations, and providing referral to intersex peer support groups are other ways that intersex people felt supported by medical and health services (23).

4.4 'Conversion' practices

Conversion practices are rooted in the false assumption that sexual orientations other than heterosexuality, and gender identities other than cisgender, are mental disorders that can and must be altered (51). Despite a move away from pathologizing LGBTQA+ identities in recent decades, people who are LGBTQA+ are still vulnerable to 'conversion' messaging. In the United States, 67% of surveyed LGBTQ youth reported that someone had tried to convince them to change their sexual orientation or gender identity, and this was associated with mental ill-health, low self-esteem, internalised homophobia and transphobia, and sexual dysfunction (51). Results from a 2020 survey indicate that one in ten LGBTQA+ Australians have experienced religion-based attempts to change their sexuality or gender identity, from formal 'counselling' programs to informal spiritual groups (52).

There is strong agreement among the medical profession in Australia that conversion practices have no medical benefit or scientific basis, and that there is evidence of significant harms resulting from such practices (53, 54). The AMA acknowledges that in some situations, it is the role of doctors to facilitate sensitive exploratory discussions with patients, including when patients are experiencing distress related to their sexual orientation or gender identity (53). Where these conversations are grounded in a genuine therapeutic intent, aim to reduce stigma associated with LGBTQA+ identities,

and have no intent to change or supress a person's sexual orientation or gender identity, they should not be considered conversion practices.

4.5 LGBTQIA+- inclusive care

The provision of appropriate, respectful and culturally safe healthcare is vital for the health and wellbeing of people who are LGBTQIA+.

People who are LGBTQI access mainstream medical clinics more frequently than any other health service, with 84% accessing one in the last year compared to 35% accessing a hospital, 25% accessing a mainstream medical clinic known to be LGBTQI-inclusive, and 6% accessing a medical clinic catering only to people who are LGBTI (15). Those accessing LGBTI-specific and LGBTI-friendly services were significantly more likely to feel that their sexual orientation or gender identity was very respected than those accessing mainstream clinics and hospitals (15). A significant proportion of respondents (47%) report that their preference in the future is to access a mainstream service that is LGBTIQ-inclusive (15).

Research supports a diversity of health service types being available, as some LGBTQIA+ people will benefit from LGBTQIA+-specific health services, while others will prefer and benefit from accessing LGBQTIA+-inclusive care in a mainstream health service (55). A 2012 review of evidence conducted by the National Drug and Alcohol Research Centre found some improved health outcomes associated with LGBT-specific services, compared to mainstream services, particularly for LGBT people with methamphetamine use issues (56).

Health services run by LGBTQIA+ communities are available in metropolitan areas but are generally difficult to access in rural and remote areas. Prominent organisations include ACON, a NSW based community-led organisation that provides free mental health support, HIV prevention and support, a sexual health clinic, and alcohol and other drugs support for people who are LGBTQI and people with HIV; Thorne Harbour Health, a Victorian community-led organisation that runs health services and General Practice clinics for LGBT community members, including a specific Gender Diverse Health Service; and the Queensland Council for LGBTI Health, which provides HIV and sexual health promotion, awareness and prevention services for gay and bisexual men and Aboriginal and Torres Strait Islander peoples.

Many doctors working in mainstream health services are already providing LGBTQIA+-inclusive care to their patients. Health providers indicate this in a range of ways, whether it be made explicit on their websites, in their workplaces through the use of posters, flags and supportive materials, through formal accreditation programs such as the Rainbow Tick (57), and by adding their names to registers of LGBTQIA+-friendly providers (58, 59, 60).

A range of LGBTQIA+ community organisations have developed resources and guidance for mainstream health services on delivering culturally safe care for people who are LGBTQIA+. These include for example:

- QLife's QGuides for Health Professionals on the topics of bisexuality; young people; coming out; gender diversity; families; intersex; suicide prevention and other topics;
- Rainbow Health Victoria's Training Programs, including on LGBTIQ-Inclusive Practice; attaining Rainbow Tick Accreditation; and LGBTI Ageing and Aged Care;

- The Australian Professional Association for Trans Health's (AusPATH) e-learning modules on Trans Primary Care and Trans Mental Health Care;
- Intersex Human Rights Australia's Inclusion Guide to Respecting People with Intersex Variations, and Healthcare pathways resources; and
- ACON's suite of Pride Training online learning courses for medical professionals, on a broad range of topics relevant to LGBTQ Inclusion.

LGBTIQ+ Health Australia maintains a comprehensive list of resources and training available for the healthcare workforce.

5.LGBTQIA+ representation in the medical profession

Australia's medical profession should reflect the same diversity present in the general population, including in relation to LGBTQIA+ identities. Patients who are LGBTQIA+ and who are reluctant to seek medical care based on fear of stigma and discrimination may prefer to see a health provider who identifies as LGBTQIA+. However, doctors and medical students who are LGBTQIA+ can also experience discrimination and stigma from patients, colleagues, and employers based on their sexual orientation, gender identity, or sex characteristics. This can make it difficult for LGBTQIA+ doctors to be open about their identity at work, and affects mental health and wellbeing. Professional associations such as the Australian Lesbian Medical Association, the Australian Medical Students Association Queer Network, and GLADD: LGBTQIA+ Doctors Australia provide supportive networks for doctors and medical students who are LGBTQIA+, and play an important role in enhancing visibility and advocacy.

The AMA is committed to promoting diversity and inclusion within the medical profession in Australia, and within our own organisation. The AMA's *Diversity and Inclusion Plan 2020-2022* outlines a range of actions the AMA is taking to promote this, including advocating for equitable access to leave entitlements for all doctors; taking steps to encourage diversity in representation and opportunity within our organisation; and improving our own data collection methods (61). The AMA encourages all medical employers to actively foster LGBTQIA+-inclusive workplaces, including by developing non-discrimination policies and practices, increasing awareness among all staff through training, encouraging respectful language, and considering gender-neutral bathrooms and dress codes.

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AusPATH: Public Statement on Gender Affirming Healthcare, including for Trans Youth

Posted on 26 June 2021

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Trans people, including women, men, non-binary people and those who are gender diverse (henceforth *trans people*), experience their gender as incongruent to that presumed for and assigned to them at birth (e.g. Coleman et al, 2012; WMA, 2017). This contrasts with cisgender (cis) people, whose gender is congruent to that presumed for and assigned to them at birth.

Many trans people become aware of a gender incongruence in childhood or adolescence (e.g. Coleman et al, 2012; Heylens et al, 2014; Zaliznyak 2020). A recent Australian survey found that 2.3% of high-school aged young people sampled were trans (Fisher et al., 2019).

The basis for development of gender is not well known. There is evidence pointing to a range of factors including biological predisposition of a cis or trans experience of gender and/or gender identity (e.g. Korpaisarn and Safer, 2019; Perrotta,2020; Ristori et al, 2020; Foreman 2019; Roselli 2018; Polderman 2018). The evidence for environmental origins for the trans experience is sparse and flawed (see e.g. Winter et al, 2016 and Turban 2020 for more on this).

Gender incongruence is a term used to describe a condition related to sexual health, which may have implications for healthcare such as requiring access to medical gender affirmation (e.g. WHO, 2019, US Endocrine Society 2020).

Trans people may experience gender-related discomfort or distress, called gender dysphoria, which may stem from the experience of others not recognising one's identity and/or awareness that one does not have a socially recognised body that represents one's known identity (e.g. APA, 2013; Winter et al, 2016).

Affirmative support for trans people, especially from their parents, friends and additionally for young people their school environments, is vital for maintaining good mental health (e.g. Travers et al, 2012; Simons et al, 2013; Hill et al, 2020; Ullman, 2021). Social support from family, friends and school environments is associated with reduced suicide risk (e.g. Edwards et al. 2019; Bauer et al., 2015; Hill et al, 2020). Family and school rejection are associated with increased risk of suicidal ideation (e.g. Chen et al. 2019) and suicide attempts (e.g. Klein & Golub, 2016; Hill et al, 2020). It is vital that parents and families are able to access supportive mental health and peer support, as needed while they adjust, in order to preserve and strengthen positive family relationships.

A supportive environment allows for **gender affirmation**; social and, where sought, medical and legal affirmation.

Social affirmation (names, pronouns, hairstyles, clothes etc) has been shown to provide benefits to many trans people, especially trans youth (e.g. Olsen et al, 2016; Durwood et al, 2017; Russell et al, 2018). **Medical affirmation** can involve a broad range of healthcare support, delivered by way of a gender affirming approach to healthcare. **Legal affirmation** involves the updating of legal identity across institutions and with the state.

Gender affirming healthcare is **the** widely accepted standard in the field (see the list of professional and scientific organisations endorsing this approach at the end of this document). It is a non-judgemental, respectful, shared-decision making model to support a person in their gender in a way that is tailored to their individual needs. Shared-decision making draws on and respects the ability and agency of most clients, including many trans youth, to provide informed consent for their healthcare.

Gender affirming healthcare emphasises affirming language, psychological and peer support, support for social affirmation, and/or medical affirmation (e.g. puberty blockers for young adolescents, or feminising or masculinising hormones and/or surgery for older clients), as medically necessary and clinically relevant.

The degree of psychological support may vary depending upon an individual's medical, psychological or social circumstances and needs. Particularly in adolescence, a gender affirming approach does not negate the need for comprehensive exploration of early developmental history, history of gender development and expression, history or trauma or abuse, emotional functioning, intellectual and educational functioning, peer and other social relationships, family functioning as well as family support (Riley, 2015). For more information on the gender affirming approach see Keo-Meier and Ehrensaft (2018), and numerous documents produced by professional and scientific organisation listed at the end of this document.

Medical and surgical affirmation can frequently alleviate gender-related distress and yield a variety of other benefits to the individual (e.g. de Vries et al, 2011ab; Edwards-Leeper et al, 2012; Khatchadourian et al, 2014; WHO, 2015; Wylie et al, 2016, White Hughto and Reisner 2016, de Vries et al, 2014, Costa et al, 2015, Mahfouda et al, 2017, Olson-Kennedy et al, 2018; Mahfouda et al, 2019; Allen et al, 2019; Turban 2020, Achille et al, 2020; van der Miesen et al, 2020). Medical affirmation when needed (including hormonal and surgical intervention) is associated with reduced risk of suicidal ideation (e.g. Bauer et al. 2015; Tucker et al. 2018).

Different trans people affirm their gender in different ways. It is not inevitable that a trans person seeks medical gender affirmation, indeed many do not (e.g. Nieder et al, 2020; Quinn, 2020). This is especially true for surgery, which is in any case usually only available to adults (e.g. Coleman et al, 2012; Hembree et al, 2017).

Widely used guidelines for provision of gender affirming healthcare respect the agency and autonomy of trans people, while also stressing the importance of engagement and assessment between patient and treating physician (e.g. Coleman et al, 2012; Deutsch, 2016; Steensma et al, 2017,

Hembree et al, 2017). As a consequence of adherence to these carefully developed guidelines, gender affirming healthcare is associated with very low rates of regret and de-transition, including as they apply to trans youth (e.g. de Vries et al, 2014; Wiepjes et al, 2018; Brik et al, 2020). Where de-transition occurs, it is often a consequence of external pressures (e.g. Turban et al, 2021).

Despite widespread professional and scientific consensus on gender affirming healthcare (see list of organisations later in this document), in Australia accessible multi-disciplinary services for trans youth are sparse, and there remains a dearth of gender affirming GPs in the primary care system. People seeking culturally-safe gender affirming medical care often encounter barriers of availability, cost and competence (as documented in e.g. Rosenberg, S, Carman, M, Bourne, A, Starlady, Cook, T, 2021). They, their families and healthcare providers also encounter legal barriers (e.g. the recent Re: Imogen decision in the Family Court of Australia, as critiqued in Jowett and Kelly, 2021), media hostility (as documented in e.g. Garcia and Badge, 2021).

Psychotherapy can have a role to play within a broadly gender affirmative approach (e.g. Coleman et al, 2012). However, the evidence on the benefits of such an approach used outside (and/or instead of) more orthodox gender affirming healthcare is strikingly sparse and anecdotal; a flaw evident in e.g. D'Angelo (2020) and D'Angelo et al (2021). Indeed, the judge in the Re:Imogen case accepted evidence that such an approach is 'risky and unproven' (para.226; Family Court of Australia, 2020). For its part, AusPATH notes the absence of any group studies justifying any confidence in the approach, and would be anxious for the welfare of any participants were any such study to be conducted.

In the absence of more information on these psychotherapeutic approaches, AusPATH is concerned that these approaches may involve pressure on the person to conform to the gender presumed for them at birth – and that they therefore verge on "reparative therapy" (also called "conversion therapy") similar to that used to 'treat' non-heterosexual sexualities.

AusPATH encourages and supports comprehensive, trans-affirming and inclusive mental health support if desired by individuals, and to support individuals in exploring their gender, but rejects gender identity change efforts (reparative or conversion therapy). Recalled exposure to attempts at conversion therapy are associated with significantly higher odds of lifetime suicide attempts and severe psychological distress (e.g. Turban et al 2019; Stonewall, 2020). Evidence from Australia underlines the risks of these approaches (e.g. Jones et al, 2020).

Many professional and scientific organisations have spoken out against these approaches as used with people of diverse sexualities and/or genders. For updated listings see APS, HRC (undated) and two important consensus documents for the USA (Various organisations, undated) and the UK (Various organisations, 2017). The UN independent expert on protection against violence and discrimination based on sexual orientation and gender identity has called for a global ban on conversion therapy (Madrigal-Borloz, 2020). A range of jurisdictions overseas and in Australia have banned these practices (see e.g. ILGA World, 2020; Starcevic, 2020).

In view of substantial evidence for the benefits of gender affirming healthcare which includes psychological support as needed, the relative lack of evidence for any benefits from psychotherapy used outside and/or instead of gender affirming healthcare, and the risk of harm where such approaches constitute reparative therapy, AusPATH believes that psychotherapeutic (including psychoanalytic) approaches used outside and/or instead of gender affirming healthcare are experimental, risk harm, raise ethical concerns.

AusPATH cautions that a recent critique of healthcare approaches for trans children and adolescents (Kozlowksa et al, 2021) should not be used to undermine current widely accepted practice.

To be unequivocally clear, AusPATH reaffirms its commitment to gender affirming healthcare, and asserts that any approach that would offer psychotherapy as an alternative to gender affirmative healthcare (i.e. offered while gender affirming healthcare is withheld or withdrawn) involves the risk of harm to the health and welfare of the clients concerned, whether they are trans youth or adults.

A large number of professional and scientific organisations worldwide support and advocate gender affirming approaches to healthcare for trans people, including trans youth. In addition to AusPATH, the following professional and scientific associations have all published endorsements (be they position statements or guidelines etc) in support of the approach. The list below, confined to English-language documents, is not intended to be exhaustive.

AusPATH Board, June 2021

Special thanks to the AusPATH Policy Committee

Some documents supporting gender affirming approaches that refer to work with trans people of all ages.

World Medical Association (WMA). (around 115 member (mostly national) physicians' associations). See *World Medical Association statement on transgender people* (2018), at https://www.wma.net/policies-post/wma-statement-on-transgender-people/

World Professional Association for Transgender Health (WPATH). (around 2400 members). See *Standards of Care for the Health of Transsexual, Transgender, and Gender Nonconforming People* (2012), at https://www.wpath.org/publications/soc

Endocrine Society. (around 18000 members). See *Clinical Practice Guidelines for Treatment of Gender-Dysphoric/Gender-Incongruent Persons* (2017), at https://doi.org/10.1210/jc.2017-01658

Professional Association for Transgender Health Aotearoa (PATHA). (around 200 members). See *Guidelines for Gender Affirming Healthcare for Gender Diverse and Transgender Children, Young People and Adults in Aotearoa, New Zealand* (2018), at: https://patha.nz/Guidelines

American Psychological Association (APA). (around 121000 members). See *Guidelines for Psychological Practice with Transgender and Gender Nonconforming People* (2015), at: https://www.apa.org/practice/guidelines/transgender.pdf

Australian Psychological Society (APS). (around 24000 members) See *Australian Psychological Society recommends mental health practices that affirm transgender people's experiences* (undated) at: https://www.psychology.org.au/getmedia/00cd6bab-650a-431b-bc67-fdfb69729b83/Info-Sheet-Transgender-affirmation-extended-version.pdf

Australian Psychological Society (APS). *Use of psychological practices that attempt to change or suppress sexual orientation or gender: Position statement* (undated) at: https://www.psychology.org.au/About-Us/What-we-do/advocacy/Position-Statements/psychological-practices-conversion-practices

Royal College of Psychiatrists (RCPsych). (around 15000 members) See *Supporting transgender and gender-diverse people* (2018), at: https://www.rcpsych.ac.uk/pdf/PS02_18.pdf

TransHub. 2020. This section of TransHub is for health professionals who are seeking to strengthen the clinical care they deliver to trans patients and clients. It was written in collaboration with leading health professionals who specialise in the healthcare and affirmation needs of trans people across Australia and has been endorsed by AusPATH, at: https://www.transhub.org.au/clinicians

Some documents supporting gender affirming approaches that specifically concern work with youth

American Academy of Child and Adolescent Psychiatry (AACAP). (around 9500 *members*). See *Statement Responding to Efforts to ban Evidence-Based Care for Transgender and Gender Diverse Youth* (2019), at: https://www.aacap.org/AACAP/Latest_News/AACAP_Statement_Responding_to_Efforts-to_ban_Evidence-Based_Care_for_Transgender_and_Gender_Diverse.aspx

American Academic of Pediatrics AAP). (around 67000 members) See *Ensuring Comprehensive Care and Support for Transgender and Gender-Diverse Children and Adolescents* (2018), at https://pediatrics.aappublications.org/content/142/4/e20182162

Australian Psychological Society (APS). (around 24000 members) See *Transgender and gender diverse children* (undated), at https://www.psychology.org.au/getmedia/03213f59-9b8f-45b9-8575-2605958fd791/Trans-and-gender-diverse-children.pdf

World Professional Association for Transgender Health (WPATH, around 2400 members), United States Professional Association for Transgender Health (USPATH, around 1700 members), and European Professional Association for Transgender Health (EPATH, around 200 members). See *WPATH/USPATH/EPATH statement in response to calls for banning evidence-based supportive health interventions for transgender and gender diverse yout* (2019), at https://www.wpath.org/media/cms/Documents/Public%20Policies/2019/FINAL%20Statement%20in%20Response%20to%20Calls%20for%20Banning%20Evidence-Based%20Supportive%20Health%20Interventions%20for%20Transgender%20and%20Gender-Diverse%20Youth%2011-20-2019.pdf

World Professional Association for Transgender Health (WPATH), European Professional Association for Transgender Health (EPATH), United States Professional Association for Transgender Health (USPATH), Asian Professional Association for Transgender Health (AsiaPATH), Canadian Professional Association for Transgender Health (CPATH), Australian Professional Association for Trans Health (AusPATH), Professional Association for Transgender Health Aotearoa (PATHA). *See WPATH, EPATH, USPATH, AsiaPATH, CPATH, AusPATH, PATHA Response to Bell v. Tavistock Judgment Statement Regarding Medical Affirming Treatment including Puberty Blockers for Transgender Adolescents* (2020), at https://www.wpath.org/media/cms/Documents/Public%20Policies/2020/FINAL%20Statement%20Regarding%20Informed%20Consent%20Court%20Case_Dec%2016%202020.docx.pdf?_t=1608225376

Royal Australasian College of Physicians (RACP). (around 17000 members). See *RACP statement on gender dysphoria* (2020), at https://www.racp.edu.au/news-and-events/media-releases/racp-statement-on-gender-dysphoria

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Application for MBS eligible service or health technology

ID:
HPP200028

Application title:
Patient Consultations and Surgical Procedures for Gender Affirmation in Adults with Gender Incongruence

Submitting organisation:
AUSTRALIAN SOCIETY OF PLASTIC SURGEONS INC

Submitting organisation ABN:
78823025148

Application description

Succinct description of the medical condition/s:
Gender incongruence is characterised by a marked and persistent incongruence between an individual´s experienced gender and the assigned sex, which often leads to a desire to 'transition', in order to live and be accepted as a person of the experienced gender.

