Self-Diagnosis
What Is The Big Deal?

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- The internet is a source of valuable medical information. However, it has the potential to increase anxiety in people who have no medical training, when it is employed as a diagnostic procedure.

- While hypochondriasis is a condition that is familiar in the medical literature, there is little research into the effects of technology on health anxiety, impact on the management of one's health and on the traditional doctor-patient relationship.

Cyberpsychology:

- An emerging field within applied psychology that studies the impact of technology on human behaviour

- It focuses on Internet psychology, specifically how humans interact in online settings and how does the internet influence people opinions, thoughts, reactions and behaviours. Some shared features with other technologies like mobile telephones, networking devices, etc.

Cyberchondria:

- "The unfounded escalation of concerns about common symptomatology, based on the review of search results and literature on the Web" (White & Horvitz, 2009, p.23:2)

- Historically, health anxiety has been described as "fears and beliefs, based on interpretations, or perhaps more often, misinterpretations of bodily signs and symptoms as being indicative of a serious illness".

- Cyberchondria: Somatoform syndrome?

- Not as yet recognised by DSM

- Health anxiety can lead to hypochondriasis   (Asmundson, Taylor & Cox, 2001)

- DSM-5 (2013) proposed revision: replace hypochondriasis with 'Illness Anxiety Disorder' to include online symptom checking (APA, 2012)

Medical Search Online:

- Log-based study: 40 million web pages processed for medical queries (10,000 manually analysed) plus survey of 515 individuals' health-related search experience (White & Horvitz, 2009)

- High rates of linkage of rare diseases, i.e. brain tumours, to common symptoms, such as headache detected. Ranking algorithms: escalation to search extreme results (White & Horvitz, 2009)

- Cyberchondria: health anxiety exacerbated by Internet (Belling, 2006; Lewis, 2006)

- 'Hypochondriacal Hermeneutics' medical consultation: "interpretive activity", therefore hypochondriac enterprise? (Belling, 2006)

- Internet may be a useful resource for the self-managing healthy individual (Lewis, 2006 ; Belling, 2006)

- Source of considerable anxiety for susceptible individuals (Lewis, 2006; Belling, 2006; White & Horvitz, 2008)

- 80% Americans search for health related information online (Fox, 2006)
- Study of 12,262 people in 12 countries : almost 50% used Google for self-diagnosis (McDaid & Park, 2011), 15% check the referenced sources while 51% eager to share that "knowledge".
- 10% of participants frightened by medically grave nature of information online (Fox, 2006)
- Public health professionals should be concerned about the extent of online health information seeking (Cline & Haynes, 2001)
- Exposing non-medical personnel to complex terminology : risk of harm from self-diagnosis and/or self-treatment (Bengeri & Pluye, 2003)
- Highest scores on self-report measures of anxiety recorded in people awaiting the results of medical tests/diagnoses: implications for online self-diagnosis (Asmundson, Taylor &Cox, 2001)
- Role of seeking (Panksepp, 2004) anonymity online (Turkle, 1995) online disinhibition (Suler, 2004) Intermittent reinforcement online (Greenfield, 2010)

Cyberchondria by proxy:

- Users search the Internet not just for themselves, but also for relatives and friends (Fox et al., 2000 : Lewis, 2006, Sillence & Briggs, 2007)
- "Virtual Factitious Disorder" and "Munchausen by Internet" (MIB) (Feldman, 2000)
- Getting sympathy from hundreds of people online, much more powerful than getting it just from one person in a white coat (Kleeman, 2011)
- Similarities between Munchausens and Munchausen's Syndrome by Proxy (MSbP) (Day & Moseley, 2010)
- MSbP abusers enjoy "showing off their medical knowledge" (Criddle, 2010, p. 50)
- Can the same be said of Cyberchondria and hypothetically 'CbP', are there gains, and if so, what is the underlying motivation to pursue same?

A web page a day keeps the doctor away, does it?

- Doctor-Patient relationship, will it be going away?

- Doctors must be prepared to discuss health information, sourced online or elsewhere, and they should endeavor to process information for the patient, rather than simply provide it, doable?

Curiosity/information seeking
Availability
Cost

- Knowledge, empowerment and reassurance may be considered positive aspects of health-related online searching, but it is debatable whether these benefits outweigh the anxiety that can be induced.

