

# International Baccalaureate

## Extended Essay

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*Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand*

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## Abstract

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Doctors have traditionally been the gatekeepers of medical health information, however this has changed with the development of the internet. It is now often the first point of reference for many health enquiries, and this is affecting the provision of health care to patients.

The research question of this essay is *“Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand”*.

My method of research was to conduct two surveys, one of patients and another of doctors, in order to gain insight into the effect of the internet on both recipients and providers of health care in New Zealand. This was supplemented by secondary research reviewing scholarly articles, journals, other published surveys and unique sources such as health forums and podcasts.

This essay explores the demographics that use the internet for health information. The implications of the online health information are then discussed, focussing on three key areas: how and what information patients find, the affect of this on the doctor-patient relationship, and the economic effects. Within these social and ethical impacts of technology are raised, including reliability, integrity, privacy and authenticity.

On evaluation, it is found that while patient access to online health information has many negative effects on the provision of healthcare presently, there are some positive effects. The internet has great potential in the future of healthcare, however current negative effects must be mitigated. This can be achieved through the internet being embraced in a positive manner by the medical profession, beginning with education of both doctors and patients in how to use the internet most effectively in the provision of health care.

**Word Count:** 272

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## Introduction

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In two decades, the internet has revolutionised the way the world communicates, learns and operates every day. Over 1.7 billion people (Miniwatts Marketing Group, 2009) are now connected to this massive volume of information, all quite easily accessible with a click of a mouse.

Traditionally the doctor has been the gatekeeper of medical information, responsible for taking care of the patient's foremost asset - their health. Since the advent of the internet, this has changed, and the average person now has access to vast amounts of health resources. A patient with health concerns may now consult the internet first instead, or use it in conjunction with their doctor's advice (Gualtieri, 2009).

Health information searches have consistently followed e-mail and retail research as popular on-line activities (Fox & Fallows, 2003; Fox, 2006), indicating the potential impact the internet could have on the provision of health care.

Patient access to online medical information has the potential for both positive and negative impacts on the provision of healthcare. The research question is: ***Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.*** There are three key areas of impact from patient access to medical information on the internet: how and what information patients access, ramifications for the patient-doctor relationship and economic impact; and then analyses the implications of these for the provision of health care.

There have been numerous studies into the use of the internet for health care, most noticeably the Pew Internet & American Life Project; however the research in New Zealand is limited.

## Background

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New Zealand is a developed Western country of over four million people where computers are a common household appliance and there are over 1.5 million internet connections within the country (Statistics New Zealand, 2009). New Zealand has a public healthcare system with free or subsidised access to a primary health care provider for all. Research suggests that as internet speeds increase, so do the number of people seeking online health information (Fox & Fallows, 2003). With the New Zealand Government's plan for the implementation of Ultra Fast Broadband<sup>1</sup> (Twose, 2010) through a Fibre-To-The-Home<sup>2</sup> (Kersey, 2010) network in the next ten years, the number of online health seekers is likely to increase.

The internet contains a huge body of health information, created by not only medical professionals, but also commercial interests and user-generated content (Fox, 2005). This has highlighted issues of reliability and integrity of information, and the ability of patients to use the information for the benefit rather than to the detriment of their health.

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<sup>1</sup> Fibre networks offering download and upload speeds of up to 100Mbps

<sup>2</sup> Fibre networks linking directly to residences offering ultra fast speeds

## Methodology

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Primary research was conducted in the form of surveys. To assess the viewpoints of patients and doctors, two surveys were conducted between December 2009 and January 2010. The patient survey was conducted both online, distributed via email and through social networking sites such as Facebook; and with a paper based version, distributed by hand; in order to reach a relatively even distribution of ages and genders. One hundred and ninety four replies were received.

A purely online-based survey was sent to doctors via an email network of general practitioners (the primary point of care for health concerns). GP and medical researcher Dr David Hopcroft helped to shape the design of the surveys in order to maximise question relevance and returns. Forty two replies were received.

The surveys were designed to gain insight into the effect of the internet on both recipients and providers of health care in New Zealand. Refer to the appendix for survey forms and data.

To supplement the survey, peer-reviewed medical journal articles were extensively reviewed, providing insight and worldwide research to provide a global perspective. Independent research company surveys provided data for comparison, podcasts provided interviews with doctors and professionals. Finally investigations of public health forums provided real-life examples of online information provision.

## Patient Survey Demographics

### Who uses the internet for health information in New Zealand?

The patient survey (Fry, 2010) found 75% of respondents have looked online for health information, comparable to the 81% found by the TNS Conversa survey (see fig. 1) (Gibson, 2009). Research suggests that, in general, women, and those on a higher income are more likely to have searched for health information online (Hesse, Nelson, Croyle, Arora, Rimer, & Viswanath, 2005). Although it was not formally measured, the survey was distributed predominantly within higher socio-economic regions in Auckland, and 59% of respondents were women. This would suggest higher access and use of the internet for health information might be expected amongst survey respondents. The lower rate reported may be a result of different question phrasing or a smaller sample size.

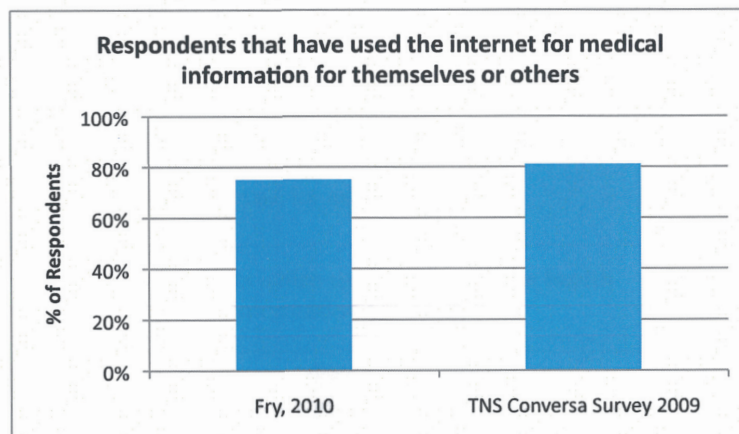


Figure 1 – Primary research was comparable to secondary research

This survey found more women had accessed health information online than men. (77% vs. 71%) (See fig. 2).

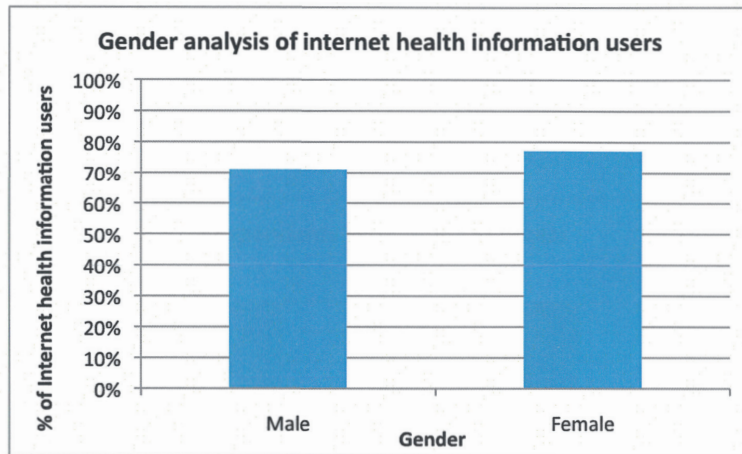


Figure 2 – Females are more likely to use the internet for health information

95% of respondents aged 21-40 and 86% of 41-60 year olds had accessed health information (see fig. 3), but only 60% of under-20 year olds group accessed internet based health information despite all completing the survey online. This may be attributable to their health status or their reliance on other sources, for example parents.

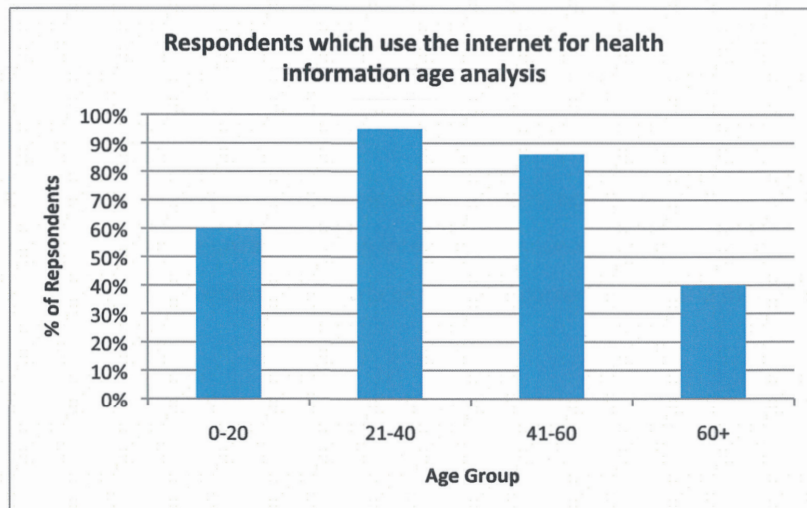


Figure 3 – Use of the internet for health information greatest aged 21-40



Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

The predominant reason for not using the internet for those aged over 60 was a lack of a computer or internet connection (55%) (See fig. 4). This suggests that an age based digital divide still exists within New Zealand. However as technology becomes cheaper and more accessible, and as the more younger, more computer literate generations age, the digital divide will shrink, allowing more people access to the internet (Bernhardt, 2000).