Succinct description of the service or health technology:
The application requests amendment to some existing MBS items relating to health assessments and development of multidisciplinary care plans. It also requests the creation of a series of new MBS items for gender affirming surgeries. Collectively, the objective of these amendments and additions to the MBS is to facilitate a multidisciplinary best model of care framework for patients pursuing medical interventions for gender affirmation that extends before and after any surgery.

Application contact details

Are you the applicant, or are you a consultant or lobbyist acting on behalf of the applicant?
Applicant

Are you applying on behalf of an organisation, or as an individual?
Organisation

Is the applicant organisation the organisation you are representing in the HPP today?
Yes

Application details

Does the implementation of your service or health technology rely on a new listing on the Pharmaceutical Benefits Scheme (PBS) and/or the Prostheses List?
No

Is the application for a new service or health technology, or an amendment to an existing listed service or health technology?
New

Please select any relevant MBS items.

MBS item number	Selected reason type

What is the type of service or health technology?
Therapeutic

PICO Sets

Application PICO sets

PICO set number	PICO set name
1	Patient Consultations and Surgical Procedures for Gender Affirmation in Adults with Gender Incongruence

Patient Consultations and Surgical Procedures for Gender Affirmation in Adults with Gender Incongruence

Supporting documentation

Document type	File name(s)
Application PICO set documents	MBS Application PICO Set_Gender Affirmation_v3 2023.03.docx
Reference list	Gender Affirmation PICO Set_Reference List.docx

Population

Describe the population in which the proposed health technology is intended to be used:
Individuals experiencing gender incongruence and electing to pursue medical interventions as part of their gender affirmation process.

Search and select the most applicable Medical condition terminology (SNOMED CT):
Gender reassignment patient

Intervention

Name of the proposed health technology:
Patient consultations and surgical procedures for gender affirmation in adults with gender incongruence

Comparator

Nominate the appropriate comparator(s) for the proposed medical service (i.e. how is the

proposed population currently managed in the absence of the proposed medical service being available in the Australian health care system). This includes identifying health care resources that are needed to be delivered at the same time as the comparator service:
Medical interventions for gender affirmation funded by existing non-gender affirmation MBS items or patient out of pocket expenses

Outcomes

Outcome description – please include information about whether a change in patient management, or prognosis, occurs as a result of the test information:
Global assessments of medical gender affirmation:
Change from baseline in health-related quality of life after receiving medical interventions for gender affirmation
Change from baseline in frequency of psychological disorders after receiving medical interventions for gender affirmation (applicable only in people reporting pre-treatment psychological disorders)
Change from baseline in frequency of suicidal ideation after receiving medical interventions for gender affirmation (applicable only in people reporting pre-treatment suicidal ideation)
Change from baseline in frequency of suicidal attempt after receiving medical interventions for gender affirmation (applicable only in people reporting pre-treatment attempt)
Change from baseline in gender dysphoria after receiving medical interventions for gender affirmation (applicable only in people reporting pre-treatment gender dysphoria)
Change from baseline in body satisfaction/attitudes/image after receiving medical interventions for gender affirmation
Patient reported satisfaction/regret after receiving medical interventions for gender affirmation

Treatment-specific assessments: Surgical procedures:
Any of the health benefit (efficacy) outcomes nominated for the global assessment of medical interventions for gender affirmation, plus
Safety signals reported for gender affirming surgical procedures (e.g. rate and nature of surgical complications, rate of revision procedures required after gender affirming surgical procedures)

Proposed MBS items

Proposed Item AAAAA

MBS item number:

Please search and select the proposed category:
THERAPEUTIC PROCEDURES

Please search and select the proposed group:
SURGICAL OPERATIONS

Please search and select the proposed item descriptor or draft a proposed item descriptor to define the population and health technology usage characteristics that would define eligibility for funding:
Masculinising chest surgery, without surgical repositioning of the nipple-areolar complex in an

individual with a diagnosis of gender incongruence

Proposed MBS fee:
$1,335.70

Indicate the overall cost per patient of providing the proposed health technology:
$0.00

Please specify any anticipated out of pocket costs:
$0.00

Provide details and explain:
MBS fee: Development of final MBS fees is ongoing. The final MB fees will be based on existing MBS items for similar procedures performed for purposes other than gender affirmation or the time and complexity of performing the procedure if there are no existing MBS items. The MBS fee for masculinising chest surgery of $1,335.70 and calculation of the MBS fee outlined in the application is providided for illustrative purposes only.

Overall cost per patient: The overall cost per patient undergoing medical gender affirmation will vary substantially based on whether hormonal treatment is used and which surgical procedure(s) are performed

Out of pocket expenses: The out of pocket expenses will depend to the fee charged by the surgeon performing the procedure. The applicants has no authority over the fees charged by individual surgeons.

How is the technology/service funded at present? (For example: research funding; State-based funding; self-funded by patients; no funding or payments):
Some patient consultations and multidisciplinary care conferences would be funded through current MBS items for attendances with general practitioners, specialists, sexual health medicine practitioners and psychiatrists.

The current funding arrangements for surgical procedures is highly fragmented. Some procedures may be claimed through existing MBS items (which are not fit-for-purpose) or self-funded, including self-funding treatment overseas.

Please provide a cost break down attachment:

Document type	File name(s)
Cost breakdown attachment	Gender Affirmation Inputs used to calculate proposed MBS fee.docx

Claims

In terms of health outcomes (comparative benefits and harms), is the proposed technology claimed to be superior, non-inferior or inferior to the comparator(s)?

Non-inferior

Please state what the overall claim is, and provide a rationale:
The application is seeking universal funding of medical interventions for gender affirmation through the MBS and not a material differences in the type of medical interventions for gender affirmation provided. As such, the foreshadowed clinical claim is that: medical interventions for gender affirmation fully funded through the MBS are non-inferior to medical interventions for gender affirmation funded by existing non-gender affirmation MBS items or patient out of pocket expenses.

Estimated utilisation

Estimate the prevalence and/or incidence of the proposed population:
It is estimated that in 2023 there would be 64,101 transgender people assigned male at birth and 64,044 transgender people assigned female at birth that would be candidates for gender affirming medical interventions.

Provide the percentage uptake of the proposed health technology by the proposed population:

Year 1 estimated uptake(%):
37

Year 2 estimated uptake(%):
37

Year 3 estimated uptake(%):
37

Year 3 estimated uptake(%):
37

Estimate the number of patients who will utilise the proposed technology for the first full year:
47087

Optionally, provide details:

Will the technology be needed more than once per patient?
No, once only

Provide references to support these calculations.

Document type	File name(s)
Estimated utilisation references	Gender Affirmation PICO Set_Estimate of People Treated and Number of Surgeries.xlsx

Consultation

List all appropriate professional bodies / organisations representing the group(s) of health professionals who provide the health technology/service:

Professional body name:
Australasian Chapter of Sexual Health Medicine (within the Royal Australasian College of Physicians)

Professional body name:
Australian Society of Plastic Surgeons

Professional body name:
Royal Australian and New Zealand College of Obstetricians and Gynaecologists

Professional body name:
Royal Australian College of General Practitioners

Professional body name:
Royal Australian College of Surgeons

List all appropriate professional bodies / organisations representing the group(s) of health professionals that may be impacted by the health technology/service:

Professional body name:
Australasian Chapter of Sexual Health Medicine (within the Royal Australasian College of Physicians)

Professional body name:
Australian Society of Plastic Surgeons

Professional body name:
Royal Australian and New Zealand College of Obstetricians and Gynaecologists

Professional body name:
Royal Australian College of General Practitioners

Professional body name:
Royal Australian College of Surgeons

List the patient and consumer advocacy organisations or individuals relevant to the proposed health technology:

Number of organisations listed: 2

Professional body name:
ACON - s47F

Number of organisations listed: 2

Professional body name:
AusPATH - s47F

List the relevant sponsor(s) and / or manufacturer(s) who produce similar products relevant to the proposed service or health technology:

Regulatory information

Would the proposed health technology involve the use of a medical device, in-vitro diagnostic test, radioactive tracer or any other type of therapeutic good?
No

Application for MBS eligible service or health technology

ID:
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Application title:
Patient Consultations and Surgical Procedures for Gender Affirmation in Adults with Gender Incongruence

Date lodged:
24/03/2023 10:49:43 AM

Submitting organisation:
AUSTRALIAN SOCIETY OF PLASTIC SURGEONS INC

Submitting organisation ABN:
78823025148

Lodged by:
s47F

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Organisation

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Application ID: HPP200028

Application type: Application for MBS eligible service or health technology
Application title: Patient Consultations and Surgical Pr...
Applicant: AUSTRALIAN SOCIETY OF PLASTIC SURGEONS INC

[Security = Official: Sensitive]

Contact name	Email	Type
s47F		Primary

Application details

Have you lodged an MSAC application for this service or health technology previously?
No

Have you had a pre-application meeting with the Department?
Yes

Has the Department notified you that your application will bypass the PICO Advisory Sub-Committee (PASC)?
No

Please select the PASC meeting relevant to this application:
10/08/2023

Will a full assessment report be required for your application?
Unsure

Does the implementation of your service or health technology rely on a new listing on the Pharmaceutical Benefits Scheme (PBS) and/or the Prostheses List?
No

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$0.00

Provide details and explain:
MBS fee: Development of final MBS fees is ongoing. The final MB fees will be based on existing MBS items for similar procedures performed for purposes other than gender affirmation or the time and complexity of performing the procedure if there are no existing MBS items. The MBS fee for masculinising chest surgery of $1,335.70 and calculation of the MBS fee outlined in the application is providided for illustrative purposes only.

Overall cost per patient: The overall cost per patient undergoing medical gender affirmation will vary substantially based on whether hormonal treatment is used and which surgical procedure(s) are performed

Out of pocket expenses: The out of pocket expenses will depend to the fee charged by the surgeon performing the procedure. The applicants has no authority over the fees charged by individual surgeons.

How is the technology/service funded at present? (For example: research funding; State-based funding; self-funded by patients; no funding or payments):
Some patient consultations and multidisciplinary care conferences would be funded through current MBS items for attendances with general practitioners, specialists, sexual health medicine practitioners and psychiatrists.

The current funding arrangements for surgical procedures is highly fragmented. Some procedures may be claimed through existing MBS items (which are not fit-for-purpose) or self-funded, including self-funding treatment overseas.

Please provide a cost break down attachment:

Document type	File name(s)
Cost breakdown attachment	Gender Affirmation Inputs used to calculate proposed MBS fee.docx

Claims

In terms of health outcomes (comparative benefits and harms), is the proposed technology claimed to be superior, non-inferior or inferior to the comparator(s)?
Non-inferior

Please state what the overall claim is, and provide a rationale:
The application is seeking universal funding of medical interventions for gender affirmation through the MBS and not a material differences in the type of medical interventions for gender affirmation provided. As such, the foreshadowed clinical claim is that: medical interventions for gender affirmation fully funded through the MBS are non-inferior to medical interventions for gender affirmation funded by existing non-gender affirmation MBS items or patient out of pocket expenses.

Estimated utilisation

Estimate the prevalence and/or incidence of the proposed population:
It is estimated that in 2023 there would be 64,101 transgender people assigned male at birth and 64,044 transgender people assigned female at birth that would be candidates for gender affirming medical interventions.

Provide the percentage uptake of the proposed health technology by the proposed population:

Year 1 estimated uptake(%):
37

Year 2 estimated uptake(%):
37

Year 3 estimated uptake(%):
37

Year 3 estimated uptake(%):
37

Estimate the number of patients who will utilise the proposed technology for the first full year:
47087

Optionally, provide details:

Will the technology be needed more than once per patient?
No, once only

Provide references to support these calculations.

Document type	File name(s)
Estimated utilisation references	Gender Affirmation PICO Set_Estimate of People Treated and Number of Surgeries.xlsx

Consultation

List all appropriate professional bodies / organisations representing the group(s) of health professionals who provide the health technology/service:

ABN (if known):

Professional body name:
Australasian Chapter of Sexual Health Medicine (within the Royal Australasian College of Physicians)

Rationale:
This group are specialists in sexual health medicine

ABN (if known):

Professional body name:
Australian Society of Plastic Surgeons

Rationale:
We are the organisation putting forth the application and all our members are Specialist Plastic Surgeons.

ABN (if known):

Professional body name:
Royal Australian and New Zealand College of Obstetricians and Gynaecologists

Rationale:
Members are all obstetricians and gynaecologists who will be part of the patient care

ABN (if known):

Professional body name:
Royal Australian College of General Practitioners

Rationale:
Members are all GPs who would be part of the patient care

ABN (if known):

Professional body name:
Royal Australian College of Surgeons

Rationale:
Members are all surgeons who will be part of the patient care (ENTs, gynaecologists, urologists etc)

List all appropriate professional bodies / organisations representing the group(s) of health professionals that may be impacted by the health technology/service:

ABN (if known):

Professional body name:
Australasian Chapter of Sexual Health Medicine (within the Royal Australasian College of Physicians)

Rationale:
Members are specialists in sexual health medicine and will be part of the patient care.

ABN (if known):

Professional body name:
Australian Society of Plastic Surgeons

Rationale:
Members are all Specialist Plastic Surgeons

ABN (if known):

Professional body name:
Royal Australian and New Zealand College of Obstetricians and Gynaecologists

Rationale:
Members will be part of the patient care

ABN (if known):

Professional body name:
Royal Australian College of General Practitioners

Rationale:
Members are all GPs who will be part of the patient care

ABN (if known):

Professional body name:
Royal Australian College of Surgeons

Rationale:
Members are all surgeons who may be part of the patient care i.e. (ENTs, ob/gyn, urologists)

List the patient and consumer advocacy organisations or individuals relevant to the proposed health technology:

Number of organisations listed: 2

ABN (if known):

Professional body name:
ACON - s47F

Rationale:
ACON strives to be a global leader in community health, inclusion and HIV responses for people of diverse sexualities and genders

Number of organisations listed: 2

ABN (if known):

Professional body name:
AusPATH - s47F

Rationale:
The Australian Professional Association for Trans Health (AusPATH) is Australia's peak body for professionals involved in the health, rights and well-being of all trans people – binary and non-binary.

List the relevant sponsor(s) and / or manufacturer(s) who produce similar products relevant to the proposed service or health technology:

Nominate (at least) two experts who could be approached about the proposed service or health technology and the current clinical management of the service or health technology. Include justification of expertise for each expert:

Number of experts identified: 3

Expert 1

Name: s47F

Email address: s47F

Phone: s47F

Rationale: She has been working in the area of LGBT health and HIV medicine since 2001, and has an active interest in research. She is an S100 prescriber, and offers holistic HIV management, PrEP and advice on all sexual health matters.

Number of experts identified: 3

Expert 2

Name: s47F

Email address: s47F

Phone: s47F

Rationale: Currently undergoing a global systematic review of studies pertaining to Gender Affirmation Surgeries and the evidence for clinical effectiveness, safety, and cost effectiveness

Number of experts identified: 3

Expert 3

Name: s47F

Email address: s47F

Phone: s47F

Rationale: s47F
and has undergone a global systematic review of all studies pertaining to gender affirming surgeries and the evidence for clinical effectiveness, safety, and cost effectiveness.

