

# Promoting the Meaningful Use of Health Information for New Zealand Consumers

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**Abstract:** A cornerstone of ‘meaningful use’ of health information is engaging consumers and their families. Yet for consumers to be engaged requires an informed population and therefore focus on consumer’s health information needs. Reports indicated consumers want health information, yet little was known about their internet use or perception of electronic health information. This New Zealand study surveyed consumers to gain an understanding of their health information requirements. Some 1783 questionnaires were available for descriptive statistical analyses. The internet was the third most preferred source of health information. Two thirds of participants had used the internet to access health information, because of the speed of access and to find information before going to the doctor. There was little awareness or use of existing New Zealand-based on-line health resources. Study implications include promoting existing resources and increasing the use of electronic communication between consumers and healthcare providers as these are currently underutilized.

**Keywords:** Health information, Consumer, Internet, Survey

## Introduction

Meaningful use of health information is a multidimensional concept that the National Quality Forum<sup>1</sup> considers has five cornerstones: (1) Improve quality, safety, efficiency, and reduce health disparities, (2) Engage patients and families, (3) Improve care coordination, (4) Improve population and public health, and (5) Ensure privacy and security protections. Focusing on the second of these cornerstones, to engage patients and families, includes consumers having access to health information. It has been suggested that “around 90 percent of the care a person needs to manage a chronic disease must come directly from the patient”<sup>2</sup>, and people living with long term conditions are also clear about the elements they require from a modern health care system, and foremost among these is access to high quality information about their

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condition<sup>3</sup>. With the aim of promoting the meaningful use of health information for New Zealand (NZ) consumers a study was undertaken to identify the health information needs of NZ consumers in the primary health context and to better understand their electronic health information requirements.

## 1. Background

The World Health Organisation (WHO) continues to emphasise the importance of providing access to timely, acceptable, and affordable health care of appropriate quality, and the same terms apply equally to providing health information and educational resources<sup>4</sup>. Such information has to be accessible so the right information can be found in a timely manner. It also needs to be acceptable in terms of being what the consumer requires, and this can apply to language, clarity and being comprehensible. Health information also needs to be affordable, both to the consumer, and the provider or funder of health resources. Finally, health information needs to be appropriate and of a quality to be useful to the consumer. Electronic health information and educational resources, such as provided through the internet, can meet all these requirements. The WHO requirements applied to health information are relevant internationally, and equally so in NZ.

NZ is a small country spread over two main islands located deep in the Pacific Ocean. The population has almost reached 4.5 million, females making up 51.5%, with nearly three quarters of the population living in the North Island<sup>5</sup>. The population by age indicates a fifth under 15 years (approximately 0 to 14 years 20%; 15-39 years 34%; 40-64 years 32%; and 14% over 65 years of age)<sup>5</sup>. Multi-cultural and multi-ethnicity statistics indicate the diversity of the population. The majority of people in NZ are European (69%), with Maori, the indigenous people, making up 15 percent of the population. Additionally NZ has Asian (9%), Pacific (7%), and many other people, but in smaller numbers<sup>5</sup>. Reports from NZ indicate consumers want better explanations about their conditions, and want family and carers included<sup>6</sup>.

A 2011 survey reported that more than half of the adults in the United States (57%) use the internet to seek health information and one fifth use Facebook or another social network option to receive updates about health issues<sup>7</sup>. NZ has a higher proportion of internet users. By September 2012 there were approximately 3.8 million internet users in NZ, which comprised 88% of the population<sup>8</sup>. One in two rural homes had broadband access, but 12 percent of homes still had a dial-up connection. The most common reason for not switching to broadband was cost<sup>5</sup>. Google is the most commonly used search engine in NZ, being responsible for 86% of all searches in 2010<sup>8</sup>. Social networking is the leading online activity in NZ and was found to account for 1 in every 5 minutes spent online<sup>8</sup>. It was also found that although males and females account for the same percentage of visitors to social networking sites females exhibited a stronger engagement with the sites, spending on average 50% more time on the sites than males<sup>8</sup>.

Benefits of being able to go online for health information include providing consumers a quick, easy and anonymous method to access information<sup>9</sup>. Individuals with long term conditions can form an online support network of people with similar conditions thereby gaining support and information<sup>9</sup>. Furthermore, social media can be customised to meet the specific needs and preferences of its target audience<sup>10</sup>. Interactive features such as the ability for consumers to provide feedback can enhance the effec-

tiveness of a health organisation's web presence by ensuring their web site contains information that the target audience wants<sup>11</sup>.