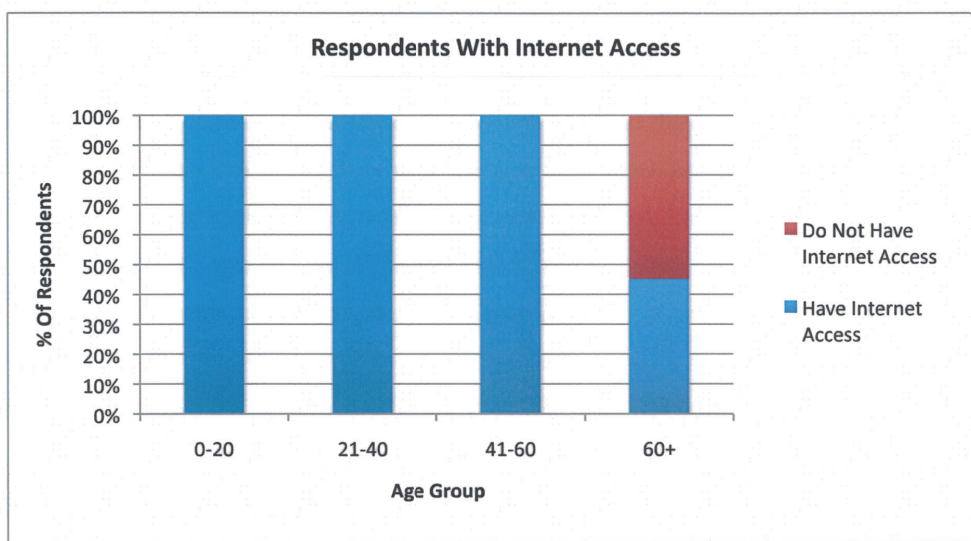


Figure 4 – A digital divide still exists for age 60+ lacking internet access

This survey indicates a broad range of people across all ages, access the internet for health information. This shows the potential of the internet as a source of easily updated, interactive platform for health care provision to all parts of society if correctly used and monitored.

## Impacts of the Internet

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### How and what health information patients acquire

The **reliability** and **integrity** of online information varies widely and carries no guarantees of accuracy. The survey revealed that the most popular source of information in New Zealand was Wikipedia, closely followed by search engines supporting studies indicating 66% of health inquiries begin at a search engine (Fox, 2006).

Search engines attempt to deliver the most relevant results to the query entered, through analysing web pages indexed by the engine using an algorithm. Through a number of determining criteria, such as meta-tags<sup>3</sup>, page content, and link analysis<sup>4</sup> from other pages (Strickland, 2008; Google Inc), the algorithm returns results. While search engines are valuable for finding information, when using them for health purposes, there are a number of concerns.

Health seekers are most likely to click on one (Boswell, Black Hat Search Engine Optimisation, 2010) of the top results of a Search Engine Results Page<sup>5</sup> (SERP) (White & Horvitz, 2008) highlighting the importance of pages being ranked highly by search engine algorithms. While search engines attempt to deliver quality results, they can be manipulated. Using search engine optimisation<sup>6</sup> (SEO), web pages can be designed to appear higher on SERPs, using techniques such as using targeted keywords, or growth of backlinks from other pages (Strickland, 2008). This raises the possibility of sites without reliable information being ranked higher via SEO. Illegitimate 'black hat'<sup>7</sup> techniques can also be used to increase SERP ranking (Boswell, 2010). While search engines are constantly being refined to detect and filter these out of the results,

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<sup>3</sup> Metadata is information not invisible to website visitors, but included within page script for search engines to help rank results (w3schools.com, 2010)

<sup>4</sup> Analysis of inbound and outbound links to a page as well as cross-linking within a site as a determinant of quality for search engine ranking. (onlinematters.com)

<sup>5</sup> Page of results returned by a search engine based on search engine algorithm

<sup>6</sup> Techniques designed to increase page ranking within search algorithms to promote SERP ranking (Strickland, 2008)

<sup>7</sup> Using unethical SEO techniques to increase pages ranking, e.g. Keyword stuffing, invisible text embedded into backgrounds, link farms and doorway pages. (Boswell, 2010)

malicious websites, such as fraudulent online pharmacies, could target a patient's susceptibility to clicking on the top results.

This is compounded by a lack of critical analysis of information found. Three quarters of online health searchers do not consistently check the source or date of their health information (Fox, 2006), however finding the source is difficult. A study by the U.S. Department of Health and Human services found only 4% of frequently visited health sites displayed the information source, and only 2% how the content was updated (as cited in Fox, 2006).

The fallability of search engines, and the susceptibility of searchers to top search results is exemplified in Wikipedia. It is ranked very highly by search engines due to its popularity from the convenience of its enormous volume of information, and to its numerous external links (Rainie, 2007). In online health inquiries, Wikipedia is in the top returned search results 75% of the time (BBC World Service, 2009). Yet using Wikipedia for health information is concerning. A study analysing drug information on Wikipedia compared to the peer reviewed and publicly accessible web database Medscape Drug Reference (MDR) found no incorrect information on Wikipedia, but concerning errors of omission. Of the total available information, Wikipedia, omitted 60% compared to 17.5% in MDR (see fig. 5), in particular information on side effects (BBC Radio, 2009; Harding, 2008). This lack of information can be just as dangerous when making a medical decision as erroneous information. Wikipedia is created from user generated content, not necessarily experts. As the author of the study Dr Kevin Clauson noted, people are writing the information with the best intentions but are still uninformed to the point that not enough information is making it online (BBC Radio, 2009).

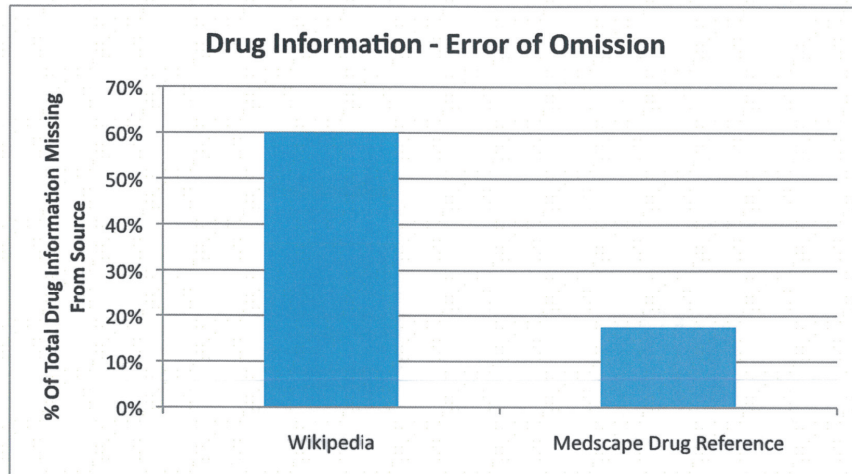


Figure 5 – Wikipedia vastly inaccurate due to errors of omission

Although Wikipedia is not such a popular health resource for doctors, search engines are still their common access point (93%) (Fry, 2010). Tang & Ng showed entering symptoms as keywords in a Google search presented a correct diagnosis in the top three results 58% of the time for uncomplicated cases (Tang & Ng, 2006). They emphasised this was useful when applied by experts able to identify correct symptoms and critically analyse results. For the general public however, using Google alone without this necessary knowledge could pose the significant danger of a 42% error rate.

Web 2.0 is a phenomenon developed with programming techniques such as AJAX<sup>8</sup> (Kyrnin), enabling users to have more dynamic interactions online (O'Reilly, 2005). These were relatively popular sources of health information in New Zealand, including self-diagnosis websites (48%) and forums (35%) (Fry, 2010). Both doctors and patients had an inherent lack of trust in these sources and the accuracy of the information posted - 42% of patients had 'almost no trust' in forums, while 68% of doctors trusted them 'a little'. (Fry, 2010). Forums where anyone may post their opinion can also be misleading in the health setting, due to the lack of expertise of

<sup>8</sup> Asynchronous JavaScript and XML – an engine which enables interaction between the user and the webpage without interaction with the server requiring the page to reload (Kyrnin)

the majority of forum posters (see fig. 6) (Torrey, 2010). Despite this, forums remain popular worldwide which is concerning if used in isolation (Torrey, 2010).

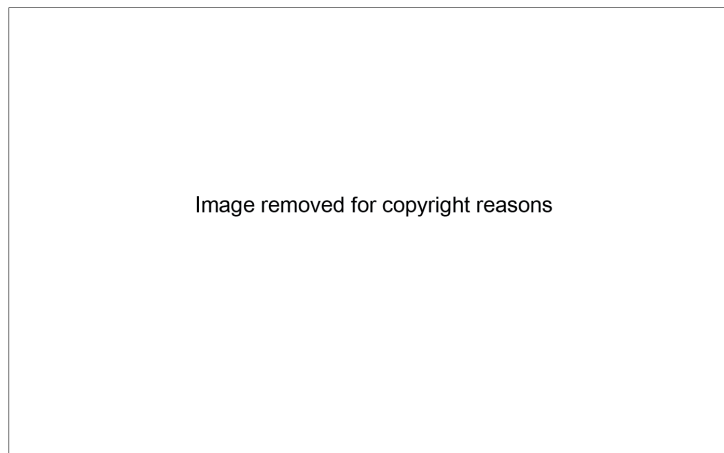


Figure 6 – Forums discuss technical issues with often unreliable responses (ehealthforum.com, 2010)

Support groups have also emerged from the web 2.0 phenomenon, and these are viewed positively, giving patient perspectives to illness which doctors cannot provide (BBC World Service, 2009). Houston et al (as cited in Fox & Fallows, 2003) found that 95% of participants in online support groups for depression found talking to similar patients therapeutic. These support groups however may be jeopardised by the reliability of other users.