Please upload an in principle statement of clinical relevance:

Document type	File name(s)
In principle statement of clinical relevance	Gender Affirmation PICO Set_Statement of Clinical Relevance.pdf

Regulatory information

Would the proposed health technology involve the use of a medical device, in-vitro diagnostic test, radioactive tracer or any other type of therapeutic good?
No

Large files

Document type	File name(s)
Large files	

Declaration

Do you agree for the Application Summary to be published on the MSAC website, or do you wish to make further redactions? I agree to publish the Application Summary

Accepted by: s47F

Date Accepted: 24/03/2023 10:49:43 AM

You:

1. warrant that You have read and understood the *Guidelines for preparing a submission to the Medical Services Advisory Committee*
2. where Your application relates to a proposed medical service or an amendment to an existing medical service that is intended to be a 'professional service' for the purposes of the *Health Insurance Act 1973* (Cth), warrant that the proposed or amended medical service is able to be regarded as being a 'professional service' as generally defined by the *Health Insurance Act 1973* (Cth);
3. will ensure that Your application does not include any personal information for the purposes of the *Privacy Act 1988* (Cth) other than the name and contact details of the primary contact and other nominated contacts (including any nominated expert(s)) for Your application which You have obtained consent to provide;
4. understand that, if any other personal information is included in attachments in support of

Your application, the personal information must be provided with the consent of the individual (and in the case of resubmission of an application, You have obtained consent to resubmit personal information from the original application), and evidence of consent must be provided to the Department of Health (**Department**) upon request;

5. warrant that You have obtained all required consents for the submission of information (including copyright) submitted at each part of the application process;
6. declare that to the best of Your knowledge and belief after making all reasonable enquiries that the information contained in Your application is true and accurate and that no other information that is relevant to the listing of the medical technologies and services on the Medicare Benefits Schedule, or the consideration of the medical technology and services for other sources of funding, is known to either You or Your Organisation. Information that is relevant is that which may contradict or bring into doubt information given in the application or otherwise influence the consideration by the Medical Services Advisory Committee (**MSAC**) of the comparative safety, clinical effectiveness, cost effectiveness and total cost of the medical service or technology;
7. warrant that applications for investigative health technologies reflect the perspectives of each requestor of the service, the provider of the service, and if necessary, the manufacturer of any device components;
8. have obtained a 'Statement of Clinical Relevance' from the most relevant professional medical college/society, where they succinctly state their 'in-principle' support for the proposed service;
9. acknowledge that if an application is considered suitable for MSAC's consideration then a redacted version of the application (with redactions to be agreed between Your Organisation and the Department within a reasonable time) will be published on MSAC's website and provided to professional bodies/organisations and consumer organisations that have been identified in the application. It will also be provided to any additional groups and individuals the Department deems appropriate/relevant for consultation;
10. acknowledge that if You request to withdraw Your application and MSAC has completed its consideration of the application, the outcomes, recommendations and/or advice of MSAC will be withheld or published, in whole or in part at the Department's discretion (but in consultation with You), and MSAC's advice about the application may still be provided to the Department;
11. acknowledge and agree that all therapeutic goods used in provision of medical services/in conjunction with the health technology will be assessed by the Therapeutic Goods Administration for inclusion on the Australian Register of Therapeutic Goods;
12. if an application is made before the relevant therapeutic good(s) is or are included on the Australian Register of Therapeutic Goods:
    i. warrant that You have evidence that the relevant sponsor/manufacturer has commenced the Therapeutic Goods Administration process;
    ii. agree You will provide confirmation of inclusion of the product on the Australian Register of Therapeutic Goods; and
    iii. acknowledge that such confirmation may be a pre-condition to MSAC finalising its recommendation in respect of the medical service/technology;
13. accept and agree that You and Your Organisation are responsible for any applications made

to the Health Products Portal by You and that the Commonwealth of Australia is not liable or legally responsible for any application made using Your Profile. Your Organisation retains ownership of the application and its contents subject to the rights granted to the Department and others under the Terms of Use; and

14. warrant that You are authorised by Your Organisation to submit the application.

Population

Describe the population in which the proposed health technology is intended to be used:

Individuals experiencing gender incongruence and electing to pursue medical interventions as part of their gender affirmation process.

Specify any characteristics of patients with the medical condition, or suspected of, who are proposed to be eligible for the proposed health technology, describing how a patient would be investigated, managed and referred within the Australian health care system in the lead up to being considered eligible for the technology:

Individuals with a diagnosis of Gender Incongruence of Adolescence and Adulthood (hereafter referred to as gender incongruence) are proposed to be eligible to receive gender affirming medical interventions. Restrictions on being able to access medical interventions relating to gender affirmation based clinical features other than a diagnosis of gender incongruence of adolescence and adulthood are not being requested.

This application requests amendment to some existing MBS items relating to health assessments and development of multidisciplinary care plans. It also requests the creation of a series of new MBS items for gender affirming surgeries. Collectively, the objective of these amendments and additions to the MBS is to facilitate a multidisciplinary best model of care framework for patients pursuing medical interventions for gender affirmation that extends before and after any surgery. The applicants are cognisant that access to hormonal treatments are also an intrinsic part of the care of those with gender incongruence, and that a paired PBAC application will be required to address this component.

The medical interventions accessed will depend on a person's personal choice as to which medical affirmation intervention(s) are right for them. As such, it is not considered informative to consider gender affirming medical interventions as a 'technology' but, rather, a suite of interrelated interventions used for the purposes of medical gender affirmation.

The diagnosis of gender incongruence would be made a person's managing clinician, usually a general practitioner, but sometimes by a sexual health practitioner, endocrinologist or psychiatrist. The diagnostic criteria are outlined in the International Classification of Diseases 11th Revision maintained by the World Health Organization. The classification set out in ICD-11 HA60 Gender incongruence of adolescence or adulthood[1] is provided below.

Gender Incongruence of Adolescence and Adulthood is characterised by a marked and persistent incongruence between an individual´s experienced gender and the assigned sex, which often leads to a desire to 'transition', in order to live and be accepted as a person of the experienced gender, through hormonal treatment, surgery or other health care services to make the individual´s body align, as much as desired and to the extent possible, with the experienced gender. The diagnosis

[1] https://icd.who.int/browse11/l-m/en#/http%3a%2f%2fid.who.int%2ficd%2fentity%2f90875286

cannot be assigned prior the onset of puberty. Gender variant behaviour and preferences alone are not a basis for assigning the diagnosis.

The criteria set out in this definition of gender incongruence is anticipated to establish eligibility for practitioners to provide gender affirming medical intervention in Australian clinical practice.

Provide a rationale for the specifics of the eligible population:

Concepts and terminology

Conceptually it is important to understand that "gender incongruence" is the innate state, whereas "gender dysphoria" is the acute distress associated with gender incongruence and varies temporally and with access to treatment.

All individuals with gender incongruence are at risk of suffering gender dysphoria and access to treatment assists in preventing gender dysphoria as well as relieving it. A conceptual parallel within surgical care is the case of women with BRCA2 genetic mutations seeking bilateral mastectomy and reconstructive surgery. Although they do not have breast cancer at that time, offering this surgery is considered reasonable because of their very high risk of breast cancer and the ability of surgery to alleviate that risk. Surgery for these women will also often vary, from mastectomy alone in some cases, to mastectomy and implant reconstruction in others, to mastectomy and microvascular reconstructions in others, and hysterectomy and oophorectomy in others still. Both populations have a very high risk of a severely debilitating disorder and in both cases only a subset will choose to undergo treatment and the treatment plan will vary depending on the individual needs, risk profile and choices of the patient. Clearly this analogy is not perfect, but may assist in understanding concepts relating to the clinical need and patterns of care for people pursuing medical interventions as part of their gender affirmation process.

In the past the trans experience has been conceived of as a binary construct, with the notion that a person is "born in the wrong body" and has the goal to achieve a body which looks like the "opposite" sex / gender. Hence the historic terms "male-to-female" and "female-to-male". Understanding in this field has now evolved and there is greater recognition of non-binary and other types of gender incongruence. This means that a rigid MtF (trans woman) and FtM (trans man) terminology and associated protocols are no longer aligned with clinical evidence. Some individuals with a diagnosis of gender incongruence will seek limited surgical intervention, some will seek more extensive surgery and some will seek none at all, and furthermore, the extent of treatments may not correlate with their "type" of gender incongruence. This conceptual understanding emphasises the need for individualised and person-centred care, rather than fixed generic protocols of treatment.

Clinical need:

People with gender incongruence or who identify as transgender, as a whole report higher levels of psychiatric conditions than the aged-matched Australian population. A cohort study of 540 transgender people undertaken in Australia reported rates of depression and anxiety in transgender people of 58% and 40% respectively compared with aged-matched Australian population prevalence of 8% and 16% (Cheung et al. 2018).

Transgender and gender diverse people report high rates of suicidal ideation and suicide attempts. The results of a survey of 1,466 transgender and gender diverse people living in Australia revealed that 62% or respondents had suicidal ideation and 10% of respondents attempted suicide in the past 12 months (Hill et al. 2023). People who felt socially excluded due to their gender identity in the past 12 months were at higher risk of suicide ideation: Odds ratio (No vs Yes): 2.0 (95% CI 1.6, 2.5).

In a survey of nearly a thousand Australian transgender adults the self-reported suicide attempt rate was 10 times higher than that of the general Australian adult population (Zwickl et al. 2021). Critically one of the factors correlated with suicidality was a desire for surgical procedures, implying that barriers to access in Australia may be a variable increasing risk of suicidal ideation.

Gender affirming medical interventions have been reported as reducing rates of psychological distress, suicide ideation and suicide attempt. A survey of transgender and gender diverse people showed that people with a history of gender affirming surgery had significantly lower odds of past month psychological distress and past year suicide ideation and attempt compared with people with no history of gender affirming surgery (Almazan et al. 2021). After adjusting for sociodemographic factors and exposure to other types of gender affirming care the odd ratios (history of gender affirming surgery vs no history of gender affirming surgery) of experiencing the following outcomes were reported:

- Severe psychological distress (past month): 0.58 (95% CI: 0.50, 0.67), p <0.001
- Suicide ideation (past year): 0.56 (0.50, 0.64), p <0.001
- Suicide attempt (past year): 0.64 (0.47, 0.90) p 0.009

Gender diverse people have consistently reported lower QOL when compared to cisgender people, and this is more pronounced prior to gender affirming medical interventions (Nobili et al. 2018). Self-reported quality of life is significantly improved in gender diverse people who have undergone gender affirming surgery (Ainsworth et al. 2010, Papadopulos et al. 2021). This finding is consistent despite the heterogeneity of the research covering this topic.

Having legitimised and universal access to gender affirming medical interventions is considered to be an important way to reduce the risk of people with gender incongruence experiencing psychological distress or having suicidal ideation/attempts, improving mental health and improving overall health-related quality of life.

Eligibility and suitability for Medicare funding: The proposed eligibility criteria of individuals having a diagnosis of gender incongruence without additional diagnoses such as concomitant psychological conditions or history of suicidal ideation or attempt is intended to be flexible, in order to meet the diverse needs of people making informed choices to access medical interventions for gender affirmation.

Eligibility for Medicare benefits being payable for gender affirming medical interventions rendered to people with gender incongruence is established by:

- The Health Insurance Act 1973. Part I, Section 3 (Interpretation) of The Health Insurance Act 1973 specifying that:

  - A "clinically relevant service means a service rendered by a medical or dental practitioner or an optometrist that is generally accepted in the medical, dental or optometrical profession (as the case may be) as being necessary for the appropriate treatment of the patient to whom it is rendered"
  - A "professional service" means:
    a) a service (other than a diagnostic imaging service) to which an item relates, being a clinically relevant service that is rendered by or on behalf of the of a medical practitioner"

- Standards of Care for the Health of Transgender and Gender Diverse People, Version 8 (Coleman et al. 2022). These guidelines have been endorsed as a Standard of Care by the Australian Professional Association for Trans Health (AusPATH).[2]
- Statement 2.1 of the Standards of Care outline that "we recommend health care systems should provide medically necessary gender-affirming health care for transgender and gender diverse people" ((Coleman et al. 2022), p. 516).
- The AusPATH public statement on gender affirming health care made 26 June 2021[3] which outline that:
  - Gender incongruence is a term used to describe a condition related to sexual health, which may have implications for healthcare such as requiring access to medical gender affirmation; and
  - Gender affirming healthcare is the widely accepted standard in the field (see the list of professional and scientific organisations endorsing this approach at the end of this document). It is a non-judgemental, respectful, shared decision-making model to support a person in their gender in a way that is tailored to their individual needs. Shared decision-making draws on and respects the ability and agency of most clients, including many trans youth, to provide informed consent for their healthcare; and
  - Gender affirming healthcare emphasises affirming language, psychological and peer support, support for social affirmation, and/or medical affirmation (e.g. puberty blockers for young adolescents, or feminising or masculinising hormones and/or surgery for older clients), as medically necessary and clinically relevant.

An assessment of gender incongruence can be made based on the internationally recognised criteria set out in ICD-11 HA60: Gender incongruence of adolescence or adulthood as described previously. For people with gender incongruence, access to gender affirming medical interventions is considered to be medically necessary and clinically relevant by bodies representing medical practitioners. As such, no further 'diagnosis' beyond gender incongruence are required for medical interventions for gender affirmation to be eligible to receive Medicare benefits under the definitions set out in The Health Insurance Act 1973.

Some people may experience temporal gender incongruence as part of an acute psychotic episode, or may have another reason for seeking treatment aside from the alleviation of gender

[2] https://auspath.org.au/standards-of-care/
[3] https://auspath.org.au/2021/06/26/auspath-public-statement-on-gender-affirming-healthcare-including-for-trans-youth/

incongruence (Coleman et al. 2022). It is important that such circumstance be identified and excluded prior to the initiation of medical interventions for gender incongruence.

Having persistent incongruence is set out as a criterion in ICD-11 HA60 which would be used to established eligibility to access medical interventions for gender affirmation. The length of time of what constitutes 'persistent' gender incongruence is self-determined by the patient, however confirmation of a history of gender incongruency and exclusion of reasons for seeking treatment aside from the alleviation of gender incongruence would take place as part of consultations performed prior to the initiation of medical interventions.

Are there any prerequisite tests? (please highlight your response)

Yes No

There are no prerequisite diagnostic tests required to establish the presence of gender incongruence.

People experiencing gender incongruence choosing to initiate hormone therapy would usually have blood tests assessing baseline levels of follicle-stimulating hormone, luteinising hormone, oestradiol or total testosterone. Full blood examination, urea and electrolytes and liver function tests may also be performed prior to initiating hormone treatment.

Are the prerequisite tests MBS funded? (please highlight your response)

Yes No

Please provide details to fund the prerequisite tests:

Provide a response if you answered 'No' to the question above

Intervention

Name of the proposed health technology:

Patient consultations and surgical procedures for gender affirmation in adults with gender incongruence

Describe the key components and clinical steps involved in delivering the proposed health technology:

Some medical interventions for gender affirmation are irreversible, may be associated with a risk of adverse effects, involve complex surgical procedures or have consequences on reproductive options after treatment.

The Standards of Care for the Health of Transgender and Gender Diverse People, Version 8 (Coleman et al. 2022) has been endorsed as a Standard of Care by the Australian Professional Association for Trans Health (AusPATH).[4] The current Standard of Care recommend that "health care professionals obtain a detailed medical history from transgender and gender diverse people, that includes past and present use of hormones, gonadal surgeries, as well as the presence of traditional cardiovascular and cerebrovascular risk factors with the aim of providing regular cardiovascular risk assessment according to established, locally used guidelines." (Statement 15.1).

Amendments to select patient consultation MBS items: This application is requesting amendments to some existing MBS items for patient consultations. The objective of this is to support the complex medical needs of people with gender incongruence and to facilitate providing a multidisciplinary model of care when required.

The stages where comprehensive patient consultations and/or multidisciplinary care are most likely to be required are:

- When a person initially engages with a healthcare provider seeking assessment for gender incongruence and advice on support and/or medical interventions.
    - Some individuals who are "gender questioning" will not have gender incongruence, or it will not be persistent. Commencement of medical interventions for these individuals will **not** be appropriate and so it is important to have all necessary expertise to make an accurate diagnosis. For some who are found to meet the diagnostic criteria for ICD-11 HA60: Gender Incongruence of Adolescence and Adulthood, social transition and support may be all that is required, whereas for others medical interventions are appropriate.
    - Examples of activities performed at this stage are: taking a detailed medical history, arranging investigations as required (e.g. pathology assessments), making an overall assessment of the persons clinical needs, discussion of treatment options available, writing referrals to specialists (if required) and providing overall health advice and information.

[4] https://auspath.org.au/standards-of-care/

  - Healthcare professionals that may be involved in consultations with the patient include general practitioners, endocrinologists, psychiatrists, nurse practitioners and sexual health practitioners.
  - Following relevant consultations, the primary provider (normally a general practitioner) should be able to access an item for coordination of and conduction of a multidisciplinary case conference. This will allow discussion on the diagnosis of gender incongruence of adolescence and adulthood vs differential diagnoses and will allow the formulation of a treatment plan, bearing in mind this must be patient-centred and highly informed by patient choice.
- When a person requests referral for gender affirming surgical interventions.
  - Only a minority of those with a diagnosis of gender incongruence will request surgical interventions. For those people it will be important to have the ability to involve specialists in a range of fields.
  - Examples of activities performed at this stage are: consultations to take further specific history and examinations with specialist plastic surgeons, specialist urologists, specialist obstetricians +/- specialist liaison psychiatrists identifying and planning the treatment and services that will be provided by each member of the multidisciplinary team, explaining the expected outcomes and risks of the treatment plan to the patient and preparing a written record of the patients care plan.
  - Healthcare professionals anticipated to provide these consultations and/or participate in multidisciplinary care of a person receiving gender affirming care are: general practitioners, endocrinologists, sexual health practitioners. plastic surgeons, oral and maxillofacial surgeons, ear nose and throat surgeons, urologists, gynaecologists, psychologists or psychiatrists and nurse practitioners.
  - Following relevant consultations, a specialist (normally a plastic surgeon) should be able to access an item for coordination of and participation in a multidisciplinary case conference. This will allow discussion on the specific risks and benefits of surgical gender affirmation, the best options for various surgical interventions, the timing of procedures and the coordination between specialists. The surgical treatment plan must be patient-centred and highly informed by patient choice.