Health information can be provided in a variety of ways, including electronically. Previous studies often first turned to health providers for information about consumers' health information needs. For example, a NZ study to investigate Asian health information needs undertaken by Chen<sup>12</sup> drew on data from interviews with health providers. Early work on the web portal 'Health Navigator NZ' which collates, coordinates and identifies the most useful resources for primary and secondary prevention of long-term conditions in NZ was informed by the Self-Management Network, again predominantly providers<sup>13</sup>. This study of consumers health information needs could impact on the development of the Health Navigator NZ web portal if it is found that web based information is appropriate and accessible for consumers. This study asked NZ consumers about their health information seeking behaviours on the internet and their perception of the electronic health information they found.

## **2. Method**

To gain a better understanding of the health information needs of NZ consumers a two phase mixed methods approach was utilised. Firstly data were collected from four focus groups, recruited using convenience sampling, with health consumer groups in NZ's largest city. The findings from the focus groups, in conjunction with the input of an Advisory Group, were used to formulate a survey. The survey was distributed using a purposive sample of 12 General Practices within one region of NZ. This provided a range of practices as inner city, suburban and rural settings were included. Data collection took place for one week in late 2010. During the data collection week a research assistant went into the practice daily to discuss the survey with adult consumers in the waiting room and if they were interested offered the anonymous questionnaire. Those agreeing to participate could either complete the questionnaire alone, or with assistance from the research assistant. It was hoped the majority of consumers would finish the questionnaire while in the waiting room and place the completed questionnaire in a box provided. However, some consumers were called in to see the doctor before completing the questionnaire, or preferred to take the questionnaire with them to have family assist them, and in these cases a stamped self-addressed envelope was provided so consumers could return their completed questionnaire by post. Ethics approval was obtained (The NZ Health and Disability Ethics Committee NTY/09/110/EXP).

A total of 900 to 1200 completed questionnaires were projected, however better than expected participation occurred and a total of over 1800 questionnaires were received. This gave a final sample of 1783, once partially completed questionnaires were excluded (at least 75% of questions needed to be answered for inclusion). Data from the surveys were entered into Statistical Package for Social Sciences (SPSS Inc.) for statistical analysis. During and after data entry quality checks were undertaken for completeness and internal consistency. This included checking for consistent handling of questionnaires with missing data or unclear responses. Quality control checks were also made of accuracy of data entry and coding of responses. Descriptive statistical analysis used included frequency counts and cross tabulations.

### 3. Results

Demographic data for the participants is summarised in Table 1. Most participants were female (62.9%), aged 35-44 years (20.3%) and of NZ European ethnicity (61.0%). The three sources of health information that were found to be the most useful were the doctor/health centre (90.8%), the nurse (82.1%) and the internet (76.2%). When asked specifically if they had ever used a computer to access health information, 67.9% of participants indicated they had. The age range of those participants who had accessed on-line health information within the last 12 months is shown in Table 2.

**Table 1.** Summary of demographic data

<b>Gender</b>	Male	37.1%
	Female	62.9%
<b>Age</b>	15-24 years	12.5%
	25-34 years	17.4%
	35-44 years	20.3%
	45-54 years	17.8%
	55-64 years	15.9%
	65-74 years	10.1%
	75 and over	6.0%
<b>Ethnicity</b>	NZ European	61.0%
	Maori	15.2%
	Pacific Peoples	7.1%
	Asian	8.1%
	Other	8.6%

**Table 2.** Age of consumers accessing health information

<b>Age Range</b>		<b>Accessed health information from internet</b>		
		<b>Yes</b>	<b>No</b>	<b>Total</b>
15-24	Count	124	80	204
	% within Age	60.8%	39.2%	100.0%
25-34	Count	208	74	282
	% within Age	73.8%	26.2%	100.0%
35-44	Count	220	111	331
	% within Age	66.5%	33.5%	100.0%
45-54	Count	172	118	290
	% within Age	59.3%	40.7%	100.0%
55-64	Count	133	126	259
	% within Age	51.4%	48.6%	100.0%
65-74	Count	62	103	165
	% within Age	37.6%	62.4%	100.0%
75+	Count	15	83	98
	% within Age	15.3%	84.7%	100.0%
Total	Count	934	695	1629
	% within Age	57.3%	42.7%	100.0%

An additional question asked participants for more detail about their use of the computer for health-related purposes and a range of options were available where participants could indicate as many as applied (Table 3).

**Table 3.** Use of computer for health-related purposes

<b>Options</b>	<b>Yes (%)</b>	<b>No (%)</b>
To look for myself	50.6	49.4
To look just generally	28.9	71.1
To look for someone else	26.8	73.2
To buy medicines or vitamins	6.0	94.0
Other – not specified	4.1	95.9
To email doctor or health centre	2.7	97.3
To participate in an online support group	0.8	99.2

Participants were also asked about the usefulness of health information found on the internet (Table 4), and their trust in the health information found (Table 5).