There is pressure to allow free access to medical journals as a reliable source of information (Fox & Fallows, 2003). Reservations exist as these sources of information are published for experts with medical training, who not only understand, but can critically evaluate it. Indeed, Wikipedia itself is complicated enough; on average the medical information is twice as hard to read as it should be for the average person (BBC Radio, 2009).

### **The Doctor-Patient Relationship**

Doctors agree that since the advent of the internet patient's medical knowledge has increased (79%) (Fry, 2010), and that it is frequently beneficial. The internet has been shown to create a more positive doctor-patient relationship, one of the most important aspects of primary healthcare (Iverson, Howard, & Penney, 2008). The internet literate patient is able to understand the doctor's terminology and concepts easier, is more capable of explaining their relevant symptoms, is more likely to ask questions, and is more compliant with treatment (Iverson, Howard, & Penney, 2008). Of patients who use the internet, 97% believe it gave them more confidence to talk about their concerns, 96% believe it improved their understanding of their condition and 85% think it improved the way they followed their doctor's advice (Murray, et al., 2003). Eighty three percent of these patients felt it was beneficial because they felt more in control. (See fig. 7)

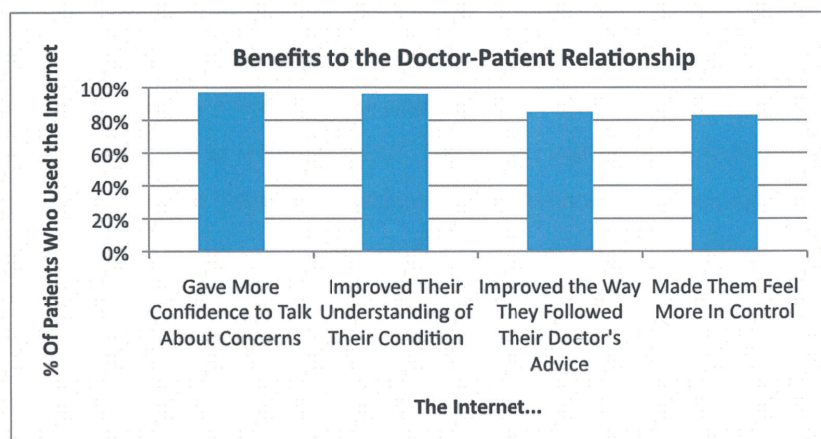


Figure 7 – The internet improves the doctor patient relationship

Many patients use the internet as a supplementary resource after consultation with their doctor, rather than prior self-diagnosis. Patients commonly complain of inadequate time with a doctor and receiving large amounts of information they struggle to understand and remember. The internet offers a resource where patients can assimilate additional information to feel more in control of their health (Iverson, Howard, & Penney, 2008).

**Privacy** and **anonymity** can also play a part in the motivation to go online. Because **authentication** and logins are not often required to access information, patients feel safe that they can anonymously surf information on a suspected condition. This is attractive for patients who find discussing their conditions with doctors embarrassing. Fourteen percent of patients surveyed had used the internet on privacy grounds (Fry, 2010). Doctors must work to ensure patients feel comfortable discussing healthcare issues in order for them to avoid the internet becoming the sole resource for sensitive topics.

The **reliability** of information also affects the doctor-patient relationship. More often than not, the internet predicts a diagnosis far more serious than the common symptoms presented. A Microsoft study showed that a common symptom such as headache, had a probability of 0.26 of being associated with a brain tumour when entered in a search engine, compared to the actual incidence of brain tumours in the population, 0.000116 (White & Horvitz, 2008). White & Horvitz state that 75% of people have thought that the ranking of search results indicates the likelihood they have the disease at least once. The “worried-well” tend to be drawn to the more serious conditions, thus falsely increasing the page rankings in search algorithms, and this creates a feedback loop (White & Horvitz, 2008). This further highlights the inadequacies of search engines as a means of finding accurate health information. So consequently it is unsurprising that 42% of doctors surveyed frequently think patients are unnecessarily worried after they have attempted internet self diagnosis, and 27% of patients have been anxious after looking at information on the internet (Fry, 2010). This has led to the coining of the term “Cyberchondriac” (White & Horvitz, 2008). There is also the danger of patients attempting to

treat themselves based on their own diagnosis, with 32% of patients choosing not to see their doctor after consulting internet information (see fig. 8).

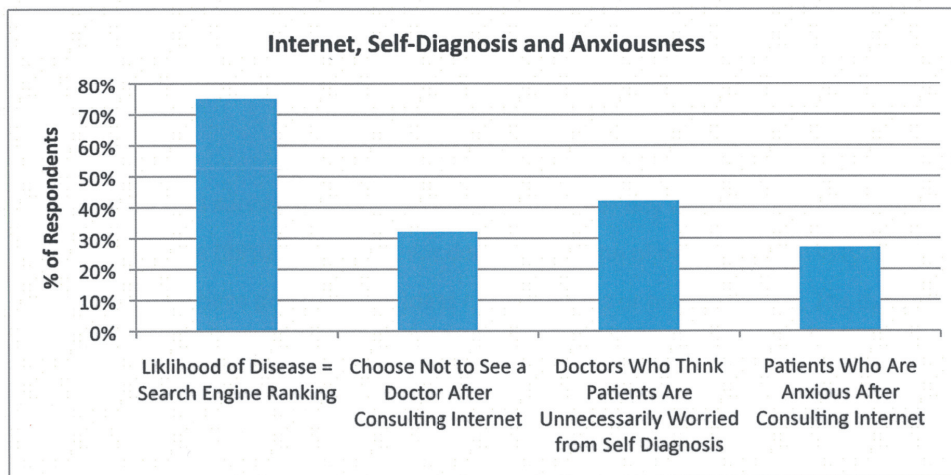


Figure 8 – The internet has many negative effects on patients

Patients who don't disclose their internet research to the doctor are also a concern. Generally doctors do not ask if patients have accessed the internet (Gualtieri, 2009). It is not part of their training, they have limited appointment times, and some feel internet research is not relevant because it is their task to make the diagnosis. Patients too do not wish to confront their doctor with internet printouts; they do not want to appear stupid or ignorant, or are uncomfortable with medical terminology; and some also want to test the doctor's diagnostic skills and see if they agree with the internet (Gualtieri, 2009). Unrevealed personal research may undermine the trust integral in a doctor-patient relationship, and alter the health care outcome (Gualtieri, 2009). Considering that 75% of people had researched health information online, yet only 18% of these had this taken information to their doctor, there is a significant amount of



non-disclosure which may be a problem. As Peter Foley, Chairman of the Medical Association of New Zealand says,

*“Health is a very complex subject and there are dangers in interpreting signs and symptoms. If people want to challenge [their doctor’s diagnosis] they should do it in the consulting room so it can be explained”*

*Peter Foley (as cited in Gibson, 2009).*

Almost all doctors surveyed have at least one patient per day who has self-diagnosed themselves online (89%) (Fry, 2010). For doctors this type of patient can be very difficult, especially if they have preconceived ideas of their illness or how to treat it. The majority of the time patients only want a doctor’s opinion (Murray, et al., 2003), however occasionally patients can attempt to pressure doctors into prescribing drugs or treatment options they have found on the internet, often without knowing the more complicated drug interactions and other considerations (Williams, 2009), or without checking the information source to take into account whether the information is biased to advertise the product (Potts & Wyatt, 2002). Doctors are fallible, and the knowledgeable patient can have a positive influence on the outcome. One survey respondent described researching a different course of treatment for an ankle problem online, presenting it to his doctor, and then undergoing surgery, which was successfully performed for the first time in New Zealand (Fry, 2010). This however, is rare (Murray, et al., 2003).

### **Economic Implications**

It may be assumed that the more knowledgeable patient would require fewer doctor visits, saving treatment time and funding, however this may not be the case. In the opinion of doctors, as a result of the internet 64% find consultations take longer, 44% think there are more unnecessary investigations and 22% that there are more unnecessary treatments (Potts & Wyatt, 2002). This results in an increased workload for the doctor, stretching the already thin primary health care resources.

Time is a precious commodity, and if excessive time is spent looking through vast quantities of information plus answering additional questions, little time is left for the consultation. A study by Helft et al. showed that when patients bring online health information, the consultation extends an extra 10 minutes (as cited in Fox & Fallows, Internet Health Resources, 2003). Although it may create a better relationship with the patient as a result, the net effect on health resources may be negative. Some doctors even acquiesce to patients with hypochondriac tendencies who demand tests or other requests found out about online simply to maintain a positive relationship with that patient, knowing they will do no harm, wasting health resources (Iverson, Howard, & Penney, 2008).

## Analysis of Issues and Implications

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The internet as a medium for health information has many advantages. It is accessible to a large number of people, especially in developed countries like New Zealand. Although there are issues of equality of access such as the age-based digital divide, as technology becomes cheaper, more accessible and computer literate generations age, this will shrink (Bernhardt, 2000). The internet provides easy access to a large amount of information which can be updated frequently and has the potential to be a vital resource used for health education. The internet is unique in its provision of interaction, with concepts like web 2.0 providing promising avenues for communication amongst patients and with doctors, providing there are quality controls on the information discussed.

There are negative effects that must be mitigated however. The most immediate solution is not only to educate the public, but educate doctors. Communication between patient and doctor is an essential part of the relationship. Studies have shown that if the doctor is openly receptive to information from the internet, and reads and guides the patient through it, the patients concerns will be alleviated, and the doctor patient relationship will improve (Murray, et al., 2003). Doctors could routinely ask if the patient has done any internet research to ensure that they talk to the patient on a level they understand, and address any concerns the patient may have. The doctor must not feel threatened by the information, but willing to discuss options with the patient and partner them in their healthcare.