- Medical knowledge (Day & Moseley, 2010)
- Challenging medical professionals (Criddle, 2010)
- Escalation/over reporting of symptoms (Criddle, 2010; Day & Moseley, 2010)
- Symptom creation (Ravdin, 2008; Criddle, 2010)

- The role technology may play in behavioural escalation online requires further research   (Aiken, Kirwan, Berry & O'Boyle, 2012)
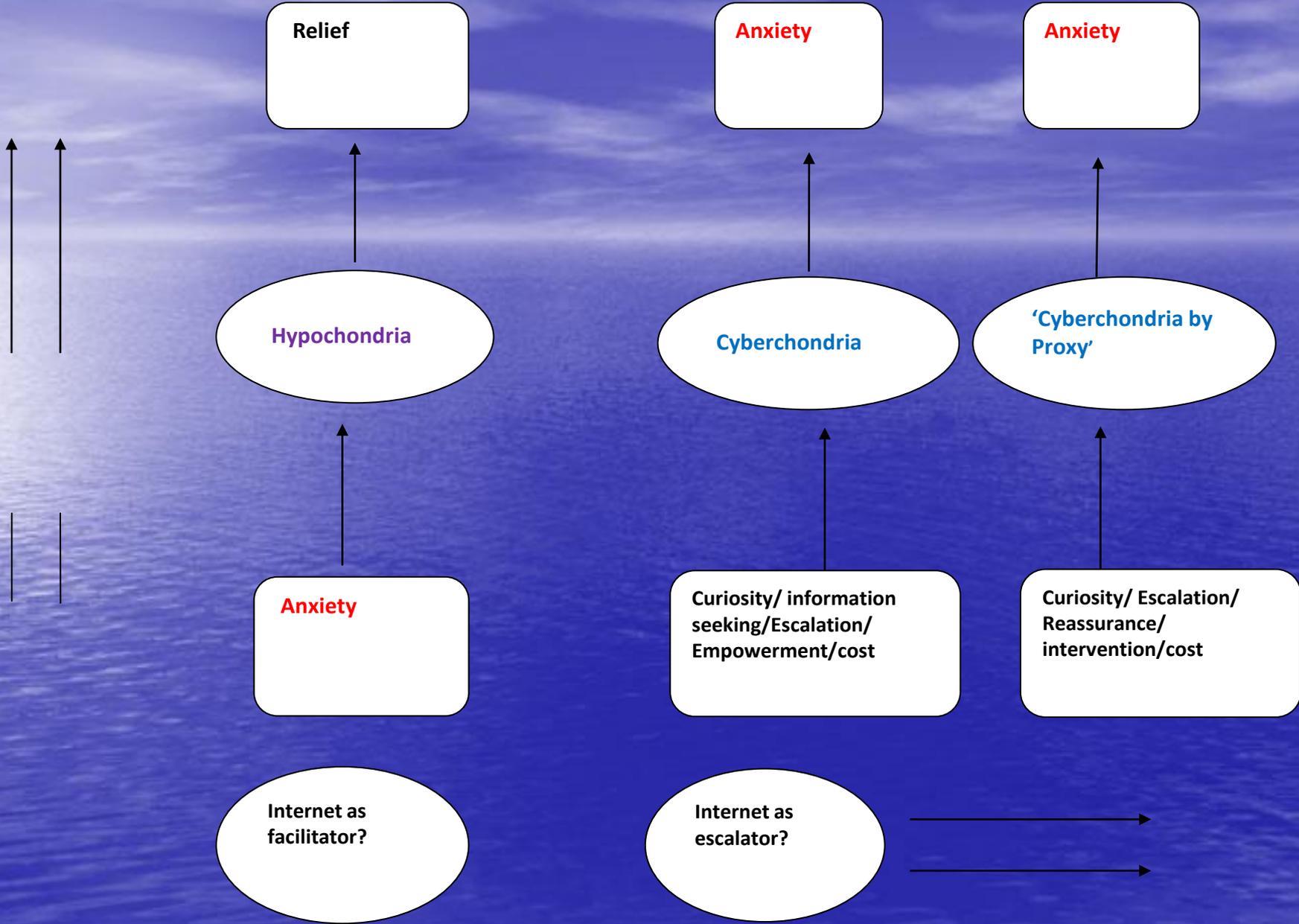
Conclusion:

- Exposing non-medical personnel to complex terminology and detailed medical descriptions may put them at risk of harm from self-diagnosis and/or self-treatment.

- Open access to complex medical information may alter the traditional role of doctors as the conventional gatekeepers of knowledge and diagnostic expertise. However, can 'Dr Google' undertake to abide by one of the main tenets of the Hippocratic oath – *primum non nocere?*

- Screen not diagnose/ check date/source, consider the context

- In order to mitigate these risks, it is important that health professionals are involved in the design, dissemination and evaluation of web-based health and medical information

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