It is anticipated that routine patient consultations provided to patients by a single medical practitioner (e.g., follow-up for surgery-related complications after gender affirmation surgery) would continue to be provided through existing global patient consultation MBS items without amendment.

MBS items for gender affirming surgeries: Gender affirming surgery refers to a constellation of procedures intended to align a person's body with their gender identity. The number and type of gender affirming surgical procedures accessed by people will depend on their medical suitabilty for particular procedures, their choices and whether they are pursuing masculinising or feminising procedures.

To ensure access to the most frequently performed gender affirming surgical procedures, a range of new MBS items is being requested. The procedures outlined below for which MBS items are sought are either not funded at all through the MBS, are funded through the MBS with MBS item descriptors preventing their use for gender affirming surgeries or have MBS item descriptors that are a 'poor fit' for performing gender affirming and cause anxiety to doctors using them as to whether they are using the appropriate MBS item.

- Gender affirming chest surgery
    - Feminising chest surgery, by any method, including but not limited to, insertion of prostheses, autologous fat graft or local flaps
    - Masculinising chest surgery without surgical repositioning of the nipple areolar complex
    - Masculinising chest surgery with surgical repositioning of the nipple areolar complex
    - Revision of masculinising or feminising chest surgery
- Genital reconfiguration surgery
    - Penectomy and bilateral orchiectomy (feminising)
    - Construction of neo-vagina by any method using penoscrotal skin (feminising)
    - Construction of neo-vagina by skin grafting around a mould (feminising)
    - Construction of neo-vagina by any method using intestinal segment (feminising)
    - Revision of construction of neo-vagina surgery
    - Hysterectomy with or without salpingo-oophorectomy (masculinising)
    - Construction of neo-phallus by any method using local flaps (masculinising)
    - Construction of neo-phallus by microvascular transfer of free autologous tissue (such as radial forearm flap or antero-lateral thigh flap) (masculinising)
    - Construction of neo-phallus by metoidioplasty (formation of penis from clitoral tissue) (masculinising)
    - Revision of construction of neo-phallus surgery
- Gender affirming facial procedures
    - Feminising/masculinising facial surgery, remodelling of forehead and orbits
    - Feminising/masculinising facial surgery, one or more mandibular ostectomies and mandibular reshaping if undertaken
    - Feminising/masculinising facial surgery, insertion of facial implants or bone grafts
    - Feminising/masculinising facial surgery, soft tissue surgery including skin advancement or local flaps to forehead or lips and including fat grafting
    - Revision of feminising/masculinising facial surgery
- Gender affirming voice surgery
    - Chondrolaryngoplasty for gender affirmation (feminising)

Healthcare professionals anticipated to access MBS items associated with gender affirmation surgery are plastic surgeons, oral and maxillofacial surgeons, urologists and ear nose and throat surgeons.

Identify how the proposed technology achieves the intended patient outcomes:

Gender affirmation is an umbrella term encompassing "the personal process or processes a trans or gender diverse person determines is right for them in order to live as their defined gender and

so that society recognises this. Gender affirmation may involve social, medical and/or legal steps that affirm a person's gender."[5]

The use of hormonal treatment and gender affirming surgeries is intended to allow people with gender incongruence to live as their defined gender.

For people assigned female at birth, masculinising medical interventions for gender affirmation may include:

- Hormonal treatment with testosterone. The use of testosterone facilitates gender affirmation by inducing: changes in body shape and size (increased muscle mass); increasing facial and body hair; deepening the voice; enlarging the genitalia; stopping menstrual periods, and redistribution of body fat from the hips and buttocks to the abdomen.
- Gender affirming surgeries such as breast removal/reduction (mastectomy), removal of reproductive organs (hysterectomy with or without salpingo-oophorecomy), construction of penis (phalloplasty or metoidioplasty), construction of scrotum (scrotoplasty with or without insertion of testicular prosthesis) and masculinising facial procedures.

For people assigned male at birth, feminising medical interventions for gender affirmation may include:

- Hormonal treatment with oestrogen. The use of oestrogen facilitates gender affirmation by inducing: changes in body shape and size (decreased muscle mass); slowing facial and body hair growth; decreasing testicular size, inducing nipple and breast growth, and redistribution of body fat from abdomen to the hips and buttocks.
- Gender affirming surgeries such as breast construction (breast augmentation mammoplasty), removal of the penis and testes (orchidectomy), construction of vagina (vaginoplasty and vulvoplasty), feminising facial procedures, and voice surgery (Chondrolaryngoplasty/tracheal shave).

Does the proposed health technology include a registered trademark component with characteristics that distinguishes it from other similar health components? (please highlight your response)

Yes No

Explain whether it is essential to have this trademark component or whether there would be other components that would be suitable:

Not applicable

[5] https://www.acon.org.au/wp-content/uploads/2020/02/TGD-Language-Guide_2020.pdf

Are there any proposed limitations on the provision of the proposed health technology delivered to the patient (For example: accessibility, dosage, quantity, duration or frequency): (please highlight your response)

Yes No

Provide details and explain:

It is proposed that the requested MBS items for gender affirming medical interventions would be limited to adults.

Australian Standards of Care and Treatment Guidelines for Trans and Gender Diverse Children and Adolescents (Telfer et al., 2020) outline that:

> "Current law requires the adolescent's clinicians to ascertain whether or not an adolescent's parents or legal guardians consent to the proposed treatment before an adolescent can access either pubertal suppression or hormone treatment. Where there is no dispute between the parents, the adolescent or the medical practitioner, the clinician may proceed on the basis of the adolescent's consent, where competent to consent, or parental consent, where the adolescent is not competent to consent. Where there is a dispute as to either competence, diagnosis or treatment, court authorisation prior to commencement of treatment is required."

While there are circumstances in which adolescent's would legally seek access to medical interventions associated with gender affirmation it is anticipated that Medicare funding of gender affirming interventions would be provided to adults between 18 and 50 years of age in broader clinical practice.

If applicable, advise which health professionals will be needed to provide the proposed health technology:

Patient consultations: General practitioners, plastic surgeons, oral and maxillofacial surgeons, ear nose and throat surgeons, endocrinologists, urologists, gynaecologists, sexual health practitioners, psychologists and psychiatrists. The vast majority of people would not require consultations with all of these practitioner types, rather the extent of interaction with various specialty practitioners will depend on the medical gender affirmation steps chosen by each person.

Gender affirming surgeries: Plastic surgeons, oral and maxillofacial surgeons, urologists and ear nose and throat surgeons.

If applicable, advise whether delivery of the proposed health technology can be delegated to another health professional:

In circumstances where hormonal treatment for gender affirmation was initiated by an endocrinologist or sexual health practitioner and the person receiving treatment was assessed as being stable, ongoing monitoring may be delegated back to the persons general practitioner.

Delegation of monitoring is not expected for all people receiving hormonal treatment and would only occur in circumstances where the prescribing endocrinologist or sexual health practitioner deems it safe to do so and when there is access to a general practitioner with expertise in the use of gender affirming hormonal treatment.

If applicable, advise if there are any limitations on which health professionals might provide a referral for the proposed health technology:

Referrals would not be required for patient consultations provided by a general practitioner.

Many general practitioners have training and experience in providing medical interventions for gender affirmation, including initiating hormonal treatment and providing follow-up monitoring. In circumstances where a general practitioner assesses that initiation of hormonal treatment is more safely provided by a specialty practitioner referral to an endocrinologist or sexual health practitioner may be provided.

People pursuing gender affirming surgery will require referral to a plastic surgeon, oral and maxillofacial surgeon, urologist or ear nose and throat surgeon depending on the type of procedure(s) requested. Referral to these surgeons would be provided by the person primary managing clinician for medical gender affirmation, usually either a general practitioner, endocrinologist or sexual health practitioner.

Some surgeons may require or request a referral from a psychiatrist with expertise in liaison psychiatry prior discussing gender affirming surgeries with people seeking these interventions.

Is there specific training or qualifications required to provide or deliver the proposed service, and/or any accreditation requirements to support delivery of the health technology? (please highlight your response)

Yes No

Provide details and explain:

The medical interventions for gender affirmation for which funding is being requested in this application are already being provided in Australia.

Currently all practitioners providing medical interventions for gender affirmation must meet the training and qualification requirements set out by their professional board prior to becoming a registered health practitioners.

Given the complex nature of gender affirming medical interventions it is proposed that eligibility to claim Medicare rebates for the MBS items proposed in this submission be limited to medical practitioners that are registered specialists (this will include Specialist General Practitioners who may wish to access consultation items).

Indicate the proposed setting(s) in which the proposed health technology will be delivered: (select all relevant settings)

- [x] Consulting rooms
- [x] Day surgery centre
- [ ] Emergency Department
- [x] Inpatient private hospital
- [x] Inpatient public hospital
- [ ] Laboratory
- [ ] Outpatient clinic
- [ ] Patient's home
- [ ] Point of care testing
- [ ] Residential aged care facility
- [ ] Other (please specify)

Patient consultations would take place in the consulting rooms of the practitioner providing the service.

Some gender affirming surgical procedures would be provided at a day surgery centre. More complex procedures and procedures requiring post-surgery care would be provided as an episode of inpatient care at a private hospital or public hospital.

Is the proposed health technology intended to be entirely rendered inside Australia? (please highlight your response)

Yes No

Please provide additional details on the proposed health technology to be rendered outside of Australia:

Not applicable

Comparator

Nominate the appropriate comparator(s) for the proposed medical service (i.e. how is the proposed population currently managed in the absence of the proposed medical service being available in the Australian health care system). This includes identifying health care resources that are needed to be delivered at the same time as the comparator service:

The objective of this application is to establish a universal funding mechanism for gender affirming medical interventions.

The medical interventions provided through the proposed MBS items are already provided to people undergoing medical gender affirmation in Australia. These interventions are currently funded through a mix of existing MBS items (which are not specific to gender affirmation and do not accurately describe the services provided when rendering gender affirming care), or as out of pocket expense by the person receiving the intervention when there are no suitable MBS items.

The application is not seeking to introduce 'new' medical interventions for gender affirmation that would be used in place of current medical interventions for gender affirmation. Further, the application is not requesting material changes in how people receiving medical interventions for gender affirmation are referred for treatment or managed by clinicians providing care.

As the application is only seeking universal funding of medical interventions for gender affirmation and not a material differences in the type of medical interventions for gender affirmation the comparator nominated is: 'medical interventions for gender affirmation funded by existing non-gender affirmation MBS items or patient out of pocket expenses.'

List any existing MBS item numbers that are relevant for the nominated comparators:

Patient consultations:

MBS items marked with an '*' are currently funded through the MBS but are not able to be used for consultations with people with gender incongruence seeking gender affirming care. This application proposes an amendment to the list of people eligible to have health assessment funded by Medicare to include people with gender incongruence seeking gender affirming care.

MBS items marked with an '**' have Associated Notes (AN.0.47) in the MBS resulting in these items being a 'poor fit' for providing consultations or multidisciplinary care to people receiving gender affirming care. This application proposes minor amendments to the Associated Notes or MBS item descriptor for the purposes of legitimising the use of these items for providing gender affirming care.

General practitioners

- Health Assessments: 701*, 703*, 705*, 707*
- Chronic Disease Management/Multidisciplinary Care Plan: 721**, 723**, 729**, 732**

Gender affirming surgeries:

MBS items marked with an '*' are currently funded through the MBS but have item descriptors preventing use for gender affirming surgeries

MBS items marked with an '**' have MBS item descriptors that are a 'poor fit' for performing gender affirming surgeries. This causes anxiety to doctors using them as to whether they are using the appropriate MBS item. Further, some of these MBS items describe part of the surgical procedure(s) undertaken when performing the gender affirming surgery and only partially fund the entire service required. This scenario places people in a scenario of being likely to incur high out of pocket expenses for some surgeries.

It should be noted that with the implementation of the Plastic and Reconstructive Surgery Section item number changes of the MBS Review, which has now been announced for 1st July 2023, there will be significant changes in this list and a "worsening of fit" for some procedures, as the Plastic Surgery Clinical Committee of the MBS Review did not consider the needs of people with gender incongruence. The applicants will be able to update the list below once the final items are announced (due to be 1st April 2023).

Gender affirming chest surgery

- Feminising chest surgery, by any method, including but not limited to, insertion of prostheses, autologous fat graft or local flaps: 45528* OR 45060* OR 45535*
- Masculinising chest surgery without surgical repositioning of the nipple areolar complex: 31524 (x2) OR 31525* OR 45520* (x2) OR 45522 (x2)
- Masculinising chest surgery with surgical repositioning of the nipple areolar complex: 31524 (x2) OR 31525* OR 45523*
- Revision of masculinising or feminising chest surgery: No current MBS items

Genital reconfiguration surgery

- Penectomy and bilateral radical orchiectomy: 30642* (x2) AND 37405
- Construction of neo-vagina by any method using penoscrotal skin: 35565**
- Construction of neo-vagina by skin grafting around a mould: 35565* OR 45451
- Construction of neo-vagina by any method using intestinal segment: 35565**
- Revision of construction of neo-vagina surgery: No current MBS items
- Hysterectomy with or without salpingo-oophorecomy: 35750, 35751, 35753, 35754
- Construction of neo-phallus by any method using local flaps: 45006**
- Construction of neo-phallus by microvascular transfer of free autologous tissue: 45562** OR 45564** OR 45565**
- Construction of neo-phallus by metoidioplasty: 37423*
- Revision of construction of neo-phallus surgery: No current MBS items

Gender affirming facial procedures

- Feminising/masculinising facial surgery, remodelling of forehead and orbits: 40600**
- Feminising/masculinising facial surgery, one or more mandibular ostectomies and mandibular reshaping if undertaken: No current MBS items
- Feminising/masculinising facial surgery, insertion of facial implants or bone grafts: 45051*

- Feminising/masculinising facial surgery, soft tissue surgery including skin advancement or local flaps to forehead or lips and including fat grafting: No current MBS items
- Revision of feminising/masculinising facial surgery: No current MBS items

Gender affirming voice surgery

- Chondrolaryngoplasty: 41876, 41879

Please provide a rationale for why this is a comparator:

MBS Guidelines state that "if the proposed therapeutic technology is likely to replace an existing MBS listed service, the relevant comparator would be the existing therapeutic technology" (p. 36).

The current MBS items outlined above describe patient consultations and surgical procedures which may be provided to people receiving medical interventions for gender affirmation. In the event that MBS items establishing a universal funding mechanism for gender affirming medical interventions are created than the use of these items would replace existing MBS listed services which are not specific to gender affirmation.

Some medical interventions used for gender affirmation are either not funded through MBS items (e.g. face surgeries) or are not eligible for funding through the MBS when used for the purposes of gender affirmation (e.g. feminising chest surgery/breast augmentation). Despite the lack of MBS funding these procedures are well-established for the purposes of gender affirmation and are considered to represent 'standard medical management funded by out of pocket expenses.'

Pattern of substitution – Will the proposed health technology wholly replace the proposed comparator, partially replace the proposed comparator, displace the proposed comparator or be used in combination with the proposed comparator? (please select your response)

☐ None – used with the comparator
☐ Displaced – comparator will likely be used following the proposed technology in some patients
☐ Partial – in some cases, the proposed technology will replace the use of the comparator, but not in all cases
☒ Full – subjects who receive the proposed intervention will not receive the comparator

Please outline and explain the extent to which the current comparator is expected to be substituted:

With the availability of a suite of MBS items specific to gender affirmation surgeries it is expected that all eligible services rendered for the purposes of gender affirmation would be performed using the newly created items in place of existing non-gender affirmation specific MBS items or standard medical management funded by out of pocket expenses.

Outcomes

(Please copy the below questions and complete for each outcome)

List the key health outcomes (major and minor – prioritising major key health outcomes first) that will need to be measured in assessing the clinical claim for the proposed medical service/technology (versus the comparator): (please select your response)

Global assessments of medical gender affirmation

☒ Health benefits: Change from baseline in health-related quality of life after receiving medical interventions for gender affirmation

☒ Health benefits: Change from baseline in frequency of psychological disorders after receiving medical interventions for gender affirmation (applicable only in people reporting pre-treatment psychological disorders)

☒ Health benefits: Change from baseline in frequency of suicidal ideation after receiving medical interventions for gender affirmation (applicable only in people reporting pre-treatment suicidal ideation)

☒ Health benefits: Change from baseline in frequency of suicidal attempt after receiving medical interventions for gender affirmation (applicable only in people reporting pre-treatment attempt)

☒ Health benefits: Change from baseline in gender dysphoria after receiving medical interventions for gender affirmation (applicable only in people reporting pre-treatment gender dysphoria)

\☒ Health benefits: Change from baseline in body satisfaction/attitudes/image after receiving medical interventions for gender affirmation

☒ Health benefits: Patient reported satisfaction/regret after receiving medical interventions for gender affirmation

Treatment-specific assessments: Surgical procedures

☒ Health benefits: Any of the health benefit (efficacy) outcomes nominated for the global assessment of medical interventions for gender affirmation, plus

☒ Health harms: Safety signals reported for gender affirming surgical procedures (e.g. rate and nature of surgical complications, rate of revision procedures required after gender affirming surgical procedures)

Outcome description – please include information about whether a change in patient management, or prognosis, occurs as a result of the test information:

Not applicable. The application does not relate to the use of an investigative test.

Proposed MBS items

How is the technology/service funded at present? (for example: research funding; State-based funding; self-funded by patients; no funding or payments):

There is no universal funding program for the range of medical interventions associated with gender affirmation that are being requested for funding through this application.