Patients rarely receive specific guidance on how to use the internet for health (Gualtieri, 2009). Doctors are a vital part of public education regarding use of the internet for health information. They have a role in teaching patients how to critically evaluate the source of their information, the best places to begin looking online, and what to avoid. This can be achieved by assessing information brought to them, and encouraging patients to look further into their condition online and to bring in their research to future appointments. Professor Steve Field, Chairman of the Royal College of General Practitioners in the United Kingdom commented that the role of

the GP is now changing, from directly teaching people about their illness to helping people navigate their way through the vast amounts of information at their disposal (BBC Radio, 2009). Time is a factor during consultations so perhaps nurse specialists or physician assistants, a role presently being considered in New Zealand, could undertake this role.

Doctors themselves have often had only limited training in critical evaluation of internet information and how to deal with internet literate patients. Incorporation of this into both undergraduate medical training and also Continuing Medical Education (CME) could be considered. Dr David Lloyd, a GP in England puts it well:

*“We have had to learn to be evidence-based doctors; now we have to teach people how to be evidence-based patients.”*

*Dr David Lloyd (as cited in Williams, 2009)*

One suggestion doctors have made is the publication of a list or database of reliable and specific websites patients can be referred to for more information, with the knowledge that what they read will be accurate. This is perhaps a project that a governing body such as the New Zealand Ministry of Health could undertake, where doctors can submit websites that they know are reliable and suitable for patient use, which can then be indexed, peer reviewed and made easily available to both doctors and patients. Certain criteria could be developed to evaluate sites, such as reliability, update frequency, readability, usability and accessibility options such as allowing high contrast for the elderly or sight impaired. As the internet increasingly becomes the first reference point for universal queries, its immediate use for health information is inevitable (Fox, 2005). It is important that reputable websites are promoted publicly easy access to reliable information. Perhaps search engine optimisation or use of search engine advertising such as Google’s AdWords could boost the ranking of reputable websites in SERPs to combat the instinctive click at the top of SERPs to find answers to enquiries.

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Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

With the introduction of Ultra Fast Broadband planned for New Zealand, the landscape of healthcare may change further with 'Telemedicine'<sup>9</sup>. Already in New Zealand radiologists review images such as x-rays remotely, efficiently centralising the service (Williams, 2009). High speed internet promises may mean physical consultations for the elderly may be reliably conducted via video link, or internet-linked diagnostic devices such as blood pressure cuffs can be easily remotely checked. Other promising developments include completely paperless prescriptions through pharmacies accessing electronic records. Remote surgeries have also been completed internationally, and high speed broadband may enable this (Vector, 2010).

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<sup>9</sup> "The use of electronic communications by health professionals to consult and treat patients" (Williams, 2009), often including video conferences and audio

## Conclusion

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The provision of healthcare in New Zealand faces numerous implications from the effects of patient access to online health information. The internet is used by over 75% of people for health information and this is ever growing, with increasing computer literacy, easier access to the internet, and better internet service (Fry, 2010; Bernhardt, 2000). As the first point for many universal enquiries, it is inevitable that more people will turn to the internet for health information (Fox, 2006). The advent of the internet has changed the role of a doctor, no longer the only source of medical information, doctors are now charged with guiding patients in their search for information (Williams, 2009).

This has a number of positive effects. Research has shown the internet to improve the vitally important doctor-patient relationship, through better communication and understanding, and the increased knowledge lets patients feel more in control, even to the point of suggesting new treatments (Iverson, Howard, & Penney, 2008). The internet also offers unique advantages as a medium, allowing increased interaction between patients and doctors, developed as a result of interactive programming techniques such as AJAX (O'Reilly, 2005). The future of developing technologies coupled with Ultra Fast Broadband also shows promise in the health care sector.

The internet does have significant negative effects however. The reliability and integrity of online information is seriously concerning, particularly because of patients tendencies to use internet resources such as Wikipedia and search engines, and their lack of critical evaluation of the information and its source (Fox, 2005). This can have adverse consequences for the doctor-patient relationship, from patients challenging diagnoses, overly anxious patients, replacing doctors visits with unreliable internet self diagnoses, and reducing the essential link of trust between doctor and patient (Iverson, Howard, & Penney, 2008). There are also a number of negative economic implications on health funding and resources, due to the internet increasing doctor's visit numbers and length (Potts & Wyatt, 2002; Fox & Fallows, Internet Health Resources, 2003).

Potential areas that still require investigation include assessing the privacy concerns for patients online, ensuring that records of their activity or other information pertaining to their health is kept secure (Fox & Rainie, 2000). The issue of the right to anonymity when searching online may also prove contentious (Fox & Fallows, 2003).

On evaluation, the internet has the potential to be an effective tool for the future, if implemented in a positive manner. Currently there are large negative repercussions for patient health and the way health care is provided. These must be dealt with under an already strained health system and budget. The internet could vastly improve healthcare in the future, as promising technology is developed, however it is essential that patient healthcare in the present is not compromised. This begins with education of both doctors and patients, in how to use the internet most effectively in the provision of health care.

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Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

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## Appendix A Patient Survey Results

### Patient Survey Results - All

#### Healthcare and the Internet (2)





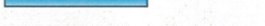
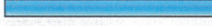


1. Please tick your age bracket:			Response Percent	Response Count
0 - 20 Years			33.5%	65
21 - 40 Years			29.4%	57
41 - 60 Years			25.8%	50
60+ Years			11.3%	22
			<i>answered question</i>	194
			<i>skipped question</i>	0

2. Please tick your gender:			Response Percent	Response Count
Male			41.2%	80
Female			58.8%	114
			<i>answered question</i>	194
			<i>skipped question</i>	0

3. Have you ever used the internet for medical information for yourself or others?			Response Percent	Response Count
Yes			74.7%	145
No			25.3%	49
			<i>answered question</i>	194
			<i>skipped question</i>	0

Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

4. Why have you not used the internet for medical information?		Response Count
<i>Note: Free response answers. Extended Answers Not Included</i>		
		46
	<i>answered question</i>	46
	<i>skipped question</i>	148


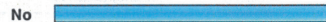
5. What types of internet sources have you used to find out the information?			Response Percent	Response Count
Self Diagnosis Website			47.5%	66
Wikipedia			74.8%	104
Communicating with an online doctor			20.1%	28
Forum/Discussion Board/Online Support Group			35.3%	49
Government Health Website			64.7%	90
Medical Drug Company Website			51.8%	72
Search Engines			73.4%	102
Other, including specific websites (please specify)			12.2%	17
	<i>answered question</i>			139
	<i>skipped question</i>			55

Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

**6. Of the sources selected above, how much did you trust these sources?**

	Almost not at all	A little	Mostly	Almost completely	Rating Average	Response Count
Self Diagnosis Website	27.3% (21)	36.4% (28)	32.5% (25)	3.9% (3)	2.13	77
Wikipedia	6.6% (7)	34.0% (36)	50.0% (53)	9.4% (10)	2.62	106
Communicating with an online doctor	62.2% (23)	16.2% (6)	16.2% (6)	5.4% (2)	1.65	37
Forum/Discussion Board/Online Support Group	42.1% (24)	29.8% (17)	24.6% (14)	3.5% (2)	1.89	57
Government Health Website	3.2% (3)	16.0% (15)	52.1% (49)	28.7% (27)	3.06	94
Medical Drug Company Website	12.5% (10)	30.0% (24)	37.5% (30)	20.0% (16)	2.65	80
Search Engines	4.9% (5)	32.0% (33)	52.4% (54)	10.7% (11)	2.69	103
Other (specified above)	5.3% (1)	10.5% (2)	42.1% (8)	42.1% (8)	3.21	19
<i>answered question</i>						137
<i>skipped question</i>						57

**7. After consulting the information on the internet, did you choose NOT to see your doctor?**



	Response Percent	Response Count
Yes 	32.0%	39
No 	68.0%	83
<i>answered question</i>		122
<i>skipped question</i>		72

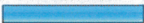
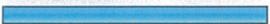
Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.





8. What was your motivation to look for information on the internet?		
	Response Percent	Response Count
General information on a medical condition	87.4%	118
To try to self-diagnose	25.9%	35
To look at further treatment options	37.0%	50
Learn about other patient's similar experiences with an illness	26.7%	36
To order vitamins/medicines	4.4%	6
Privacy	14.1%	19
Other (please specify)	8.9%	12
<i>answered question</i>		135
<i>skipped question</i>		59

9. Has self-diagnosing your own condition (whether you were right or wrong) from internet sources ever caused you anxiety?		
	Response Percent	Response Count
Yes	27.3%	36
No	72.7%	96
<i>answered question</i>		132
<i>skipped question</i>		62

Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.





10. Have you ever taken information from the internet to your doctor?		
	Response Percent	Response Count
Yes 	17.8%	24
No 	82.2%	111
<i>answered question</i>		135
<i>skipped question</i>		59





11. Did taking information from the internet to your doctor affect your treatment?		
	Response Percent	Response Count
Yes 	34.8%	8
No 	65.2%	15
<i>answered question</i>		23
<i>skipped question</i>		171

12. Was your doctor open to discussing the information?		
	Response Percent	Response Count
Not at all 	12.0%	3
Slightly 	8.0%	2
Mostly 	32.0%	8
Completely 	48.0%	12
Comments?		5
<i>answered question</i>		25
<i>skipped question</i>		169




Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.



