Introduction
When delivering health care services, there is an inherent exchange of spoken and/or written information between health care professionals and consumers. Within the continuum of health, consumers are not only provided with information specific to their own health, medical conditions and medicines at various time points, but they also seek out specific information to help meet their own needs.

When examining the consumer population, one of the most fundamental differences between consumers is gender. Health care professionals are a key medicine1-3 and health4-6 information source for consumers and as a result, gender differences and consumers’ information seeking behaviour should be considered to better tailor for consumer needs.

Therefore, this paper aims to present some of the findings from the literature exploring differences in male and female health and medicine information seeking behaviour. To identify relevant studies, Medline and Embase searches were conducted, and supplemented by additional reference list searching. MeSH subheadings and key words featured in the searches included: consumer health information, medicine information, drug labeling, information seeking behavior and gender.

Taking the first step- who is more motivated to seek information?
Overall, more women than men have nominated that they search for health information.7 Women demonstrate both increased interest, and seek health information more actively than males.8 This finding was echoed by Kassulke et al.9 and Rutten et al.10, who have explored searching for information specific to cancer. When examining consumer characteristics which influence health information seeking, women who were carers or suffered from a chronic medical condition had a higher likelihood of searching for health information.11 This variation in active searching of health information may yield further differences between how information is gained by men and women to meet consumer needs.

Where do consumers source information?
A myriad of health and medicine information sources exist today for consumers to access and use. Slight differences exist between the genders in where information is sourced. Overall, women display increased likelihood...
of consulting various information sources (aside from online discussions) in comparison
to men. For instance, relatives have been
reported as a health information source
more commonly by females aged 36–65 years
than males. Broadly, the health and/or
medicine information sources accessed can be
categorised into: (i) written health and/
medicine information, (ii) health care
professionals and (iii) the Internet.

(i) Written health and/or medicine
information
A Finnish study showed that medicine
information was obtained from sources
such as patient information leaflets
(PILs) (48% females vs. 38% males
(P<0.001)), health food retailers (10% females vs. 5% males (P<0.001)),
advertisements (9% females vs.
6% males (P=0.002)), and printed
materials such as newspapers, books
and magazines (15% females vs. 6% males (P<0.001)) by women more
so than men. One study also noted that a
slightly higher (though not statistically
significant) proportion of females than
males nominated that they regularly
read PILs (73% females vs. 66% males).

(ii) Health care professionals
Consumer reliance on different health
care professionals as information
sources may differ between males
and females. Dubois and Loiselle noted
that nurses were a key cancer
information source for females with
breast cancer, whereas male prostate
cancer sufferers primarily sought
information from their oncologist.
Additionally, there are also variations
in information sources for specific
diseases and their perceived reliability.
For instance, women with diabetes
held friends with prior experience with
diabetes in higher regard in relation
to reliability, whilst men felt medical
doctors and text messages (received
as part of an intervention to increase
consumer knowledge about diabetes and
its management) were most reliable.

(iii) The Internet
Undoubtedly, one of the largest available
repositories of health and medicine
information increasingly used by
consumers is the Internet. Gender has
been found to be a strong predictor in
the use of the Internet as a source of
health information, where women were
more likely to use the Internet. Females
had a higher chance of using a
website as a health information source,
when asked about their use during the
previous year, than men. Specifically,
females have been shown to utilise a
statistically significantly larger number
of websites and conducted more online
searches for health information during a
1 month period than males (P<0.001).

However, this does not necessarily
indicate that the Internet is a resource
which only appeals to women. A larger
proportion of men compared to women
(46.2% males vs. 36.9% females
(P<0.01)) have claimed to seek health
information on the Internet due to
the presupposition that information
would not be difficult to locate. With
regards to how this located information
was used, men had a higher chance
than women of utilising it to aid in
self-diagnosis (48.6% males vs. 40.1% females (P=0.02)).

Interestingly, no significant
differences were noted between male and
female motivation to use the Internet
to obtain health information in the
future (if they had not used it previously
as a source of health information) or
specifically, as an initial source of health
information.

Aside from gender, age is also a
factor which impacts Internet searching
tendencies, with older women using the
Internet less as a health information
source in comparison to their younger
counterparts. Moreover, younger
females have a higher chance of utilising
the Internet to obtain health information
in comparison to males.

Who asks what? Engaging in health
and medicine information seeking
With no two patient journeys identical, some
differences exist overall between the types
of information sought by men and women.
Female gender has been shown to be a
predictor of searching for cancer information.
In particular, gender-specific information
needs do arise in the management of, or when
learning about, chronic conditions. In relation
to diabetes, men were interested in receiving
information regarding erectile dysfunction
and women were interested in information
pertaining to female concerns such as
menopause and yeast infections. Similarly, in
the context of acute ischaemic events, women
wanted more information about angina and
hypertension, where men expressed that they
would like to receive additional information
regarding sexual function.

Discussion
What does this mean for pharmacists?
Various differences exist between male and
female information seeking behaviour, such
as the degree of consumer proactivity, health
information needs and how these needs are
met. Overall, rising Internet use has been
noted amongst consumers in regards to
health information searching, which may
be associated with ease of accessibility,
convenience, maintained privacy and
anonymity, amongst other reasons. Health care
professionals may not be meeting consumer
information needs, such as in the case of
female patients’ post-acute ischaemic coronary
event, where consumers have proceeded
to consult the Internet in search of health
information due to insufficient information
provided by health care professionals.
Consumers may not always discuss their
information seeking with health care
professionals, such as their Internet use. This
has an impact on health care professionals’
abilities to identify and address any difficulties
consumers may have in understanding health
and medicine information, or recognise
whether information is being misunderstood.
Utilisation of health care professionals as
information sources may also be impeded
by consumers’ perceived health care
professional time constraints and aversion
to supplying information. Gender of health
care professionals in relation to the gender
of their consumers may also be an important
consideration in the information exchange
process.

Gender-driven health and/or medicine
information needs are inevitable, as seen
in the management of medical conditions
such as diabetes and when considering
indications for use of certain medicines (for
example, contraceptive measures). Therefore,
health care professionals should discuss
with consumers the most appropriate ways
in which to meet their information needs,
thereby encouraging an open dialogue about
health and medicine use. Moreover, active
encouragement of the use of reliable and valid health and medicine information sources is crucial due to the extent of unreliable information freely available on the Internet.

Aside from gender, a plethora of other consumer demographics have been shown to be important to consider when examining the consumer health-related information seeking experience, such as age, education, health status alongside other considerations such as language and cultural differences, which therefore should not be neglected. Consumers' information needs fluctuate over time and accordingly, impact information seeking behaviour.

Health care professionals must gauge and address consumer needs, whereby those involved in medicine and health information development should further examine whether information quality and perceived usefulness perpetuate certain consumer information seeking behaviour or conversely, contribute to information avoidance by both genders.

Conclusion

Differences exist in how males and females source information about their health and medicines. Women are more active information seekers than men, which may be reflected in how they utilise information sources such as the Internet. Gender differences are also apparent in desired information with respect to managing medical conditions. Health care professionals must explore and be privy to these gender differences to ensure that consumer health and medicine information needs are acknowledged and addressed as part of a patient-centred approach to health care.

Declaration of interest

David K Raynor is the co-founder and academic advisor for Luto Research Ltd, a company that provides performance-based health information testing services.

References