Some patient consultations and multidisciplinary care conferences would be funded through current MBS items for attendances with general practitioners, specialists, sexual health medicine practitioners and psychiatrists as outlined in the table below.

	Patient consultations	Multidisciplinary care conference, Organise	Multidisciplinary care conference, Attend
General practitioners, complex consultations	23, 36, 44	735, 739, 743	747, 750, 758
Specialists (surgeons, endocrinologists, urologists, gynaecologists)	104, 105, 110, 116	820, 822, 823, 830, 832, 834	825, 826, 828, 835, 837, 838
Sexual health practitioner	6051, 6052, 6057, 6058	6064, 6065, 6067, 6068	6071, 6072, 6074, 6075
Psychiatrists	291, 293, 296, 300, 302, 304, 306	855, 857, 858, 861, 864, 866	825, 826, 828, 835, 837, 838

The current funding arrangements for surgical procedures is highly fragmented. Some procedures may be claimed through existing MBS items (which are not fit-for-purpose) or self-funded, including self-funding treatment overseas.

Hormonal treatment is currently funded through the Pharmaceutical Benefits Scheme (PBS). There is no restriction on clinicians being able to prescribe feminising hormones (estradiol) and anti-androgens through current PBS listings.

The PBS listings for masculinising hormones (testosterone) are 'Authority Required' listings and clinicians must contact Services Australia or the Department of Veterans Affairs and obtain approval before a prescription for PBS listed testosterone treatment can be written. It is anticipated that a minor amendment to the clinical criteria for existing PBS restrictions for testosterone for treatment of androgen deficiency to more clearly establish use in people with gender incongruence will be requested through a separate application to the PBAC. The amendment based on PBS codes 11740X, 8619P and 8830R being considered is provided in red text below.

Androgen deficiency

Clinical criteria:

Patient must have an established pituitary or testicular disorder or gender incongruence.

Please provide at least one proposed item with their descriptor and associated costs, for each population/Intervention: (please copy the below questions and complete for each proposed item)

Proposed item details: amendments to MBS items for patient consultations

Correspondence received from s22 , Medicare Benefits Division) outlined that the MSAC Executive considered that gender affirming surgeries needed a multidisciplinary best model of care framework extending before and after any surgery.

The ASPS supports a funding model for gender affirmation that facilitates a multidisciplinary model of care framework. In response to the MSAC Executive's statement that gender affirming surgeries needed a multidisciplinary best model of care framework the ASPS initially proposed creating of a suite of new MBS items specifically for patient consultations and multidisciplinary team care that would be used specifically for the provision of gender affirming care.

At a pre-application meeting with representatives from the Department of Health held 17th March 2023 the Department articulated a preference for a multidisciplinary model of care to be facilitated through existing MBS items for patient consultations, with amendments supporting the use of existing patient consultation items for gender affirming care should this be required.

Amendments to Associated Notes for MBS items for health assessments and the development of chronic disease management plans are proposed. The objective of the proposed amendments is to establish the legitimate the use of existing MBS items to provide a multidisciplinary best model of care.

Proposed amendment to AN.0.36 Health Assessments (MBS items 701, 703, 705 and 707)

MBS items 701, 703, 705 and 707 support health assessments in patient groups with complex medical needs. These have been identified as existing MBS items which would be suitable for use in the context of providing gender affirming care. However, this would require amendment to the list of people eligible to have health assessment funded by Medicare that are outlined in Associated Note (AN.0.36) applicable to these items.

The Associated Note AN.0.36 applicable to health assessments funded through the MBS states that "health assessment means the assessment of a patient's health and physical, psychological and social function and consideration of whether preventive health care and education should be offered to the patient, to improve that patient's health and physical, psychological and social function". The breadth of health domains considered as part of consultation provided through existing MBS items for health assessments is relevant to the care of people with gender incongruence seeking gender affirming care.

It is proposed that people with gender incongruence receiving gender affirming medical interventions be added as a 'Target Group' eligible for health assessments funded through MBS items 701, 703, 705 and 707 in Associated Note AN.0.36 applicable to these items (see bold text below)

Target Group	Frequency of Service
A type 2 diabetes risk evaluation for people aged 40-49 years (inclusive) with a high risk of developing type 2 diabetes as determined by the Australian Type 2 Diabetes Risk Assessment Tool	Once every three years to an eligible patient
A health assessment for people aged 45-49 years (inclusive) who are at risk of developing chronic disease	Once only to an eligible patient
A health assessment for people aged 75 years and older	Provided annually to an eligible patient
A comprehensive medical assessment for permanent residents of residential aged care facilities	Provided annually to an eligible patient
A health assessment for people with an intellectual disability	Provided annually to an eligible patient
A health assessment for refugees and other humanitarian entrants	Once only to an eligible patient
A health assessment for former serving members of the Australian Defence Force	Once only to an eligible patient
A health assessment for people with gender incongruence receiving gender affirming medical interventions	**Once every three years to an eligible patient**

Proposed amendment to AN.0.47 Chronic Disease Management Items (MBS items 721, 723, 729 and 732)

MBS items 721, 723, 729 and 732 have been identified as suitable for general practitioners to use in developing a management plan and coordinating multidisciplinary care for people receiving gender affirming care. These MBS items are currently limited to chronic disease management or the management of a terminal medical conditions.

An amendment to the to the Regulatory requirements outlined in the Associated Notes (AN.0.47) is proposed to establish the legitimate use of these items in providing gender affirming care (see bold text below).

AN.0.47 Regulatory requirements

Items 721, 723, 729, 731 and 732 provide rebates to manage chronic, or terminal medical conditions **or people receiving gender affirming medical interventions** by preparing, coordinating, reviewing or contributing to chronic disease management (CDM) plans **or multidisciplinary care plans for people receiving gender affirming medical interventions**. They apply for a patient who suffers from at least one medical condition that has been present (or is likely to be present) for at least six months **which may include gender incongruence**, or is terminal."

Proposed item details: Gender affirming surgeries

A series of new MBS items specifically for gender affirming surgeries is proposed. Advice received at a pre-application meeting with representatives from the Department of Health held 17th March 2023 was that the creation of new MBS items explicitly for gender affirming surgeries was appropriate.

The Department commented that establishing new MBS items for gender affirming surgeries would support potential post-funding assessments of the uptake and patterns of care of gender affirming surgeries. The ASPS agrees with this comment.

The creation of new MBS items for gender affirming surgeries also supports the 'Complete Medical Service Concept' described in the MBS Review Taskforce Report for Plastic and Reconstructive Surgery Items.[6] In this report it is outlined that "the Taskforce has recommended that each MBS item in the surgical section (T8) of the MBS represents a complete medical service and highlighted that it is not appropriate to claim additional items in relation to a procedure that are intrinsic to the performance of that procedure" (p.20).

Making amendments to existing MBS items which would then be claimed as a series of procedures for the purposes of performing gender affirming surgeries would not be in accordance with the recommendations of the MBS Review Taskforce and is not supported by the ASPS accordingly.

The new MBS items for gender affirming surgeries being requested in this submission are described below.

Gender affirming chest surgery

Category number	2
Category description	Therapeutic Procedures
Proposed item descriptor	Masculinising chest surgery, without surgical repositioning of the nipple-areolar complex in an individual with a diagnosis of gender incongruence
Proposed MBS fee	MBS fees are being developed. These will be based on existing MBS items for similar procedures performed for purposes other than gender affirmation or the time and complexity of performing the procedure if there are no existing MBS items
Indicate the overall cost per patient of providing the proposed health technology	The overall cost per patient undergoing medical gender affirmation will vary substantially based on whether hormonal treatment is used and which surgical procedure(s) are performed
Please specify any anticipated out of pocket expenses	The out of pocket expenses will depend to the fee charged by the surgeon performing the procedure. The applicants has no authority over the fees charged by individual surgeons.

Category number	2
Category description	Therapeutic Procedures
Proposed item descriptor	Masculinising chest surgery, with surgical repositioning or free grafting of the nipple-areolar complex in an individual with a diagnosis of gender incongruence

Category number	2
Category description	Therapeutic Procedures

[6] https://www.health.gov.au/sites/default/files/documents/2021/05/taskforce-final-report-plastic-and-reconstructive-surgery-items-taskforce-report-for-plastic-and-reconstructive-surgery-items.pdf

Proposed item descriptor	Feminising chest surgery, by any method, including but not limited to, insertion of prostheses, autologous fat graft or local flaps in an individual with a diagnosis of gender incongruence

Category number	2
Category description	Therapeutic Procedures
Proposed item descriptor	Feminising / Masculinising chest surgery, revision of, in an individual with a diagnosis of gender incongruence
Proposed MBS fee	MBS fees are being developed. These will be based on existing MBS items for similar procedures performed for purposes other than gender affirmation or the time and complexity of performing the procedure if there are no existing MBS items

Proposed item details: Genital reconfiguration surgery

Category number	2
Category description	Therapeutic Procedures
Proposed item descriptor	Penectomy and bilateral radical orchiectomy, combined, in an individual with a diagnosis of gender incongruence

Category number	2
Category description	Therapeutic Procedures
Proposed item descriptor	Neo-vagina, construction of, by any method using penoscrotal skin in an individual with a diagnosis of gender incongruence

Category number	2
Category description	Therapeutic Procedures
Proposed item descriptor	Neo-vagina, construction of by skin grafting around a mould in an individual with a diagnosis of gender incongruence

Category number	2
Category description	Therapeutic Procedures
Proposed item descriptor	Neo-vagina, construction of, by any method using intestinal segment in an individual with a diagnosis of gender incongruence

Category number	2
Category description	Therapeutic Procedures
Proposed item descriptor	Revision of construction of neo-vagina surgery

Category number	2
Category description	Therapeutic Procedures
Proposed item descriptor	Hysterectomy with or without salpingo-oophorectomy in an individual with a diagnosis of gender incongruence

Category number	2
Category description	Therapeutic Procedures

Proposed item descriptor	Neo-phallus, construction of, by any methods using local flaps in an individual with a diagnosis of gender incongruence

Category number	2
Category description	Therapeutic Procedures
Proposed item descriptor	Neo-phallus, construction of, by microvascular transfer of free autologous tissue (such as radial forearm flap or antero-lateral thigh flap) in an individual with a diagnosis of gender incongruence

Category number	2
Category description	Therapeutic Procedures
Proposed item descriptor	Neo-phallus, construction of by metoidioplasty (formation of penis from clitoral tissue) in an individual with a diagnosis of gender incongruence

Category number	2
Category description	Therapeutic Procedures
Proposed item descriptor	Revision of construction of neo-phallus

Proposed item details: Gender affirming facial procedures

Category number	2
Category description	Therapeutic Procedures
Proposed item descriptor	Feminising / Masculinising facial surgery, remodelling of forehead and orbits in an individual with a diagnosis of gender incongruence

Category number	2
Category description	Therapeutic Procedures
Proposed item descriptor	Feminising / Masculinising facial surgery, one or more mandibular ostectomies and mandibular reshaping if undertaken in an individual with a diagnosis of gender incongruence

Category number	2
Category description	Therapeutic Procedures
Proposed item descriptor	Feminising / Masculinising facial surgery, insertion of facial implants or bone grafts in an individual with a diagnosis of gender incongruence,

Category number	2
Category description	Therapeutic Procedures
Proposed item descriptor	Feminising / Masculinising facial surgery, soft tissue surgery including skin advancement or local flaps to forehead or lips and including fat grafting in an individual with a diagnosis of gender incongruence

Category number	2
Category description	Therapeutic Procedures
Proposed item descriptor	Facial feminisation / masculinisation surgery, revision of, in an individual with a diagnosis of gender incongruence

Proposed item details: Gender affirming voice surgery

MBS item number (where used as a template for the proposed item)	41876
Category number	2
Category description	Therapeutic Procedures
Proposed item descriptor	LARYNX, external operation on, OR LARYNGOFISSURE with or without cordectomy in an individual with a diagnosis of gender incongruence
Proposed MBS fee	$621.20

MBS item number (where used as a template for the proposed item)	41879
Category number	2
Category description	Therapeutic Procedures
Proposed item descriptor	Tracheoplasty, laryngoplasty or thyroplasty, not by injection techniques, including tracheostomy in an individual with a diagnosis of gender incongruence, other than a service associated with a service to which item 41870 applies (H)
Proposed MBS fee	$1,006.55

Algorithms

Preparation for using the health technology

Define and summarise the clinical management algorithm, including any required tests or healthcare resources, before patients would be eligible for the proposed health technology:

Gender affirming surgeries
People electing to receive gender affirming surgical procedures would have consultations with general practitioners, endocrinologists, sexual health practitioners, psychiatrists or psychologists to confirm a diagnosis of gender incongruence prior to being considered eligible for gender affirming surgery.

Depending on the nature of the surgery being performed (most commonly genital surgery) some people who are on hormonal treatment may be advised to discontinue treatment for 1-4 weeks before and after surgery to mitigate the risk of venous thromboembolism (Coleman et al. 2022).

A discussion on the risks and expected physiological changes facilitating the provision of informed consent to undergo gender affirming surgeries would be provided prior to any procedure being performed. This would include discussion of the potential for hormonal therapy to impair fertility, with potential referral to preservation services of sperm cryopreservation and oocyte preservation.

Is there any expectation that the clinical management algorithm *before* the health technology is used will change due to the introduction of the proposed health technology?
(please highlight your response)

Yes No

Describe and explain any differences in the clinical management algorithm prior to the use of the proposed health technology vs the comparator health technology:

Please provide a response if you answered 'Yes' to the question above

Use of the health technology

Explain what other healthcare resources are used in conjunction with delivering the proposed health technology:

Gender affirming surgeries

Health care resources for services provided by anaesthetists, surgical assistants and nurses would be used in episodes of care where a person undergoes a surgical procedure for gender affirmation.

Explain what other healthcare resources are used in conjunction with the comparator health technology:

The application is seeking universal funding of medical interventions for gender affirmation through the MBS and not a material differences in the type of medical interventions for gender affirmation provided. As such, there are differences in the healthcare resource used in conjunction with the comparator health technology (medical interventions for gender affirmation funded by existing non-gender affirmation MBS items or patient out of pocket expenses)

Describe and explain any differences in the healthcare resources used in conjunction with the proposed health technology vs the comparator health technology:

Refer to response to previous question.

Clinical management after the use of health technology

Define and summarise the clinical management algorithm, including any required tests or healthcare resources, *after* the use of the proposed health technology:

Gender affirming surgeries
Following standard post-surgery after care, additional healthcare resources used after a person has received gender affirming surgeries may include:

- Follow-up to assess for evidence of urethral complications in people undergoing construction of a neo-phallus
- Follow-up gynaecological assessment for evidence of granulation tissue, hair and lesions in people undergoing construction of neo-vagina

Define and summarise the clinical management algorithm, including any required tests or healthcare resources, *after* the use of the comparator health technology:

No difference in the healthcare resource used after the comparator health technology (medical interventions for gender affirmation funded by existing non-gender affirmation MBS items or patient out of pocket expenses) are anticipated.

Describe and explain any differences in the healthcare resources used *after* the proposed health technology vs the comparator health technology:

Refer to response to previous question.

Algorithms

Insert diagrams demonstrating the clinical management algorithm with and without the proposed health technology:

Not applicable. The application is seeking universal funding of medical interventions for gender affirmation through the MBS. As there are no material differences in the type of medical

interventions for gender affirmation provided the clinical management of patients is not expected to change.

Claims

In terms of health outcomes (comparative benefits and harms), is the proposed technology claimed to be superior, non-inferior or inferior to the comparator(s)? (please select your response)

☐ Superior
☒ Non-inferior
☐ Inferior

Please state what the overall claim is, and provide a rationale:

The medical interventions provided through the proposed MBS items are already provided to people undergoing medical gender affirmation in Australia.

The application is seeking universal funding of medical interventions for gender affirmation through the MBS and not a material differences in the type of medical interventions for gender affirmation provided. As such, the foreshadowed clinical claim is that: medical interventions for gender affirmation fully funded through the MBS are non-inferior to medical interventions for gender affirmation funded by existing non-gender affirmation MBS items or patient out of pocket expenses.

Why would the requestor seek to use the proposed investigative technology rather than the comparator(s)?

Not applicable. The application does not relate to the use of an investigative test.

Identify how the proposed technology achieves the intended patient outcomes:

This information request is a repeat of the request in Intervention section. Please refer to previous response.

For some people, compared with the comparator(s), does the test information result in: (please highlight your response)

A change in clinical management?	Yes	No
A change in health outcome?	Yes	No
Other benefits?	Yes	No

Not applicable. The application does not relate to the use of an investigative test.

Please provide a rationale, and information on other benefits if relevant:

A petition (Petition EN3307) to then Minister for Health Greg Hunt sought to make gender affirming services eligible for Medicare benefit.[7] This petition received 148,180 signatures in support of this request which is indicative of broad public support for funding of gender affirming medical interventions facilitated through the requested MBS items.

In responding to this petition then Minister Greg Hunt noted that "to date, no application has been submitted to MSAC to list specific gender affirmation surgery items on the MBS." This application directly addresses the gap identified by then Minister Hunt as a means to progress making gender affirming services eligible for a Medicare benefit.

In terms of the immediate costs of the proposed technology (and immediate cost consequences, such as procedural costs, testing costs etc.), is the proposed technology claimed to be more costly, the same cost or less costly than the comparator? (please select your response)

☒ More costly
☐ Same cost
☒ Less costly

Provide a brief rationale for the claim:

From the perspective of the Commonwealth government as the funding body for services provided through the MBS it is anticipated that funding gender affirming medical interventions through the requested MBS items would be more costly. This is because the full range of gender affirming services are not funded through the MBS, resulting in some services currently funded as out of pocket expenses being replaces by gender affirming services funded by the MBS.