13. Where would you prefer to go to for specific health information?		
	Response Percent	Response Count
Internet 	9.4%	17
GP (Doctor) 	88.4%	160
Library 	1.1%	2
Other (please specify) 	1.1%	2
<b>answered question</b>		<b>181</b>
<b>skipped question</b>		<b>13</b>



14. Where do you actually go first?		
	Response Percent	Response Count
Internet 	35.4%	64
GP (Doctor) 	58.0%	105
Library 	1.1%	2
Other (please specify) 	5.5%	10
<b>answered question</b>		<b>181</b>
<b>skipped question</b>		<b>13</b>

**Patient Survey Results - Restricted Results - Age 0-20**

**Healthcare and the Internet (2)**

1. Please tick your age bracket:		
	Response Percent	Response Count
0 - 20 Years 	100.0%	65
21 - 40 Years	0.0%	0
41 - 60 Years	0.0%	0
60+ Years	0.0%	0
	<i>answered question</i>	65
	<i>skipped question</i>	0

2. Please tick your gender:		
	Response Percent	Response Count
Male 	46.2%	30
Female 	53.8%	35
	<i>answered question</i>	65
	<i>skipped question</i>	0

3. Have you ever used the internet for medical information for yourself or others?		
	Response Percent	Response Count
Yes 	60.0%	39
No 	40.0%	26
	<i>answered question</i>	65
	<i>skipped question</i>	0



Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

4. Why have you not used the internet for medical information?		Response Count
<i>Note: Free response answers. Extended Answers Not Included</i>		
		23
<i>answered question</i>		23
<i>skipped question</i>		42

5. What types of internet sources have you used to find out the information?		
	Response Percent	Response Count
Self Diagnosis Website	39.4%	13
Wikipedia	69.7%	23
Communicating with an online doctor	0.0%	0
Forum/Discussion Board/Online Support Group	18.2%	6
Government Health Website	48.5%	16
Medical Drug Company Website	18.2%	6
Search Engines	54.5%	18
Other, including specific websites (please specify)	3.0%	1
<i>answered question</i>		33
<i>skipped question</i>		32

Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

6. Of the sources selected above, how much did you trust these sources?						
	Almost not at all	A little	Mostly	Almost completely	Rating Average	Response Count
Self Diagnosis Website	9.5% (2)	33.3% (7)	52.4% (11)	4.8% (1)	2.52	21
Wikipedia	3.6% (1)	46.4% (13)	39.3% (11)	10.7% (3)	2.57	28
Communicating with an online doctor	11.1% (1)	33.3% (3)	44.4% (4)	11.1% (1)	2.56	9
Forum/Discussion Board/Online Support Group	6.7% (1)	46.7% (7)	40.0% (6)	6.7% (1)	2.47	15
Government Health Website	4.8% (1)	0.0% (0)	42.9% (9)	52.4% (11)	3.43	21
Medical Drug Company Website	6.7% (1)	20.0% (3)	33.3% (5)	40.0% (6)	3.07	15
Search Engines	9.5% (2)	47.6% (10)	38.1% (8)	4.8% (1)	2.38	21
Other (specified above)	33.3% (1)	33.3% (1)	0.0% (0)	33.3% (1)	2.33	3
<i>answered question</i>						33
<i>skipped question</i>						32



7. After consulting the information on the internet, did you choose NOT to see your doctor?			
		Response Percent	Response Count
Yes		51.5%	17
No		48.5%	16
<i>answered question</i>			33
<i>skipped question</i>			32



Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.




8. What was your motivation to look for information on the internet?		
		Response Percent    Response Count
General information on a medical condition		69.7%    23
To try to self-diagnose		42.4%    14
To look at further treatment options		15.2%    5
Learn about other patient's similar experiences with an illness		18.2%    6
To order vitamins/medicines		0.0%    0
Privacy		27.3%    9
Other (please specify)		15.2%    5
		<i>answered question</i> 33
		<i>skipped question</i> 32

9. Has self-diagnosing your own condition (whether you were right or wrong) from internet sources ever caused you anxiety?		
		Response Percent    Response Count
Yes		28.1%    9
No		71.9%    23
		<i>answered question</i> 32
		<i>skipped question</i> 33

Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

10. Have you ever taken information from the internet to your doctor?		
	Response Percent	Response Count
Yes 	12.5%	4
No 	87.5%	28
	<i>answered question</i>	32
	<i>skipped question</i>	33

11. Did taking information from the internet to your doctor affect your treatment?		
	Response Percent	Response Count
Yes 	20.0%	1
No 	80.0%	4
	<i>answered question</i>	5
	<i>skipped question</i>	60

12. Was your doctor open to discussing the information?		
	Response Percent	Response Count
Not at all 	20.0%	1
Slightly	0.0%	0
Mostly 	40.0%	2
Completely 	40.0%	2
Comments?		0
	<i>answered question</i>	5
	<i>skipped question</i>	60

Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

**13. Where would you prefer to go to for specific health information?**

	Response Percent	Response Count
Internet	3.6%	2
GP (Doctor)	94.5%	52
Library	1.8%	1
Other (please specify)	0.0%	0
<i>answered question</i>		55
<i>skipped question</i>		10

**14. Where do you actually go first?**

	Response Percent	Response Count
Internet	43.6%	24
GP (Doctor)	41.8%	23
Library	1.8%	1
Other (please specify)	12.7%	7
<i>answered question</i>		55
<i>skipped question</i>		10

Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

*Patient Survey Results - Restricted Results - Age 21-40*

**Healthcare and the Internet (2)**

1. Please tick your age bracket:		
	Response Percent	Response Count
0 - 20 Years	0.0%	0
21 - 40 Years	100.0%	57
41 - 60 Years	0.0%	0
60+ Years	0.0%	0
<i>answered question</i>		57
<i>skipped question</i>		0









2. Please tick your gender:		
	Response Percent	Response Count
Male	45.6%	26
Female	54.4%	31
<i>answered question</i>		57
<i>skipped question</i>		0

3. Have you ever used the internet for medical information for yourself or others?		
	Response Percent	Response Count
Yes	94.7%	54
No	5.3%	3
<i>answered question</i>		57
<i>skipped question</i>		0





Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

4. Why have you not used the internet for medical information?		
<i>Note: Free response answers. Extended Answers Not Included</i>		Response Count
		3
	<i>answered question</i>	3
	<i>skipped question</i>	54

5. What types of internet sources have you used to find out the information?			
		Response Percent	Response Count
Self Diagnosis Website		50.0%	27
Wikipedia		81.5%	44
Communicating with an online doctor		29.6%	16
Forum/Discussion Board/Online Support Group		50.0%	27
Government Health Website		79.6%	43
Medical Drug Company Website		72.2%	39
Search Engines		77.8%	42
Other, including specific websites (please specify)		14.8%	8
	<i>answered question</i>		54
	<i>skipped question</i>		3

Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.


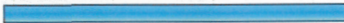
6. Of the sources selected above, how much did you trust these sources?						
	Almost not at all	A little	Mostly	Almost completely	Rating Average	Response Count
Self Diagnosis Website	28.6% (8)	32.1% (9)	32.1% (9)	7.1% (2)	2.18	28
Wikipedia	7.1% (3)	21.4% (9)	59.5% (25)	11.9% (5)	2.76	42
Communicating with an online doctor	66.7% (10)	20.0% (3)	6.7% (1)	6.7% (1)	1.53	15
Forum/Discussion Board/Online Support Group	44.0% (11)	28.0% (7)	24.0% (6)	4.0% (1)	1.88	25
Government Health Website	0.0% (0)	19.0% (8)	52.4% (22)	28.6% (12)	3.10	42
Medical Drug Company Website	10.5% (4)	23.7% (9)	42.1% (16)	23.7% (9)	2.79	38
Search Engines	5.0% (2)	32.5% (13)	52.5% (21)	10.0% (4)	2.68	40
Other (specified above)	0.0% (0)	0.0% (0)	37.5% (3)	62.5% (5)	3.63	8
<i>answered question</i>						52
<i>skipped question</i>						5

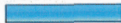

7. After consulting the information on the internet, did you choose NOT to see your doctor?			Response Percent	Response Count
Yes			24.0%	12
No			76.0%	38
<i>answered question</i>				50
<i>skipped question</i>				7




Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

8. What was your motivation to look for information on the internet?			Response Percent	Response Count
General information on a medical condition		90.4%	47	
To try to self-diagnose		25.0%	13	
To look at further treatment options		46.2%	24	
Learn about other patient's similar experiences with an illness		26.9%	14	
To order vitamins/medicines		9.6%	5	
Privacy		13.5%	7	
Other (please specify)		5.8%	3	
			<i>answered question</i>	52
			<i>skipped question</i>	5

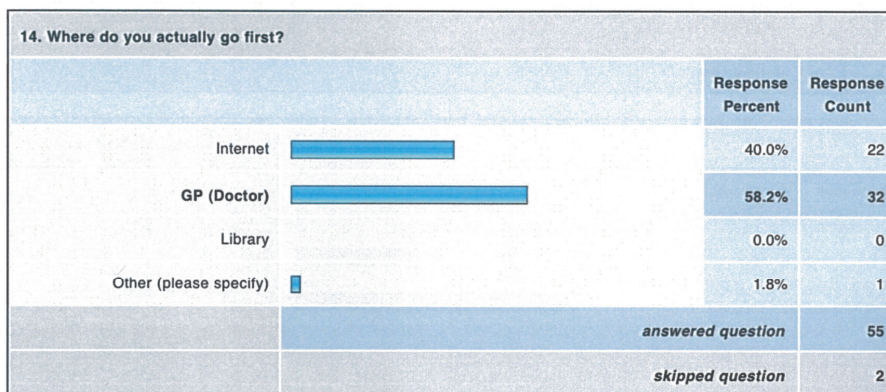
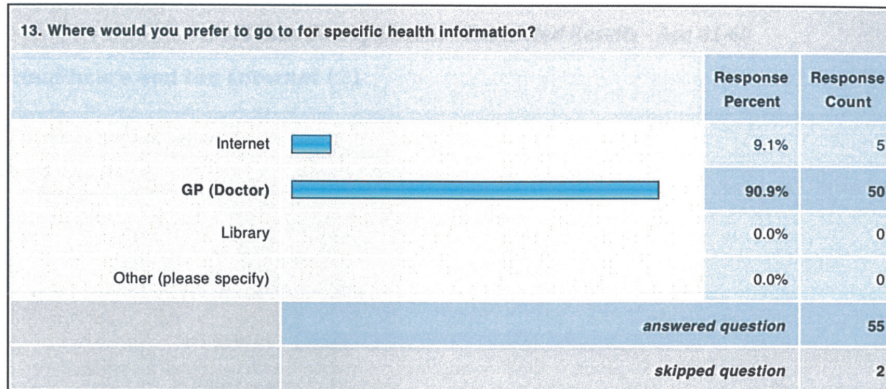
9. Has self-diagnosing your own condition (whether you were right or wrong) from internet sources ever caused you anxiety?			Response Percent	Response Count
Yes		26.4%	14	
No		73.6%	39	
			<i>answered question</i>	53
			<i>skipped question</i>	4