**Table 4.** Perception of usefulness of health information from the internet

N=1034	Frequency (n)	Percent (%)
Not at all useful	18	1.7
Not really useful	41	4.0
A little bit useful	188	18.2
Useful	515	49.8
Very useful	272	26.3
<b>TOTAL</b>	1034	100

Participants were asked about their reactions to looking for health information on-line; more than one option could be chosen from the list provided (Table 6). The speed of accessing information was most noted (42.6%), followed by finding some information before going to the doctor (29.2%). There are some existing NZ-based on-line health resources and participants were asked to indicate if they had heard of or used the listed free on-line health information services (Table 7).

**Table 6.** Reactions to looking for on-line health information

Options	Yes (%)	No (%)
I like to use the internet because I can get health information quickly	42.6	57.4
I like to have some information before I go to the doctor	29.2	70.8
I like getting health information from a lot of different websites	19.5	80.5
I don't like to use the internet because I don't know what health information I can trust	12.2	87.8
I feel confused because there is too much health information	10.9	89.1
When looking for health information on the internet I feel frustrated	7.5	92.5

**Table 5.** Perception of trustworthiness of health information from the internet

N=1034	Frequency (n)	Percent (%)
Not at all	29	2.8
A little bit	126	12.1
Some	417	40.1
Quite a lot	349	33.6
Very much	119	11.4
<b>Total</b>	1040	100

**Table 7.** Awareness of existing NZ web-based health resources

Options	Yes (%)	No (%)
HealthPoint (www.healthpoint.co.nz)	4.2	95.8
Health Topics A-Z (www.agewell.org.nz)	9.1	90.9
Web Health (www.webhealth.co.nz)	8.0	92.0
Health Navigator (www.healthnavigator.org.nz)	2.2	97.8

#### 4. Discussion

The participants in this study are not representative of the NZ population on gender, nor ethnicity despite a range of practices, including inner city, suburban and rural settings, being utilised. More females participated in this study (nearly 63%), however, consumers were accessed in General Practice waiting rooms and it is known that men are more reluctant to access health services<sup>14</sup>. This study had a smaller (61%) proportion of people who identified as NZ European, compared to the general population (69%)<sup>5</sup>; and a much higher proportion of participants identified as being of other ethnicities (8.6%). This may reflect the more cosmopolitan nature of the largest city in the country. Across the participants in this study the majority preferred to receive health information directly from their doctor/health centre (90.8%) or nurse (82.1%). The internet was indicated as the third most useful source of health information by three quarters of participants (76.2%), yet only 67.9% indicated they had used a computer to access health information. Given that 88% of the general population is considered internet

users<sup>8</sup> there is an opportunity to encourage further use of internet based health information.

Of those who used a computer to look up health information the most common reason was for information related to their own health needs (50.6%), and age was not an indicator of internet usage, although usage did decrease with age once over 65 years, which is similar to other studies<sup>15</sup>. There was minimal use of a computer to buy medicines or vitamins (6%), but most medicines are prescribed in NZ and prescription medicines are subsidized by the government, therefore there is little reason to buy medicines on-line. There was limited use of a computer to contact health providers via email (2.7%) and this is an area that could increase, and potentially improve access to health information and services. Changes to service funding may be needed to encourage this. On-line support groups were not commonly used (0.8%) and increasing use of these could provide an opportunity to further support consumers in an accessible manner of any time and place.

There were positive reactions by the consumers in this study to accessing on-line health information. The benefit of information being quick and easy to access mirrors previous studies<sup>9</sup>, however, the anonymity seeking on-line information affords was not mentioned in this study, but had been noted in literature<sup>10</sup>. A further difference in the findings of this study was the lack of comment on the opportunity for health information to be customized, yet other studies have indicated this is a potential benefit<sup>10</sup>. Overall NZ consumers found accessing on-line health information useful (three quarters of participants found it useful or very useful), and felt they could mostly trust (85% indicated some trust or more) the information they found. There are some existing NZ health information related web sites but this study found low rates of awareness or use of these. This was not surprising since limited national funding or efforts have gone into the marketing and promotion of these.

## **5. Conclusion**

New Zealanders are increasingly using technology and national strategies identify patient portals and shared records as important enablers for improving quality and population health. Therefore, the provision of appropriate and reliable electronic health information and educational resources is becoming a priority. While NZ has a high rate of internet use there are opportunities to improve the use of the internet for health information. Particularly, there is a need to promote the existing health web sites as a means of easily providing credible NZ appropriate health information.

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