From the perspective of people receiving gender affirming medical interventions having the full range of gender affirming services funded through the MBS would be less. This is because the services current funded as out of pocket expenses would be eligible to attract a Medicare rebate thereby reducing the cost for people receiving gender affirming medical interventions.

Summary of Evidence

Provide one or more recent (published) high quality clinical studies that support use of the proposed health service/technology. At 'Application Form lodgement', please do not attach full text articles; just provide a summary (repeat columns as required).

Identify yet-to-be-published research that may have results available in the near future (that could be relevant to your application). Do not attach full text articles; this is just a summary (repeat columns as required).

[7] https://www.aph.gov.au/e-petitions/petition/EN3307

	Type of study design*	Title of journal article or research project (including any trial identifier or study lead if relevant)	Short description of research (max 50 words)**	Website link to journal article or research (if available)	Date of publication***
1.	Clinical management guideline for hormonal treatment	Position statement on the hormonal management of adult transgender and gender diverse individuals (Cheung et al. 2019)	Describes Australian specific recommendations for hormonal treatment and related management of adult transgender people.	DOI: 10.5694/mja2.50259	2019
2.	Clinical management guideline transgender and gender diverse people	Standards of care for the health of transgender and gender diverse people, Version 8 (Coleman et al. 2022)	Provides comprehensive evidence-based recommendations to healthcare professionals to assist transgender people accessing safe and effective treatment.	DOI: 10.1080/26895269.2022.2100644	2022
3.	Systematic review	A systematic review of the effects of hormone therapy on psychological functioning and quality of life in transgender individuals (White Hughto et al. 2016)	Presents the results of 3 studies enrolling 247 transgender adults receiving hormonal treatment. The studies measured exposure to hormone therapy and subsequent changes in mental health (e.g., depression, anxiety) and quality of life outcomes at follow-up. Two studies showed a significant improvement in psychological functioning at 3–6 months and 12 months compared with baseline. The third study showed improvements in quality of life outcomes 12 months after initiating hormone therapy for female-to-male and male-to-female participants.	DOI: 10.1089/trgh.2015.0008	2016

	Type of study design*	Title of journal article or research project (including any trial identifier or study lead if relevant)	Short description of research (max 50 words)**	Website link to journal article or research (if available)	Date of publication***
4.	Cross sectional study	Association Between Gender-Affirming Surgeries and Mental Health Outcomes (Almazan et al. 2021)	Data from a survey of 27,715 transgender adults undertaken in the US in 2015 was analysed. Out of 27,715 respondents, 3,559 (13%) reported undergoing at least 1 gender affirming surgery and 16,401 (59%) reported a desire to undergo gender affirming surgery but had not had any procedures. After adjustment for sociodemographic factors and exposure to other types of gender affirming care, undergoing gender affirming surgery was associated with lower past month psychological distress (adjusted odds ratio [aOR], 0.58 (95% CI: 0.50-0.67)); past year suicidal ideation (aOR, 0.56 (95% CI: 0.50-0.64)) and past year suicide attempt (aOR, 0.65 (95% CI: 0.47, 0.90).	DOI:10.1001/jamasurg.2021.0952	2021
5.	Cohort study	Chest surgery in female-to-male transgender individuals (Frederick et al. 2017)	88 transgender people underwent chest surgery for female-to-male gender affirmation. 6/88 (7%) required surgical revision. No infections, wound dehiscence or nipple loss was reported. 57/88 of people were very satisfied with the outcome, and 100% would recommend the procedure to other transgender people.	DOI: 10.1097/SAP.0000000000000882	2017

	Type of study design*	Title of journal article or research project (including any trial identifier or study lead if relevant)	Short description of research (max 50 words)**	Website link to journal article or research (if available)	Date of publication***
6.	Cross sectional study	Body image in transmen: multidimensional measurement and the effects of mastectomy (Van de Grift et al. 2016)	33 transgender men undergoing mastectomy completed assessments of body image pre-and-post operatively. Before surgery, transmen reported less positive body attitudes and satisfaction, a lower self-esteem and body image-related quality of life compared with cisgender men and women. Mastectomy improved body satisfaction most strongly, although respondents reported improvements in all domains (e.g., decreased dysphoria when looking in the mirror and improved feelings of self-worth).	DOI: 10.1016/j.jsxm.2016.09.003	2016
7.	Cross sectional study	Hormone therapy, gender affirmation surgery, and their association with recent suicidal ideation and depression symptoms in transgender veterans (Tucker et al. 2018)	Outcomes from 206 self-identified transgender veterans were assessed. Significantly lower levels of suicidal ideation experienced in the past year and 2-weeks were seen in veterans with a history of both hormone intervention and surgery on both the chest and genitals in comparison with those who endorsed a history of no medical intervention, history of hormone therapy but no surgical intervention, and those with a history of hormone therapy and surgery on either (but not both) the chest or genitals when controlling for sample demographics (e.g., gender identity and annual income).	DOI: 10.1017/S0033291717003853	2017
8.	Cohort study	Postoperative complications following primary penile inversion vaginoplasty among 330 male-to-female transgender patients (Gaither et al. 2018)	330 transgender people underwent vaginoplasty for male-to-female gender affirmation. 30/330 (9%) required surgical revision. 95/330 (29%) presented with a post-operative complication. No complications were greater than Clavien-Dindo grade IIIB	DOI: 10.1016/j.juro.2017.10.013	2017

	Type of study design*	Title of journal article or research project (including any trial identifier or study lead if relevant)	Short description of research (max 50 words)**	Website link to journal article or research (if available)	Date of publication***
9.	Systematic review	Phalloplasty: a review of techniques and outcomes (Morrison et al. 2016)	Presents aggregated results of 248 articles reporting outcomes for 3,278 people undergoing phalloplasty for female-to-male gender affirmation. Complications were reported for 1,753/3,230 (54%) of procedures. 4 articles (n=320 people) reported satisfaction outcomes for metoidioplasty. 298/320 (93%) of respondents were satisfied overall. 7 articles (n=168 people) reported satisfaction outcomes for phalloplasty by abdominal flap technique. 96/168 (57%) or respondents were satisfied overall.	DOI: 10.1097/PRS.0000000000002518	2016

* Categorise study design, for example meta-analysis, randomised trials, non-randomised trial or observational study, study of diagnostic accuracy, etc.

**Provide high level information including population numbers and whether patients are being recruited or in post-recruitment, including providing the trial registration number to allow for tracking purposes. For yet to be published research, provide high level information including population numbers and whether patients are being recruited or in post-recruitment.

*** If the publication is a follow-up to an initial publication, please advise. For yet to be published research, include the date of when results will be made available (to the best of your knowledge).

References

Ainsworth, TA and Spiegel, JH (2010). "Quality of life of individuals with and without facial feminization surgery or gender reassignment surgery." Qual Life Res **19**(7): 1019-1024.

Almazan, AN and Keuroghlian, AS (2021). "Association between gender-affirming surgeries and mental health outcomes." JAMA surgery **156**(7): 611-618.

Cheung, AS, Ooi, O, et al. (2018). "Sociodemographic and clinical characteristics of transgender adults in Australia." Transgender health **3**(1): 229-238.

Cheung, AS, Wynne, K, et al. (2019). "Position statement on the hormonal management of adult transgender and gender diverse individuals." Medical Journal of Australia **211**(3): 127-133.

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Frederick, MJ, Berhanu, AE, et al. (2017). "Chest surgery in female to male transgender individuals." Annals of Plastic Surgery **78**(3): 249-253.

Gaither, TW, Awad, MA, et al. (2018). "Postoperative complications following primary penile inversion vaginoplasty among 330 male-to-female transgender patients." The Journal of urology **199**(3): 760-765.

Hill, AO, Cook, T, et al. (2023). "Demographic and psychosocial factors associated with recent suicidal ideation and suicide attempts among trans and gender diverse people in Australia." Suicide and Life-Threatening Behavior.

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Nobili, A, Glazebrook, C, et al. (2018). "Quality of life of treatment-seeking transgender adults: A systematic review and meta-analysis." REVIEWS IN ENDOCRINE & METABOLIC DISORDERS **19**(3): 199-220.

Papadopulos, NA, Ehrenberger, B, et al. (2021). "Quality of Life and Satisfaction in Transgender Men After Phalloplasty in a Retrospective Study." Ann Plast Surg **87**(1): 91-97.

Tucker, RP, Testa, RJ, et al. (2018). "Hormone therapy, gender affirmation surgery, and their association with recent suicidal ideation and depression symptoms in transgender veterans." Psychological medicine **48**(14): 2329-2336.

Van de Grift, TC, Kreukels, BP, et al. (2016). "Body image in transmen: multidimensional measurement and the effects of mastectomy." The journal of sexual medicine **13**(11): 1778-1786.

White Hughto, JM and Reisner, SL (2016). "A systematic review of the effects of hormone therapy on psychological functioning and quality of life in transgender individuals." Transgender health **1**(1): 21-31.

Zwickl, S, Wong, AFQ, et al. (2021). "Factors associated with suicide attempts among Australian transgender adults." BMC psychiatry **21**(1): 1-9.

Gender Affirmation PICO Set Reference List

Ainsworth, TA and Spiegel, JH (2010). "Quality of life of individuals with and without facial feminization surgery or gender reassignment surgery." Qual Life Res **19**(7): 1019-1024.

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The Australian Society of Plastic Surgeons is continuing to develop MBS fees for gender affirming surgeries. The final fees will be calculated upon finalisation of suite of MBS items for gender affirming surgeries agreed to be included in the assessment report.

The intent will be to develop MBS fee based on existing MBS items for similar surgical procedures performed for purposes other than gender affirmation. An illustration of the intended approach is provided in the table below. Note that the fee and approach to fee setting set out in the table below is not final. The ASPS will propose final fee based on the overall scope of the assessment and any advice regarding fees provided by the Department of Health, and any expert committees involved in reviewing this application.

Reference MBS items	**MBS item descriptor**	**MBS fee**	**Cost to MBS**
-	Masculinising chest surgery, without surgical repositioning of the nipple-areolar complex in an individual with a diagnosis of gender incongruence	$1,335.70	$1,335.70
45522 (x2)	Reduction mammaplasty (unilateral) without surgical repositioning of the nipple: (a) excluding the treatment of gynaecomastia; and (b) not with insertion of any prosthesis	$667.85	$667.85 x 2 = $1,335.7

	Reference	2023	2024	2025	2026	2027	2028
Males (Age 18-50)	A	6,104,896	6,188,766	6,278,066	6,371,136	6,462,466	6,557,158
Females (Age 18-50)	B	6,099,471	6,180,485	6,268,275	6,360,524	6,450,491	6,544,227
% of population that are transgender	c	1.05%	1.05%	1.05%	1.05%	1.05%	1.05%
Feminising gender affirmation surgeries							
Transgender assigned male at birth	D	64,101	64,982	65,920	66,897	67,856	68,850
% undergoing genital reconfiguration surgery	E	18.4%	18.4%	18.4%	18.4%	18.4%	18.4%
% undergoing chest surgery (breast augementation)	F	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%
% undergoing facial feminisation	G	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%
% undergoing voice surgery	H	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
# undergoing genital reconfiguration surgery	I	11,795	11,957	12,129	12,309	12,485	12,668
# undergoing chest surgery (breast augementation)	J	1,987	2,014	2,044	2,074	2,104	2,134
# undergoing facial feminisation	K	1,667	1,690	1,714	1,739	1,764	1,790
# underoging voice surgery	L	321	325	330	334	339	344
Total feminising surgeries	**M**	**15,769**	**15,986**	**16,216**	**16,457**	**16,693**	**16,937**
Masculinising gender affirmation surgeries							
Transgender assigned female at birth	N	64,044	64,895	65,817	66,786	67,730	68,714
% undergoing genital reconfiguration surgery	O	6%	6%	6%	6%	6%	6%
% undergoing chest surgery (mastectomy)	P	40%	40%	40%	40%	40%	40%
% undergoing facial masculinising	Q	3%	3%	3%	3%	3%	3%
% undergoing voice surgery	R	0%	0%	0%	0%	0%	0%
# undergoing genital reconfiguration surgery	S	4,035	4,088	4,146	4,207	4,267	4,329
# undergoing chest surgery (mastectomy)	T	25,618	25,958	26,327	26,714	27,092	27,486
# undergoing facial feminisation	U	1,665	1,687	1,711	1,736	1,761	1,787
# underoging voice surgery	V	0	0	0	0	0	0
Total feminising surgeries	**W**	**31,318**	**31,734**	**32,184**	**32,658**	**33,120**	**33,601**
Summary calculations							
Uptake of gender affirming surgeries		37%	37%	37%	37%	37%	37%
Number of patients utilising gender affirming surgeries for the first full year		**47,087**					

3. ABS Data - Male

	Age						
	0	1	2	3	4	5	6
2012	157,077	150,320	153,201	152,221	151,594	149,983	149,918
2013	158,747	158,052	152,196	155,193	154,181	153,489	151,731
2014	161,153	159,747	159,970	154,231	157,194	156,116	155,274
2015	163,626	162,196	161,737	162,082	156,309	159,201	157,967
2016	166,071	164,670	164,186	163,851	164,159	158,316	161,054
2017	157,778	165,198	161,751	161,586	164,670	163,471	163,077
2018	165,712	158,552	166,826	163,616	163,493	166,510	165,112
2019	169,190	166,517	160,245	168,764	165,599	165,405	168,216
2020	172,579	169,990	168,198	162,169	170,732	167,497	167,101
2021	175,772	173,364	171,637	170,086	164,100	172,593	169,160
2022	178,731	176,544	174,986	173,496	171,986	165,933	174,230
2023	181,455	179,480	178,122	176,793	175,346	173,768	167,526
2024	183,941	182,184	181,020	179,885	178,598	177,085	175,322
2025	186,203	184,647	183,680	182,732	181,638	180,288	178,594
2026	188,247	186,890	186,104	185,347	184,440	183,285	181,759
2027	190,076	188,912	188,302	187,721	187,003	186,038	184,710
2028	191,708	190,742	190,324	189,918	189,376	188,601	187,463
2029	193,186	192,376	192,154	191,940	191,573	190,974	190,025
2030	194,571	193,853	193,788	193,770	193,595	193,171	192,398

4. ABS Data - Female

	Age						
	0	1	2	3	4	5	6
2012	148,342	142,692	145,149	144,412	144,080	141,791	141,988
2013	150,654	149,326	144,519	147,067	146,306	145,897	143,470
2014	152,933	151,661	151,193	146,478	149,000	148,161	147,613
2015	155,275	153,982	153,598	153,228	148,484	150,924	149,940
2016	157,593	156,326	155,918	155,632	155,235	150,410	152,703
2017	148,888	155,891	153,630	153,641	155,834	154,840	154,837

2018	157,102		149,640	157,467	155,447	155,512	157,651	156,467
2019	160,396		157,883	151,278	159,356	157,390	157,399	159,341
2020	163,605		161,172	159,507	153,154	161,286	159,263	159,076
2021	166,625		164,366	162,765	161,346	155,050	163,123	160,909
2022	169,428		167,373	165,934	164,576	163,212	156,860	164,745
2023	172,007		170,154	168,899	167,695	166,391	164,972	158,438
2024	174,363		172,713	171,643	170,617	169,466	168,108	166,513
2025	176,503		175,047	174,161	173,312	172,337	171,133	169,605
2026	178,440		177,167	176,457	175,787	174,988	173,962	172,592
2027	180,176		179,085	178,534	178,034	177,412	176,563	175,376
2028	181,725		180,822	180,452	180,110	179,659	178,987	177,977
2029	183,132		182,372	182,189	182,028	181,735	181,234	180,400
2030	184,447		183,778	183,738	183,765	183,653	183,310	182,647

2029	2030	Source
6,650,765	6,742,397	ABS population - 3222.0 Series B
6,635,835	6,724,758	ABS population - 3222.0 Series B
1.05%	1.05%	Mid-point of estimate range of 0.1%-2% reported by Cheung et al (2019)
69,833	70,795	A*C
18.4%	18.4%	Cheung et al (2018)
3.1%	3.1%	Cheung et al (2018)
2.6%	2.6%	Cheung et al (2018)
0.5%	0.5%	Cheung et al (2018)
12,849	13,026	D*E
2,165	2,195	D*F
1,816	1,841	D*G
349	354	D*H
17,179	**17,416**	I+J+K+L+M
69,676	70,610	B*C
6%	6%	Cheung et al (2018)
40%	40%	Cheung et al (2018)
3%	3%	Assumed to be same as in transgender assisgned male at borth population
0%	0%	Cheung et al (2018)
4,390	4,448	N*O
27,871	28,244	N*P
1,812	1,836	N*Q
0	0	N*R
34,072	**34,528**	S+T+U+V
37%	37%	(M+W)/(D+N)
		M+W