10. Have you ever taken information from the internet to your doctor?		
	Response Percent	Response Count
Yes 	15.1%	8
No 	84.9%	45
<i>answered question</i>		53
<i>skipped question</i>		4

11. Did taking information from the internet to your doctor affect your treatment?		
	Response Percent	Response Count
Yes 	28.6%	2
No 	71.4%	5
<i>answered question</i>		7
<i>skipped question</i>		50


12. Was your doctor open to discussing the information?		
	Response Percent	Response Count
Not at all	0.0%	0
Slightly 	12.5%	1
Mostly 	50.0%	4
Completely 	37.5%	3
Comments?		0
<i>answered question</i>		8
<i>skipped question</i>		49



Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.





*Patient Survey Results - Restricted Results - Age 41-60*

**Healthcare and the Internet (2)**



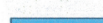





1. Please tick your age bracket:		
	Response Percent	Response Count
0 - 20 Years	0.0%	0
21 - 40 Years	0.0%	0
41 - 60 Years 	100.0%	50
60+ Years	0.0%	0
<i>answered question</i>		50
<i>skipped question</i>		0

2. Please tick your gender:		
	Response Percent	Response Count
Male 	30.0%	15
Female 	70.0%	35
<i>answered question</i>		50
<i>skipped question</i>		0

3. Have you ever used the internet for medical information for yourself or others?		
	Response Percent	Response Count
Yes 	86.0%	43
No 	14.0%	7
<i>answered question</i>		50
<i>skipped question</i>		0



Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

4. Why have you not used the internet for medical information?		
<i>Note: Free response answers. Extended Answers Not Included</i>		Response Count
		7
<i>answered question</i>		7
<i>skipped question</i>		43

5. What types of internet sources have you used to find out the information?			
		Response Percent	Response Count
Self Diagnosis Website		53.5%	23
Wikipedia		79.1%	34
Communicating with an online doctor		23.3%	10
Forum/Discussion Board/Online Support Group		32.6%	14
Government Health Website		62.8%	27
Medical Drug Company Website		55.8%	24
Search Engines		76.7%	33
Other, including specific websites (please specify)		16.3%	7
<i>answered question</i>			43
<i>skipped question</i>			7

Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

6. Of the sources selected above, how much did you trust these sources?						
	Almost not at all	A little	Mostly	Almost completely	Rating Average	Response Count
Self Diagnosis Website	40.0% (10)	44.0% (11)	16.0% (4)	0.0% (0)	1.76	25
Wikipedia	6.1% (2)	39.4% (13)	48.5% (16)	6.1% (2)	2.55	33
Communicating with an online doctor	90.9% (10)	0.0% (0)	9.1% (1)	0.0% (0)	1.18	11
Forum/Discussion Board/Online Support Group	73.3% (11)	13.3% (2)	13.3% (2)	0.0% (0)	1.40	15
Government Health Website	3.7% (1)	25.9% (7)	55.6% (15)	14.8% (4)	2.81	27
Medical Drug Company Website	16.7% (4)	45.8% (11)	33.3% (8)	4.2% (1)	2.25	24
Search Engines	3.0% (1)	24.2% (8)	63.6% (21)	9.1% (3)	2.79	33
Other (specified above)	0.0% (0)	14.3% (1)	71.4% (5)	14.3% (1)	3.00	7
<i>answered question</i>						43
<i>skipped question</i>						7

7. After consulting the information on the internet, did you choose NOT to see your doctor?		
	Response Percent	Response Count
Yes 	29.4%	10
No 	70.6%	24
<i>answered question</i>		34
<i>skipped question</i>		16





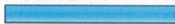
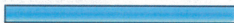
Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.





8. What was your motivation to look for information on the internet?		
	Response Percent	Response Count
General information on a medical condition	95.1%	39
To try to self-diagnose	19.5%	8
To look at further treatment options	48.8%	20
Learn about other patient's similar experiences with an illness	36.6%	15
To order vitamins/medicines	2.4%	1
Privacy	7.3%	3
Other (please specify)	9.8%	4
<i>answered question</i>		41
<i>skipped question</i>		9

9. Has self-diagnosing your own condition (whether you were right or wrong) from internet sources ever caused you anxiety?		
	Response Percent	Response Count
Yes	25.0%	10
No	75.0%	30
<i>answered question</i>		40
<i>skipped question</i>		10

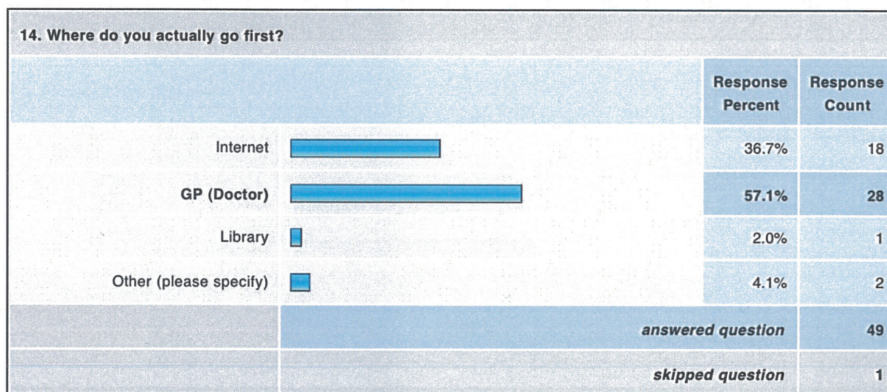
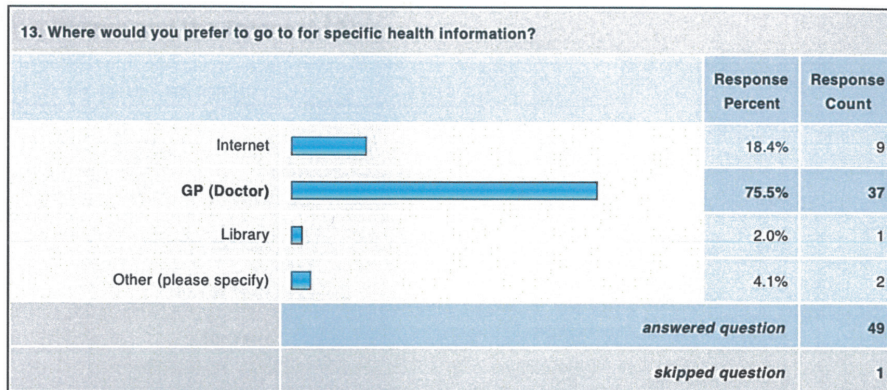
Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

10. Have you ever taken information from the internet to your doctor?		
	Response Percent	Response Count
Yes 	19.5%	8
No 	80.5%	33
<i>answered question</i>		41
<i>skipped question</i>		9

11. Did taking information from the internet to your doctor affect your treatment?		
	Response Percent	Response Count
Yes 	42.9%	3
No 	57.1%	4
<i>answered question</i>		7
<i>skipped question</i>		43

12. Was your doctor open to discussing the information?		
	Response Percent	Response Count
Not at all 	12.5%	1
Slightly 	12.5%	1
Mostly 	25.0%	2
Completely 	50.0%	4
Comments?		3
<i>answered question</i>		8
<i>skipped question</i>		42

Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.



*Patient Survey Results - Restricted Results - Age 60+*

**Healthcare and the Internet (2)**

1. Please tick your age bracket:		
	Response Percent	Response Count
0 - 20 Years	0.0%	0
21 - 40 Years	0.0%	0
41 - 60 Years	0.0%	0
60+ Years	100.0%	22
<i>answered question</i>		22
<i>skipped question</i>		0

2. Please tick your gender:		
	Response Percent	Response Count
Male	40.9%	9
Female	59.1%	13
<i>answered question</i>		22
<i>skipped question</i>		0

3. Have you ever used the internet for medical information for yourself or others?		
	Response Percent	Response Count
Yes	40.9%	9
No	59.1%	13
<i>answered question</i>		22
<i>skipped question</i>		0


Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

4. Why have you not used the internet for medical information?		Response Count
<i>Note: Free response answers. Extended Answers Not Included</i>		13
<i>answered question</i>		13
<i>skipped question</i>		9




5. What types of internet sources have you used to find out the information?		
	Response Percent	Response Count
Self Diagnosis Website	33.3%	3
Wikipedia	33.3%	3
Communicating with an online doctor	22.2%	2
Forum/Discussion Board/Online Support Group	22.2%	2
Government Health Website	44.4%	4
Medical Drug Company Website	33.3%	3
Search Engines	100.0%	9
Other, including specific websites (please specify)	11.1%	1
<i>answered question</i>		9
<i>skipped question</i>		13



Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

6. Of the sources selected above, how much did you trust these sources?						
	Almost not at all	A little	Mostly	Almost completely	Rating Average	Response Count
Self Diagnosis Website	33.3% (1)	33.3% (1)	33.3% (1)	0.0% (0)	2.00	3
Wikipedia	33.3% (1)	33.3% (1)	33.3% (1)	0.0% (0)	2.00	3
Communicating with an online doctor	100.0% (2)	0.0% (0)	0.0% (0)	0.0% (0)	1.00	2
Forum/Discussion Board/Online Support Group	50.0% (1)	50.0% (1)	0.0% (0)	0.0% (0)	1.50	2
Government Health Website	25.0% (1)	0.0% (0)	75.0% (3)	0.0% (0)	2.50	4
Medical Drug Company Website	33.3% (1)	33.3% (1)	33.3% (1)	0.0% (0)	2.00	3
Search Engines	0.0% (0)	22.2% (2)	44.4% (4)	33.3% (3)	3.11	9
Other (specified above)	0.0% (0)	0.0% (0)	0.0% (0)	100.0% (1)	4.00	1
	<i>answered question</i>					9
	<i>skipped question</i>					13



7. After consulting the information on the internet, did you choose NOT to see your doctor?		
	Response Percent	Response Count
Yes	0.0%	0
No 	100.0%	5
	<i>answered question</i>	
	<i>skipped question</i>	
		5
		17



Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.



8. What was your motivation to look for information on the internet?		
	Response Percent	Response Count
General information on a medical condition 	100.0%	9
To try to self-diagnose	0.0%	0
To look at further treatment options 	11.1%	1
Learn about other patient's similar experiences with an illness 	11.1%	1
To order vitamins/medicines	0.0%	0
Privacy	0.0%	0
Other (please specify)	0.0%	0
<i>answered question</i>		9
<i>skipped question</i>		13

9. Has self-diagnosing your own condition (whether you were right or wrong) from internet sources ever caused you anxiety?		
	Response Percent	Response Count
Yes 	42.9%	3
No 	57.1%	4
<i>answered question</i>		7
<i>skipped question</i>		15

Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

10. Have you ever taken information from the internet to your doctor?		
	Response Percent	Response Count
Yes 	44.4%	4
No 	55.6%	5
	<i>answered question</i>	9
	<i>skipped question</i>	13

11. Did taking information from the internet to your doctor affect your treatment?		
	Response Percent	Response Count
Yes 	50.0%	2
No 	50.0%	2
	<i>answered question</i>	4
	<i>skipped question</i>	18

12. Was your doctor open to discussing the information?		
	Response Percent	Response Count
Not at all 	25.0%	1
Slightly	0.0%	0
Mostly	0.0%	0
Completely 	75.0%	3
	Comments?	2
	<i>answered question</i>	4
	<i>skipped question</i>	18



Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

13. Where would you prefer to go to for specific health information?		
	Response Percent	Response Count
Internet	4.5%	1
GP (Doctor)	95.5%	21
Library	0.0%	0
Other (please specify)	0.0%	0
<b>answered question</b>		<b>22</b>
<b>skipped question</b>		<b>0</b>

14. Where do you actually go first?		
	Response Percent	Response Count
Internet	0.0%	0
GP (Doctor)	100.0%	22
Library	0.0%	0
Other (please specify)	0.0%	0
<b>answered question</b>		<b>22</b>
<b>skipped question</b>		<b>0</b>

**Patient Survey Results - Restricted Results - Females**

**Healthcare and the Internet (2)**

1. Please tick your age bracket:

	Response Percent	Response Count
0 - 20 Years	30.7%	35
21 - 40 Years	27.2%	31
41 - 60 Years	30.7%	35
60+ Years	11.4%	13
<i>answered question</i>		114
<i>skipped question</i>		0

2. Please tick your gender:

	Response Percent	Response Count
Male	0.0%	0
Female	100.0%	114
<i>answered question</i>		114
<i>skipped question</i>		0

3. Have you ever used the internet for medical information for yourself or others?

	Response Percent	Response Count
Yes	77.2%	88
No	22.8%	26
<i>answered question</i>		114
<i>skipped question</i>		0



Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

4. Why have you not used the internet for medical information?		Response Count
<i>Note: Free response answers. Extended Answers Not Included</i>		
		24
	<i>answered question</i>	24
	<i>skipped question</i>	90

5. What types of internet sources have you used to find out the information?		
	Response Percent	Response Count
Self Diagnosis Website	46.4%	39
Wikipedia	69.0%	58
Communicating with an online doctor	20.2%	17
Forum/Discussion Board/Online Support Group	32.1%	27
Government Health Website	65.5%	55
Medical Drug Company Website	53.6%	45
Search Engines	70.2%	59
Other, including specific websites (please specify)	13.1%	11
	<i>answered question</i>	84
	<i>skipped question</i>	30

Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

6. Of the sources selected above, how much did you trust these sources?						
	Almost not at all	A little	Mostly	Almost completely	Rating Average	Response Count
Self Diagnosis Website	28.3% (13)	37.0% (17)	32.6% (15)	2.2% (1)	2.09	46
Wikipedia	8.2% (5)	36.1% (22)	49.2% (30)	6.6% (4)	2.54	61
Communicating with an online doctor	60.9% (14)	13.0% (3)	17.4% (4)	8.7% (2)	1.74	23
Forum/Discussion Board/Online Support Group	50.0% (16)	18.8% (6)	28.1% (9)	3.1% (1)	1.84	32
Government Health Website	1.8% (1)	16.1% (9)	57.1% (32)	25.0% (14)	3.05	56
Medical Drug Company Website	10.0% (5)	40.0% (20)	26.0% (13)	24.0% (12)	2.64	50
Search Engines	3.3% (2)	35.0% (21)	56.7% (34)	5.0% (3)	2.63	60
Other (specified above)	7.7% (1)	7.7% (1)	46.2% (6)	38.5% (5)	3.15	13
<i>answered question</i>						83
<i>skipped question</i>						31



7. After consulting the information on the internet, did you choose NOT to see your doctor?		
	Response Percent	Response Count
Yes 	29.6%	21
No 	70.4%	50
<i>answered question</i>		71
<i>skipped question</i>		43



Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.




8. What was your motivation to look for information on the internet?		
	Response Percent	Response Count
General information on a medical condition	86.4%	70
To try to self-diagnose	28.4%	23
To look at further treatment options	35.8%	29
Learn about other patient's similar experiences with an illness	24.7%	20
To order vitamins/medicines	4.9%	4
Privacy	14.8%	12
Other (please specify)	6.2%	5
<i>answered question</i>		81
<i>skipped question</i>		33

9. Has self-diagnosing your own condition (whether you were right or wrong) from internet sources ever caused you anxiety?		
	Response Percent	Response Count
Yes	24.4%	19
No	75.6%	59
<i>answered question</i>		78
<i>skipped question</i>		36


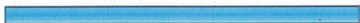


Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.


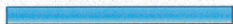


10. Have you ever taken information from the internet to your doctor?		
	Response Percent	Response Count
Yes 	13.6%	11
No 	86.4%	70
<i>answered question</i>		81
<i>skipped question</i>		33

11. Did taking information from the internet to your doctor affect your treatment?		
	Response Percent	Response Count
Yes 	22.2%	2
No 	77.8%	7
<i>answered question</i>		9
<i>skipped question</i>		105

12. Was your doctor open to discussing the information?		
	Response Percent	Response Count
Not at all 	9.1%	1
Slightly	0.0%	0
Mostly 	45.5%	5
Completely 	45.5%	5
Comments?		1
<i>answered question</i>		11
<i>skipped question</i>		103

Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

13. Where would you prefer to go for specific health information?		
	Response Percent	Response Count
Internet 	9.6%	10
GP (Doctor) 	87.5%	91
Library 	1.9%	2
Other (please specify) 	1.0%	1
	<b>answered question</b>	<b>104</b>
	<b>skipped question</b>	<b>10</b>

14. Where do you actually go first?		
	Response Percent	Response Count
Internet 	34.6%	36
GP (Doctor) 	55.8%	58
Library 	1.9%	2
Other (please specify) 	7.7%	8
	<b>answered question</b>	<b>104</b>
	<b>skipped question</b>	<b>10</b>

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**Patient Survey Results - Restricted Results - Males**

**Healthcare and the Internet (2)**

**1. Please tick your age bracket:**

	Response Percent	Response Count
0 - 20 Years	37.5%	30
21 - 40 Years	32.5%	26
41 - 60 Years	18.8%	15
60+ Years	11.3%	9
<i>answered question</i>		<b>80</b>
<i>skipped question</i>		<b>0</b>

**2. Please tick your gender:**

	Response Percent	Response Count
Male	100.0%	80
Female	0.0%	0
<i>answered question</i>		<b>80</b>
<i>skipped question</i>		<b>0</b>

**3. Have you ever used the internet for medical information for yourself or others?**

	Response Percent	Response Count
Yes	71.3%	57
No	28.8%	23
<i>answered question</i>		<b>80</b>
<i>skipped question</i>		<b>0</b>



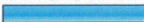

Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

4. Why have you not used the internet for medical information?		Response Count
<i>Note: Free response answers. Extended Answers Not Included</i>		
		22
	<i>answered question</i>	22
	<i>skipped question</i>	58