7	8	9	10	11	12	13	14	15	16	17	18	19	20
145,515	142,886	140,855	140,490	142,790	142,720	143,329	143,823	145,494	147,159	151,181	151,706	154,159	157,094
151,491	147,018	144,357	142,276	141,861	144,145	144,057	144,689	145,441	147,550	149,708	154,580	156,103	158,857
153,337	153,026	148,521	145,807	143,676	143,245	145,510	145,448	146,342	147,544	150,156	153,183	159,071	160,905
156,939	154,930	154,584	150,026	147,259	145,112	144,662	146,954	147,165	148,525	150,252	153,766	157,848	164,056
159,632	158,533	156,491	156,090	151,479	148,695	146,530	146,107	148,672	149,349	151,234	153,865	158,434	162,837
163,733	161,900	161,846	160,613	154,852	149,258	147,537	144,953	145,232	149,213	150,372	154,716	160,578	164,994
164,489	165,022	163,165	163,076	161,801	156,037	150,431	148,844	146,711	147,396	152,119	155,632	162,164	167,592
166,579	165,829	166,337	164,443	164,310	163,032	157,255	151,790	150,670	148,960	150,416	157,585	163,369	169,454
169,672	167,910	167,134	167,605	165,667	165,531	164,242	158,604	153,601	152,900	151,958	155,841	165,266	170,603
168,529	170,979	169,192	168,380	168,806	166,866	166,717	165,565	160,380	155,790	155,841	157,282	163,378	172,364
170,566	169,816	172,241	170,419	169,563	169,987	168,034	168,017	167,314	162,535	158,685	161,083	164,703	170,369
175,597	171,818	171,044	173,434	171,569	170,711	171,122	169,298	169,717	169,408	165,348	163,783	168,301	171,504
168,861	176,818	173,015	172,208	174,556	172,689	171,819	172,357	170,957	171,760	172,150	170,320	170,826	174,936
176,618	170,048	177,981	174,146	173,298	175,644	173,765	173,018	173,968	172,940	174,426	176,978	177,159	177,271
179,856	177,774	171,182	179,082	175,208	174,358	176,692	174,931	174,589	175,901	175,537	179,130	183,641	183,438
182,983	180,977	178,873	172,250	180,111	176,236	175,374	177,822	176,453	176,463	178,418	180,097	185,591	189,726
185,933	184,104	182,076	179,941	173,280	181,139	177,252	176,505	179,344	178,326	178,979	182,979	186,558	191,675
188,688	187,053	185,203	183,144	180,970	174,308	182,155	178,384	178,027	181,217	180,842	183,540	189,440	192,642
191,250	189,808	188,151	186,271	184,173	181,997	175,325	183,287	179,906	179,902	183,732	185,402	190,001	195,522

7	8	9	10	11	12	13	14	15	16	17	18	19	20
137,197	135,064	134,140	133,925	135,423	136,313	136,590	136,050	138,210	139,015	142,527	143,110	146,422	150,446
143,512	138,649	136,489	135,513	135,252	136,741	137,613	137,903	137,607	140,189	141,469	145,884	147,632	151,372
145,026	144,995	140,105	137,892	136,869	136,601	138,067	138,954	139,494	139,629	142,695	144,900	150,504	152,688
149,227	146,565	146,506	141,561	139,298	138,268	137,977	139,460	140,607	141,591	142,232	146,255	149,693	155,750
151,553	150,766	148,076	147,961	142,967	140,697	139,645	139,369	141,114	142,706	144,194	145,794	151,051	154,939
155,930	153,423	153,819	151,923	146,709	140,755	138,650	137,974	138,070	141,236	143,999	146,779	152,396	157,807

156,247	157,223	154,666	155,008	153,051	147,817	141,880	139,930	139,674	140,203	144,166	149,078	153,836	159,189
157,931	157,590	158,514	155,901	156,180	154,201	148,985	143,210	141,697	141,890	143,247	149,441	156,409	160,892
160,794	159,264	158,871	159,740	157,065	157,321	155,359	150,304	144,961	143,898	144,912	148,483	156,719	163,412
160,502	162,102	160,521	160,074	160,881	158,185	158,457	156,652	152,023	147,121	146,862	150,049	155,624	163,590
162,313	161,790	163,340	161,705	161,198	161,983	159,303	159,730	158,346	154,149	150,040	151,921	157,081	162,391
166,110	163,565	162,994	164,492	162,798	162,270	163,070	160,541	161,377	160,413	156,986	154,960	158,761	163,663
159,771	167,332	164,739	164,118	165,558	163,844	163,333	164,278	162,146	163,393	163,183	161,787	161,636	165,186
167,807	160,958	168,472	165,830	165,153	166,574	164,878	164,506	165,837	164,104	166,082	167,845	168,270	167,879
170,867	168,965	162,072	169,536	166,841	166,143	167,581	166,021	166,025	167,744	166,725	170,625	174,163	174,353
173,815	171,990	170,044	163,105	170,516	167,801	167,119	168,689	167,493	167,874	170,285	171,130	176,752	180,061
176,599	174,938	173,069	171,076	164,087	171,475	168,777	168,227	170,161	169,342	170,413	174,693	177,257	182,650
179,200	177,722	176,017	174,101	172,057	165,047	172,451	169,884	169,699	172,010	171,881	174,821	180,819	183,154
181,622	180,323	178,801	177,049	175,082	173,016	166,023	173,558	171,356	171,548	174,548	176,289	180,947	186,716

21	22	23	24	25	26	27	28	29	30	31	32	33	34
162,833	169,617	169,458	169,636	170,388	172,106	172,487	171,157	172,104	167,876	164,842	158,216	155,038	151,584
161,469	167,172	174,099	173,381	172,754	173,191	174,944	175,518	174,417	175,412	170,868	167,414	160,575	157,240
163,330	165,906	171,759	178,106	176,570	175,620	176,093	178,042	178,849	177,802	178,465	173,496	169,821	162,824
165,550	167,938	170,670	175,925	181,418	179,548	178,637	179,315	181,505	182,364	180,976	181,194	175,996	172,154
168,702	170,160	172,706	174,840	179,240	184,397	182,568	181,861	182,779	185,022	185,539	183,707	183,691	178,327
170,083	178,365	182,127	183,102	183,688	185,921	187,819	183,833	183,529	181,877	183,689	181,327	181,279	180,395
170,887	176,940	186,530	189,137	188,078	187,651	189,408	190,967	186,763	186,232	184,204	185,758	183,466	183,335
173,714	178,013	185,428	193,813	194,306	192,198	191,280	192,681	194,010	189,575	188,654	186,360	187,983	185,608
175,533	180,787	186,437	192,661	198,942	198,392	195,798	194,528	195,703	196,798	191,976	190,789	188,569	190,105
176,569	182,473	189,053	193,532	197,698	202,950	201,922	198,984	197,492	198,436	199,147	194,069	192,954	190,650
178,237	183,401	190,613	196,041	198,490	201,645	206,421	205,056	201,898	200,183	200,749	201,203	196,197	194,996
176,083	184,882	191,317	197,410	200,862	202,328	205,023	209,466	207,886	204,509	202,430	202,746	203,264	198,179
177,082	182,571	192,608	197,951	202,115	204,608	205,622	207,996	212,225	210,430	206,698	204,374	204,754	205,188
180,350	183,382	190,078	199,049	202,520	205,753	207,807	208,506	210,675	214,692	212,548	208,579	206,321	206,619
182,546	186,491	190,697	196,358	203,501	206,066	208,871	210,616	211,116	213,079	216,752	214,377	210,470	208,135
188,552	188,498	193,584	196,787	200,674	206,936	209,088	211,591	213,145	213,443	215,074	218,519	216,203	212,221
194,835	194,503	195,588	199,672	201,106	204,113	209,958	211,810	214,119	215,471	215,440	216,842	220,342	217,951
196,785	200,783	201,591	201,677	203,990	204,544	207,136	212,682	214,338	216,447	217,467	217,210	218,666	222,086
197,754	202,732	207,870	207,677	205,994	207,427	207,571	209,861	215,210	216,666	218,444	219,238	219,034	220,412

21	22	23	24	25	26	27	28	29	30	31	32	33	34
157,013	161,993	162,831	163,251	163,949	166,354	168,714	168,311	169,095	165,094	162,735	157,273	154,571	152,199
155,026	161,567	166,834	167,225	167,041	167,645	170,136	172,574	172,178	172,795	168,334	165,489	159,771	156,885
156,050	159,678	166,512	171,323	171,096	170,817	171,508	174,080	176,524	175,958	176,104	171,147	168,041	162,133
157,542	160,876	164,807	171,169	175,341	175,013	174,824	175,598	178,180	180,445	179,391	179,021	173,794	170,490
160,604	162,369	166,008	169,467	175,187	179,258	179,022	178,915	179,698	182,104	183,878	182,307	181,666	176,242
161,737	169,096	174,801	177,131	179,467	184,352	188,130	185,959	186,295	185,302	187,167	185,246	184,223	182,378

163,707	168,741	177,479	182,066	182,694	184,407	188,991	192,400	189,827	189,799	188,304	189,775	187,761	186,611
165,318	170,981	177,447	185,025	187,846	187,824	189,226	193,427	196,417	193,467	192,918	191,015	192,390	190,243
166,975	172,538	179,621	184,937	190,761	192,936	192,606	193,629	197,414	200,028	196,561	195,607	193,609	194,850
169,381	174,059	181,016	186,971	190,566	195,755	197,630	196,925	197,540	200,955	203,060	199,195	198,149	196,023
169,467	176,356	182,410	188,254	192,514	195,483	200,376	201,883	200,774	201,028	203,942	205,650	201,696	200,523
168,110	176,252	184,480	189,448	193,645	197,298	199,978	204,511	205,625	204,165	203,934	206,461	208,078	204,002
169,244	174,733	184,181	191,349	194,709	198,314	201,684	204,013	208,162	208,932	206,999	206,391	208,831	210,323
170,607	175,677	182,436	190,853	196,458	199,243	202,573	205,602	207,558	211,372	211,682	209,383	208,691	211,009
173,163	176,877	183,185	188,944	195,833	200,878	203,396	206,393	209,058	210,684	214,050	214,005	211,619	210,814
179,475	179,242	184,157	189,495	193,774	200,120	204,904	207,100	209,743	212,090	213,279	216,299	216,170	213,674
185,182	185,555	186,522	190,467	194,324	198,061	204,146	208,607	210,450	212,774	214,685	215,528	218,463	218,223
187,770	191,260	192,833	192,831	195,296	198,611	202,087	207,849	211,957	213,483	215,369	216,934	217,692	220,515
188,274	193,848	198,537	199,141	197,660	199,583	202,637	205,791	211,199	214,990	216,079	217,618	219,097	219,744

35	36	37	38	39	40	41	42	43	44	45	46	47	48
151,188	151,533	153,848	156,955	160,797	167,435	169,797	161,443	158,940	153,147	149,485	148,968	150,198	154,564
153,660	153,128	153,301	155,530	158,584	162,307	168,811	171,081	162,617	159,895	153,881	150,088	149,473	150,607
159,360	155,644	154,938	155,024	157,202	160,136	163,728	170,133	172,275	163,595	160,642	154,496	150,612	149,902
165,026	161,421	157,528	156,734	156,769	158,825	161,626	165,118	171,387	173,286	164,376	161,284	155,047	151,074
174,351	167,084	163,302	159,324	158,478	158,396	160,318	163,024	166,381	172,403	174,055	165,012	161,824	155,503
175,652	171,378	164,599	159,538	156,770	156,132	157,498	157,885	162,204	163,888	169,056	169,649	159,926	156,439
182,131	177,169	172,729	165,800	160,640	157,743	156,937	158,124	158,408	162,645	164,200	169,247	169,716	159,870
185,142	183,708	178,574	173,976	166,942	161,654	158,585	157,597	158,677	158,885	162,987	164,423	169,333	169,648
187,401	186,703	185,094	179,805	175,099	167,940	162,484	159,236	158,148	159,147	159,229	163,208	164,517	169,267
191,857	188,931	188,058	186,291	180,901	176,065	168,743	163,114	159,767	158,607	159,482	159,449	163,296	164,458
192,376	193,354	190,261	189,233	187,358	181,841	176,840	169,350	163,628	160,213	158,934	159,694	159,540	163,235
196,666	193,830	194,638	191,396	190,263	188,259	182,582	177,412	169,832	164,045	160,521	159,134	159,773	159,479
199,804	198,079	195,078	195,736	192,395	191,131	188,967	183,125	177,866	170,223	164,329	160,705	159,205	159,704
206,756	201,165	199,285	196,138	196,696	193,230	191,809	189,476	183,546	178,225	170,481	164,493	160,761	159,129
208,142	208,073	202,332	200,310	197,066	197,500	193,881	192,298	189,871	183,878	178,453	170,620	164,530	160,674
209,607	209,414	209,191	203,316	201,199	197,838	198,117	194,343	192,667	190,174	184,080	178,559	170,634	164,426
213,689	210,876	210,531	210,169	204,202	201,967	198,457	198,573	194,708	192,965	190,364	184,176	178,553	170,517
219,414	214,956	211,993	211,507	211,046	204,964	202,580	198,914	198,933	195,002	193,150	190,449	184,158	178,417
223,547	220,677	216,071	212,968	212,385	211,799	205,573	203,031	199,274	199,222	195,183	193,230	190,417	184,009

35	36	37	38	39	40	41	42	43	44	45	46	47	48
151,814	152,234	154,749	158,683	163,381	170,640	173,676	163,449	161,854	155,221	151,639	151,473	153,263	157,143
154,336	153,810	154,075	156,479	160,349	164,961	172,098	175,001	164,644	162,833	155,979	152,281	152,040	153,752
159,069	156,374	155,692	155,846	158,188	161,968	166,459	173,457	176,217	165,645	163,603	156,636	152,865	152,549
164,397	161,185	158,329	157,533	157,624	159,876	163,529	167,881	174,727	177,252	166,449	164,284	157,248	153,403
172,754	166,510	163,137	160,168	159,312	159,313	161,442	164,955	169,158	175,765	178,047	167,128	164,885	157,783
176,401	171,988	165,609	160,935	158,049	157,005	158,292	159,086	163,895	168,024	174,518	177,661	166,171	164,240

184,465	178,227	173,622	167,064	162,261	159,267	158,069	159,205	159,889	164,595	168,582	174,945	177,967	166,360
188,786	186,361	179,924	175,132	168,441	163,527	160,375	159,022	160,046	160,628	165,188	169,041	175,276	178,154
192,397	190,666	188,044	181,420	176,493	169,694	164,625	161,318	159,855	160,778	161,219	165,645	169,375	175,465
196,960	194,238	192,310	189,506	182,749	177,715	170,765	165,544	162,131	160,571	161,355	161,669	165,975	169,564
198,099	198,769	195,853	193,745	190,807	183,945	178,759	171,664	166,337	162,831	161,136	161,796	161,996	166,164
202,538	199,855	200,335	197,244	195,005	191,960	184,954	179,623	172,425	167,009	163,375	161,559	162,108	162,178
205,964	204,248	201,380	201,685	198,468	196,126	192,935	185,787	180,356	173,070	167,531	163,781	161,859	162,281
212,225	207,618	205,725	202,687	202,867	199,550	197,065	193,732	186,488	180,971	173,565	167,915	164,064	162,021
212,861	213,833	209,053	206,993	203,835	203,915	200,459	197,834	194,404	187,078	181,439	173,926	168,179	164,214
212,607	214,416	215,218	210,277	208,099	204,846	204,788	201,197	198,478	194,960	187,519	181,773	174,171	168,310
215,465	214,167	215,801	216,438	211,381	209,107	205,718	205,522	201,837	199,030	195,392	187,846	182,007	174,294
220,012	217,023	215,552	217,021	217,538	212,386	209,976	206,453	206,158	202,385	199,457	195,709	188,072	182,120
222,303	221,568	218,406	216,774	218,120	218,539	213,252	210,707	207,088	206,702	202,808	199,769	195,925	188,176

49	50	51	52	53	54	55	56	57	58	59	60	61	62
155,957	156,432	155,545	150,051	148,165	144,308	141,248	139,670	134,811	130,539	129,448	125,341	123,661	121,330
154,839	156,118	156,509	155,539	150,001	148,041	144,051	140,882	139,261	134,377	130,070	128,915	124,728	122,952
150,912	155,020	156,216	156,517	155,488	149,889	147,786	143,692	140,486	138,825	133,911	129,560	128,308	124,042
150,238	151,133	155,147	156,254	156,491	155,383	149,652	147,434	143,311	140,071	138,361	133,409	128,980	127,629
151,412	150,465	151,277	155,193	156,235	156,391	155,136	149,305	147,048	142,899	139,619	137,853	132,826	128,322
151,833	147,940	148,771	148,298	154,224	155,305	154,600	152,989	147,161	143,672	140,383	136,634	135,014	128,596
156,285	151,614	147,663	148,448	147,924	153,759	154,740	153,949	152,313	146,494	142,999	139,698	135,940	134,254
159,717	156,065	151,333	147,352	148,081	147,490	153,205	154,093	153,277	151,629	145,814	142,308	138,998	135,191
169,469	159,484	155,770	151,010	146,991	147,650	146,965	152,569	153,422	152,588	150,923	145,111	141,597	138,234
169,084	169,208	159,177	155,431	150,636	146,564	147,128	146,359	151,909	152,738	151,881	150,193	144,385	140,823
164,285	168,820	168,870	158,824	155,040	150,194	146,046	146,522	145,729	151,233	152,030	151,147	149,436	143,593
163,062	164,031	168,480	168,482	158,419	154,579	149,660	145,445	145,893	145,084	150,534	151,293	150,384	148,609
159,309	162,806	163,703	168,093	168,039	157,944	154,027	149,043	144,821	145,248	144,418	149,806	150,529	149,549
159,529	159,060	162,479	163,329	167,647	167,528	157,377	153,391	148,401	144,181	144,579	143,727	149,049	149,694
158,948	159,276	158,742	162,105	162,901	167,133	166,921	156,727	152,728	147,741	143,520	143,886	143,012	148,227
160,483	158,689	158,952	158,377	161,677	162,404	166,527	166,226	156,047	152,043	147,057	142,832	143,166	142,230
164,225	160,224	158,367	158,588	157,962	161,184	161,817	165,837	165,501	155,348	151,336	146,349	142,122	142,386
170,302	163,956	159,898	158,005	158,174	157,485	160,604	161,150	165,114	164,754	154,626	150,605	145,619	141,353
178,180	170,016	163,618	159,532	157,594	157,696	156,922	159,944	160,455	164,371	163,982	153,879	149,852	144,830