5. What types of internet sources have you used to find out the information?		
	Response Percent	Response Count
Self Diagnosis Website	49.1%	27
Wikipedia	83.6%	46
Communicating with an online doctor	20.0%	11
Forum/Discussion Board/Online Support Group	40.0%	22
Government Health Website	63.6%	35
Medical Drug Company Website	49.1%	27
Search Engines	78.2%	43
Other, including specific websites (please specify)	10.9%	6
	<i>answered question</i>	55
	<i>skipped question</i>	25

Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

6. Of the sources selected above, how much did you trust these sources?						
	Almost not at all	A little	Mostly	Almost completely	Rating Average	Response Count
Self Diagnosis Website	25.8% (8)	35.5% (11)	32.3% (10)	6.5% (2)	2.19	31
Wikipedia	4.4% (2)	31.1% (14)	51.1% (23)	13.3% (6)	2.73	45
Communicating with an online doctor	64.3% (9)	21.4% (3)	14.3% (2)	0.0% (0)	1.50	14
Forum/Discussion Board/Online Support Group	32.0% (8)	44.0% (11)	20.0% (5)	4.0% (1)	1.96	25
Government Health Website	5.3% (2)	15.8% (6)	44.7% (17)	34.2% (13)	3.08	38
Medical Drug Company Website	16.7% (5)	13.3% (4)	56.7% (17)	13.3% (4)	2.67	30
Search Engines	7.0% (3)	27.9% (12)	46.5% (20)	18.6% (8)	2.77	43
Other (specified above)	0.0% (0)	16.7% (1)	33.3% (2)	50.0% (3)	3.33	6
<i>answered question</i>						54
<i>skipped question</i>						26



7. After consulting the information on the internet, did you choose NOT to see your doctor?		
	Response Percent	Response Count
Yes 	35.3%	18
No 	64.7%	33
<i>answered question</i>		51
<i>skipped question</i>		29



Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.





8. What was your motivation to look for information on the internet?		
	Response Percent	Response Count
General information on a medical condition	88.9%	48
To try to self-diagnose	22.2%	12
To look at further treatment options	38.9%	21
Learn about other patient's similar experiences with an illness	29.6%	16
To order vitamins/medicines	3.7%	2
Privacy	13.0%	7
Other (please specify)	13.0%	7
<i>answered question</i>		54
<i>skipped question</i>		26

9. Has self-diagnosing your own condition (whether you were right or wrong) from internet sources ever caused you anxiety?		
	Response Percent	Response Count
Yes	31.5%	17
No	68.5%	37
<i>answered question</i>		54
<i>skipped question</i>		26




Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.




10. Have you ever taken information from the internet to your doctor?		
	Response Percent	Response Count
Yes 	24.1%	13
No 	75.9%	41
<i>answered question</i>		54
<i>skipped question</i>		26

11. Did taking information from the internet to your doctor affect your treatment?		
	Response Percent	Response Count
Yes 	42.9%	6
No 	57.1%	8
<i>answered question</i>		14
<i>skipped question</i>		66

12. Was your doctor open to discussing the information?		
	Response Percent	Response Count
Not at all 	14.3%	2
Slightly 	14.3%	2
Mostly 	21.4%	3
Completely 	50.0%	7
Comments?		4
<i>answered question</i>		14
<i>skipped question</i>		66

Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

13. Where would you prefer to go for specific health information?		
	Response Percent	Response Count
Internet 	9.1%	7
GP (Doctor) 	89.6%	69
Library	0.0%	0
Other (please specify) 	1.3%	1
<i>answered question</i>		<b>77</b>
<i>skipped question</i>		<b>3</b>

14. Where do you actually go first?		
	Response Percent	Response Count
Internet 	36.4%	28
GP (Doctor) 	61.0%	47
Library	0.0%	0
Other (please specify) 	2.6%	2
<i>answered question</i>		<b>77</b>
<i>skipped question</i>		<b>3</b>

## Appendix B

### Doctor Survey Results







#### Healthcare and the Internet - Doctors





1. Please tick your age bracket:		
	Response Percent	Response Count
20-30	0.0%	0
31-40	9.5%	4
41-50	40.5%	17
51-60	42.9%	18
60+	7.1%	3
<i>answered question</i>		42
<i>skipped question</i>		0

2. Please tick your gender:		
	Response Percent	Response Count
Male	61.9%	26
Female	38.1%	16
<i>answered question</i>		42
<i>skipped question</i>		0

3. Do you use the internet to access medical information?		
	Response Percent	Response Count
Yes	97.5%	39
No	2.5%	1
<i>answered question</i>		40
<i>skipped question</i>		2

Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

4. What types of internet sources have you used for medical information?		
	Response Percent	Response Count
Search Engines 	92.5%	37
Online journals 	62.5%	25
Government health website 	57.5%	23
Medical Drug company website 	27.5%	11
Wikipedia 	50.0%	20
Other (please specify) 	20.0%	8
<i>answered question</i>		40
<i>skipped question</i>		2

5. How many patients do you see a day who have accessed information on the internet before visiting you?		
	Response Percent	Response Count
0	0.0%	0
1 	17.1%	6
2-5 	57.1%	20
6-10 	20.0%	7
10+ 	5.7%	2
<i>answered question</i>		35
<i>skipped question</i>		7

Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

**6. How much would you trust the following sources to provide accurate and reliable information for patients?**

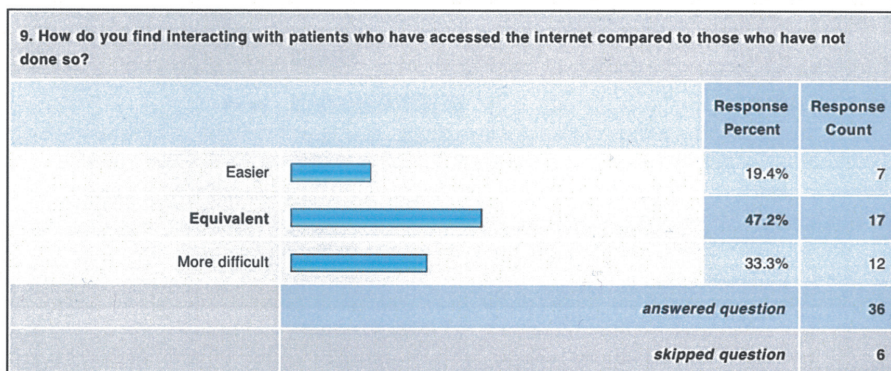
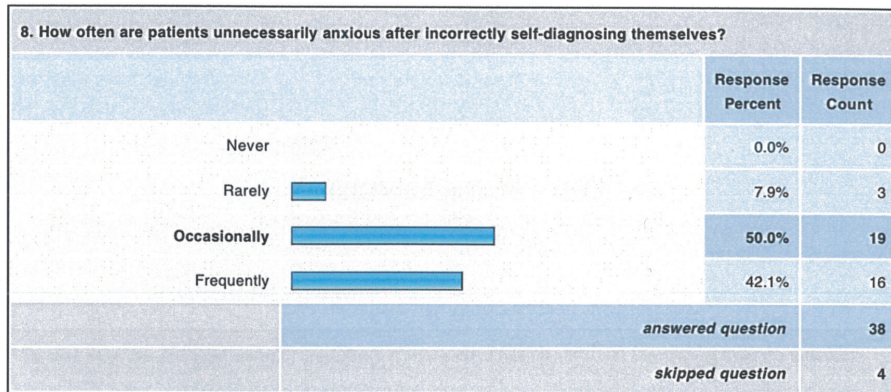
	Almost not at all	A little	Mostly	Almost completely	Response Count
Self-Diagnosis Website	55.3% (21)	44.7% (17)	0.0% (0)	0.0% (0)	38
Wikipedia	8.1% (3)	67.6% (25)	24.3% (9)	0.0% (0)	37
Communicating with an online doctor	11.1% (4)	61.1% (22)	27.8% (10)	0.0% (0)	36
Forum/Discussion Board/Online Support Group	21.6% (8)	64.9% (24)	16.2% (6)	0.0% (0)	37
Government Health Website	0.0% (0)	27.0% (10)	48.6% (18)	24.3% (9)	37
Medical Drug Company Website	8.3% (3)	50.0% (18)	38.9% (14)	2.8% (1)	36
Search Engines	10.8% (4)	40.5% (15)	45.9% (17)	2.7% (1)	37
Other, including specific websites (please specify)					6
	<i>answered question</i>				38
	<i>skipped question</i>				4

**7. How many patients do you see a day who have self-diagnosed a condition after consulting the internet?**

	Response Percent	Response Count
0	10.5%	4
1	63.2%	24
2-5	23.7%	9
6-10	2.6%	1
10+	0.0%	0
	<i>answered question</i>	
	<i>skipped question</i>	
		38
		4



Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.








**10. Why?**



*Note: Free response answers. Extended Answers Not Included*

	Response Count
	27
<i>answered question</i>	<b>27</b>
<i>skipped question</i>	<b>15</b>

Evaluate the effectiveness of patient access to medical health information from the internet in New Zealand.

11. Do you feel threatened by patients who bring in information from the internet?		
	Response Percent	Response Count
Yes 	7.9%	3
No 	92.1%	35
<i>answered question</i>		38
<i>skipped question</i>		4

12. How often are you been asked to prescribe a drug a patient has identified for themselves from the internet?		
	Response Percent	Response Count
Never 	15.8%	6
Rarely 	42.1%	16
Occasionally 	42.1%	16
Frequently	0.0%	0
<i>answered question</i>		38
<i>skipped question</i>		4

13. Is it your impression that patients' medical knowledge has increased since the advent of the internet?		
	Response Percent	Response Count
Yes 	78.9%	30
No 	21.1%	8
<i>answered question</i>		38
<i>skipped question</i>		4