49	50	51	52	53	54	55	56	57	58	59	60	61	62
159,202	158,727	158,672	153,537	151,034	147,845	144,068	141,605	138,186	134,082	132,241	127,324	125,683	123,276
157,541	159,524	158,982	158,865	153,714	151,172	147,890	144,036	141,539	138,087	133,943	132,047	127,079	125,364
154,173	157,882	159,794	159,192	159,049	153,866	151,227	147,863	143,982	141,447	137,953	133,764	131,801	126,778
153,002	154,546	158,181	160,028	159,401	159,214	153,938	151,215	147,820	143,906	141,327	137,782	133,538	131,504
153,858	153,381	154,854	158,425	160,240	159,571	159,281	153,927	151,173	147,741	143,789	141,158	137,556	133,249
158,630	154,110	154,021	153,624	159,188	160,191	158,959	158,441	153,637	149,372	147,382	143,075	140,398	135,905

164,345	158,667	154,081	153,974	153,554	159,074	160,026	158,739	158,218	153,433	149,169	147,163	142,839	140,114
166,475	164,385	158,643	154,042	153,917	153,466	158,923	159,812	158,526	158,014	153,231	148,959	146,926	142,562
178,248	166,510	164,348	158,596	153,982	153,827	153,329	158,711	159,595	158,319	157,798	153,005	148,717	146,632
175,559	178,256	166,464	164,286	158,523	153,890	153,686	153,130	158,498	159,384	158,098	157,553	152,746	148,416
169,662	175,567	178,186	166,394	164,196	158,416	153,748	153,486	152,930	158,286	159,157	157,849	157,272	152,425
166,259	169,673	175,494	178,085	166,294	164,068	158,255	153,541	153,279	152,731	158,058	158,899	157,561	156,927
162,271	166,269	169,607	175,394	177,953	166,157	163,889	158,033	153,331	153,072	152,516	157,799	158,602	157,211
162,364	162,280	166,203	169,512	175,261	177,782	165,967	163,647	157,803	153,119	152,850	152,270	157,500	158,242
162,096	162,365	162,215	166,110	169,389	175,091	177,557	165,714	163,396	157,573	152,889	152,598	151,988	157,140
164,276	162,091	162,294	162,122	165,985	169,227	174,868	177,270	165,450	163,141	157,321	152,629	152,308	151,645
168,366	164,269	162,021	162,201	162,006	165,831	169,019	174,590	176,974	165,188	162,872	157,045	152,340	151,965
174,340	168,352	164,195	161,930	162,086	161,861	165,631	168,757	174,304	176,676	164,915	162,578	156,741	151,999
182,156	174,315	168,272	164,100	161,816	161,941	161,673	165,378	168,488	174,018	176,365	164,615	162,254	156,383

63	64	65	66	67	68	69	70	71	72	73	74	75	76
118,334	119,676	123,900	104,733	99,727	94,733	85,161	83,710	77,433	74,237	70,065	65,658	62,216	57,480
120,542	117,443	118,594	122,619	103,550	98,472	93,398	83,816	82,249	75,944	72,647	68,391	63,903	60,350
122,183	119,666	116,423	117,411	121,270	102,291	97,130	91,968	82,402	80,715	74,368	70,962	66,616	62,039
123,300	121,331	118,662	115,305	116,170	119,835	100,944	95,694	90,464	80,917	79,092	72,697	69,175	64,727
126,889	122,468	120,346	117,560	114,131	114,848	118,298	99,499	94,179	88,881	79,340	77,367	70,919	67,270
124,909	124,256	121,229	120,040	117,034	113,826	114,543	117,096	98,064	91,825	86,596	76,784	75,129	68,305
127,807	124,071	123,255	120,103	118,821	115,718	112,387	112,926	115,253	96,346	90,031	84,702	74,906	73,075
133,439	126,963	123,092	122,127	118,905	117,507	114,277	110,828	111,181	113,256	94,493	88,092	82,657	72,889
134,376	132,557	125,969	121,977	120,923	117,607	116,061	112,713	109,143	109,285	111,101	92,484	85,995	80,459
137,406	133,499	131,529	124,847	120,795	119,626	116,191	114,505	111,034	107,325	107,254	108,788	90,332	83,758
139,978	136,508	132,469	130,361	123,646	119,513	118,199	114,651	112,820	109,205	105,355	105,047	106,281	88,010
142,727	139,062	135,457	131,301	129,111	122,342	118,100	116,646	112,982	110,983	107,225	103,214	102,655	103,574
147,708	141,791	137,996	134,271	130,052	127,758	120,909	116,567	114,964	111,163	108,991	105,073	100,891	100,072
148,643	146,735	140,706	136,792	133,002	128,699	126,273	119,352	114,905	113,134	109,192	106,827	102,735	98,381
148,789	147,665	145,616	139,487	135,509	131,631	127,215	124,661	117,668	113,095	111,151	107,051	104,478	100,207
147,334	147,811	146,538	144,355	138,181	134,114	130,120	125,600	122,910	115,827	111,126	108,983	104,714	101,924
141,386	146,374	146,690	145,279	143,007	136,767	132,583	128,477	123,849	120,998	113,825	108,976	106,620	102,173
141,546	140,478	145,271	145,437	143,932	141,550	135,215	130,921	126,696	121,936	118,921	111,639	106,630	104,051
140,524	140,643	139,432	144,036	144,097	142,473	139,953	133,531	129,119	124,753	119,856	116,651	109,253	104,078

63	64	65	66	67	68	69	70	71	72	73	74	75	76
119,415	119,884	124,284	105,058	101,561	96,890	87,626	85,414	79,636	76,578	73,299	69,368	66,425	64,680
122,897	118,962	119,325	123,603	104,430	100,877	96,142	86,856	84,564	78,737	75,599	72,248	68,250	65,218
124,996	122,449	118,430	118,701	122,872	103,751	100,123	95,321	86,020	83,638	77,761	74,546	71,116	67,043
126,430	124,561	121,923	117,836	118,030	122,085	103,002	99,294	94,429	85,109	82,631	76,710	73,411	69,893
131,150	126,007	124,043	121,329	117,193	117,303	121,216	102,175	98,391	93,454	84,115	81,544	75,574	72,181
132,867	130,562	126,193	124,817	121,677	117,125	116,998	119,627	100,374	95,446	90,669	81,506	79,834	74,430

135,560	132,458	130,048	125,596	124,136	120,909	116,274	116,018	118,479	99,288	94,273	89,397	80,219	78,412
139,766	135,151	131,948	129,442	124,923	123,363	120,041	115,314	114,921	117,200	98,078	92,962	87,994	78,803
142,205	139,339	134,630	131,335	128,749	124,152	122,482	119,057	114,233	113,693	115,776	96,724	91,515	86,451
146,257	141,769	138,800	134,006	130,636	127,960	123,277	121,489	117,954	113,029	112,331	114,195	95,237	89,929
148,033	145,800	141,218	138,158	133,296	129,837	127,061	122,283	120,369	116,717	111,684	110,808	112,447	93,596
152,018	147,566	145,227	140,561	137,423	132,482	128,928	126,040	121,162	119,113	115,336	110,182	109,124	110,520
156,497	151,528	146,985	144,548	139,814	136,586	131,557	127,896	124,890	119,909	117,713	113,794	108,521	107,268
156,778	155,984	150,926	146,298	143,778	138,963	135,633	130,509	126,735	123,605	118,509	116,148	112,089	106,688
157,799	156,263	155,358	150,219	145,519	142,903	137,998	134,556	129,330	125,438	122,169	116,946	114,420	110,209
156,697	157,273	155,633	154,624	149,416	144,633	141,908	136,903	133,343	128,009	123,987	120,564	115,211	112,508
151,229	156,179	156,644	154,901	153,797	148,506	143,629	140,784	135,674	131,985	126,534	122,363	118,783	113,292
151,550	150,741	155,557	155,911	154,075	152,860	147,479	142,496	139,523	134,298	130,470	124,884	120,563	116,810
151,587	151,063	150,149	154,833	155,083	153,142	151,804	146,319	141,223	138,112	132,762	128,774	123,052	118,569

77	78	79	80	81	82	83	84	85	86	87	88	89	90
52,297	49,098	46,152	43,429	42,262	39,380	35,570	32,072	28,245	24,763	20,787	17,391	14,064	11,740
55,544	50,319	47,002	43,930	41,071	39,677	36,668	32,811	29,277	25,479	22,052	18,262	15,059	11,996
58,373	53,497	48,224	44,792	41,598	38,612	36,997	33,874	29,999	26,453	22,728	19,408	15,842	12,867
60,063	56,278	51,325	46,011	42,467	39,159	36,055	34,229	31,019	27,149	23,637	20,037	16,865	13,559
62,722	57,964	54,050	49,026	43,676	40,028	36,616	33,406	31,392	28,117	24,298	20,874	17,441	14,460
64,190	59,364	54,635	50,946	46,456	41,046	37,583	33,869	31,062	28,507	25,524	21,325	18,382	14,921
66,209	61,979	57,059	52,242	48,430	43,857	38,454	34,888	31,109	28,203	25,539	22,532	18,537	15,715
70,863	63,958	59,605	54,591	49,692	45,749	41,115	35,723	32,071	28,269	25,289	22,567	19,610	15,868
70,713	68,486	61,539	57,058	51,957	46,972	42,919	38,222	32,863	29,168	25,370	22,367	19,663	16,809
78,106	68,390	65,946	58,959	54,353	49,160	44,111	39,945	35,204	29,925	26,213	22,472	19,521	16,888
81,336	75,567	65,879	63,208	56,190	51,453	46,190	41,077	36,814	32,078	26,912	23,238	19,629	16,783
85,494	78,720	72,822	63,171	60,267	53,218	48,371	43,037	37,881	33,567	28,871	23,877	20,317	16,894
100,643	82,774	75,890	69,859	60,260	57,109	50,055	45,095	39,713	34,562	30,232	25,638	20,894	17,503
97,273	97,475	79,829	72,833	66,670	57,130	53,743	46,691	41,636	36,258	31,150	26,867	22,458	18,018
95,660	94,245	94,043	76,644	69,539	63,237	53,791	50,160	43,135	38,037	32,702	27,706	23,555	19,389
97,453	92,702	90,949	90,314	73,196	65,978	59,559	50,220	46,358	39,422	34,323	29,101	24,304	20,349
99,141	94,458	89,480	87,366	86,274	69,468	62,161	55,625	46,430	42,385	35,588	30,559	25,543	21,009
99,403	96,115	91,194	85,975	83,482	81,904	65,467	58,074	51,447	42,466	38,281	31,701	26,838	22,095
101,249	96,389	92,816	87,643	82,173	79,276	77,211	61,184	53,732	47,074	38,369	34,118	27,856	23,230

77	78	79	80	81	82	83	84	85	86	87	88	89	90
60,969	57,623	55,927	53,599	53,865	51,591	48,343	45,698	42,194	38,855	35,299	31,092	26,994	23,366
63,353	59,555	56,093	54,223	51,723	51,690	49,184	45,754	42,892	39,214	35,706	32,038	27,834	23,799
63,915	61,919	58,013	54,424	52,369	49,679	49,327	46,599	42,992	39,910	36,080	32,449	28,718	24,571
65,738	62,505	60,353	56,328	52,604	50,344	47,454	46,783	43,835	40,049	36,765	32,828	29,124	25,385
68,567	64,324	60,962	58,640	54,488	50,614	48,135	45,053	44,055	40,881	36,936	33,494	29,500	25,777
70,884	67,116	63,178	59,666	55,940	51,106	47,603	44,961	42,043	40,616	37,459	33,017	29,820	26,251

72,927	69,270	65,386	61,327	57,671	53,791	48,844	45,175	42,306	39,197	37,470	34,121	29,662	26,373
76,841	71,280	67,497	63,484	59,289	55,469	51,424	46,366	42,522	39,456	36,174	34,144	30,669	26,246
77,236	75,117	69,469	65,547	61,389	57,039	53,042	48,828	43,657	39,671	36,425	32,974	30,703	27,152
84,751	75,523	73,230	67,482	63,405	59,081	54,566	50,388	45,998	40,750	36,644	33,223	29,669	27,201
88,173	82,884	73,638	71,149	65,289	61,035	56,532	51,848	47,480	42,949	37,654	33,434	29,904	26,296
91,782	86,242	80,827	71,558	68,850	62,862	58,415	53,730	48,870	44,346	39,699	34,369	30,106	26,515
108,390	89,785	84,116	78,558	69,259	66,303	60,178	55,535	50,658	45,658	41,003	36,249	30,960	26,706
105,216	106,046	87,585	81,770	76,048	66,712	63,487	57,224	52,375	47,343	42,229	37,455	32,668	27,477
104,661	102,958	103,463	85,155	79,173	73,266	63,893	60,386	53,982	48,962	43,803	38,589	33,769	29,005
108,121	102,421	100,460	100,600	82,458	76,286	70,178	60,780	56,974	50,473	45,309	40,036	34,799	29,991
110,384	105,816	99,944	97,690	97,424	79,460	73,080	66,767	57,355	53,280	46,716	41,422	36,112	30,914
111,161	108,040	103,265	97,198	94,616	93,892	76,130	69,537	63,016	53,644	49,324	42,717	37,372	32,089
114,622	108,809	105,444	100,438	94,147	91,195	89,969	72,450	65,640	58,950	49,668	45,113	38,550	33,217

91	92	93	94	95	96	97	98	99	100	Total	Millions	Growth
8,986	6,760	4,239	3,112	2,277	1,663	1,096	690	455	639	########	11.31	
9,858	7,424	5,481	3,364	2,415	1,729	1,243	807	500	782	########	11.51	1.75%
10,089	8,157	6,027	4,354	2,612	1,834	1,292	916	585	918	########	11.71	1.75%
10,839	8,360	6,631	4,792	3,381	1,984	1,371	952	664	1,078	########	11.92	1.77%
11,440	8,994	6,804	5,276	3,723	2,570	1,484	1,010	690	1,251	########	12.13	1.75%
12,330	9,384	7,223	5,260	3,936	2,736	1,834	1,034	737	887	########	12.20	0.63%
12,531	10,163	7,569	5,692	4,051	2,960	2,009	1,319	727	1,127	########	12.41	1.67%
13,218	10,345	8,210	5,973	4,389	3,049	2,175	1,446	928	1,291	########	12.62	1.70%
13,366	10,928	8,370	6,489	4,612	3,307	2,242	1,566	1,019	1,545	########	12.83	1.67%
14,192	11,077	8,863	6,630	5,019	3,479	2,435	1,616	1,104	1,790	########	13.04	1.64%
14,275	11,776	8,995	7,029	5,133	3,790	2,563	1,756	1,140	2,024	########	13.25	1.61%
14,202	11,860	9,575	7,141	5,447	3,879	2,794	1,849	1,239	2,217	########	13.46	1.56%
14,312	11,813	9,654	7,611	5,539	4,118	2,861	2,017	1,305	2,424	########	13.66	1.52%
14,845	11,919	9,628	7,683	5,910	4,191	3,039	2,066	1,424	2,619	########	13.86	1.47%
15,299	12,378	9,726	7,671	5,971	4,475	3,095	2,195	1,460	2,841	########	14.06	1.42%
16,476	12,766	10,108	7,754	5,965	4,523	3,306	2,237	1,551	3,026	########	14.25	1.37%
17,304	13,758	10,433	8,064	6,033	4,520	3,342	2,390	1,582	3,221	########	14.44	1.35%
17,878	14,460	11,252	8,329	6,277	4,574	3,341	2,416	1,690	3,385	########	14.63	1.32%
18,816	14,951	11,834	8,989	6,487	4,761	3,383	2,416	1,709	3,577	########	14.82	1.29%

91	92	93	94	95	96	97	98	99	100	Total	Millions	Growth
19,364	14,973	10,535	8,498	6,663	4,983	3,769	2,496	1,660	2,660	########	11.41	
20,264	16,505	12,513	8,596	6,765	5,184	3,794	2,813	1,826	3,156	########	11.61	1.74%
20,666	17,294	13,809	10,220	6,847	5,265	3,948	2,832	2,058	3,646	########	11.81	1.75%
21,363	17,658	14,486	11,289	8,147	5,332	4,011	2,947	2,072	4,179	########	12.02	1.77%
22,099	18,275	14,806	11,853	9,006	6,347	4,063	2,996	2,157	4,587	########	12.23	1.75%
22,717	18,885	15,389	12,197	9,516	7,182	4,808	2,829	2,174	2,970	########	12.40	1.34%

22,817	19,369	15,753	12,540	9,691	7,359	5,393	3,505	2,008	3,676	########	12.61	1.70%
22,936	19,466	16,166	12,842	9,967	7,496	5,527	3,932	2,492	4,084	########	12.83	1.73%
22,838	19,578	16,256	13,185	10,211	7,710	5,631	4,030	2,800	4,723	########	13.04	1.70%
23,645	19,511	16,363	13,268	10,489	7,901	5,793	4,107	2,877	5,415	########	13.26	1.67%
23,700	20,209	16,314	13,362	10,558	8,117	5,937	4,225	2,932	5,978	########	13.48	1.63%
22,922	20,267	16,906	13,326	10,636	8,173	6,100	4,330	3,017	6,431	########	13.69	1.59%
23,124	19,611	16,962	13,816	10,610	8,235	6,143	4,450	3,091	6,824	########	13.90	1.54%
23,301	19,793	16,420	13,866	11,004	8,215	6,190	4,481	3,177	7,167	########	14.11	1.49%
23,985	19,955	16,580	13,428	11,046	8,522	6,176	4,516	3,200	7,480	########	14.32	1.45%
25,326	20,546	16,721	13,562	10,699	8,556	6,407	4,506	3,225	7,726	########	14.52	1.40%
26,194	21,702	17,220	13,681	10,807	8,287	6,433	4,675	3,217	7,926	########	14.71	1.37%
27,008	22,451	18,195	14,092	10,904	8,372	6,231	4,693	3,339	8,069	########	14.91	1.35%
28,042	23,155	18,828	14,895	11,234	8,447	6,295	4,546	3,352	8,260	########	15.11	1.32%