

Functional Themes across Blogs, Wikis and Social Networking Sites relating to Pregnancy

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Abstract

The aim of this article is to explore the functional themes across blogs, wikis and social networking sites relating to pregnancy, through a thematic analysis of data contained within a selection of individual websites. A research question, which could be answered by this study is, "What information and applications are individuals sharing and accessing on pregnancy related websites?" A search was conducted on the Internet using Google to identify all related pregnancy related Web 2.0 applications on the Internet in Australia. They were analysed and grouped based on their content and functional themes. The thematic analysis revealed several recurrent themes, which were labelled 'provision of personal opinion on health information (unreferenced)', 'sharing of pregnancy experience', 'news articles' and 'trading pregnancy items/gadgets'. The findings illustrated the usage of various Web 2.0 Internet applications in relation to obtaining and sharing pregnancy related information. Many of these applications have not been certified by health care professionals. The study illustrated that health care consumers were taking it upon themselves to utilise these Internet applications and other publicly available application for health purposes. In most instances the researcher noted the intention of information and resources provision on these websites was not to educate but to sell or to convince the consumer to take a particular action that may or may not benefit their health circumstances. Understanding what type of tools and functions consumers are seeking online and how they are accessing them will enable health care providers to capitalise on these easy to use applications for patient education, health promotion and for changing policy to improve health care services.

Keywords: Consumer Health Informatics, Web 2.0 Applications, Blogs, Wikis, Social Networking, Pregnancy

1 Introduction

Pregnancy is an occasion that every fertile female may or may not go through once or several times in their lifetime. In Australia, there are numerous antenatal care options available to pregnant women including; public care where the pregnant woman attends an outpatient clinic or a community midwifery clinic, private care where the pregnant woman organises to see her own obstetrician, or shared care where the local doctor shares the care with the midwives and/or doctors at the maternity hospital. The pregnant woman also has the option to use not only hospitals to give birth; birth centres and planned home birth options are also available to them. These choices are often confusing and daunting to pregnant women.

In addition, there is no consistent national recom-

mendation on the number of antenatal visits a pregnant woman needs to have. However, health care providers are guided by their colleges and minimum guidelines set up by states and territories in Australia. In addition to medical screening and check-ups, antenatal care also aims to provide psychological support to the pregnant woman and her partner. This includes information and advice to facilitate problem solving and empowerment to improve self-care and preparation for childbirth and parenthood. Hildingsson and Radestad [1] investigated womens' expectations of antenatal care. They found that women appreciated being able to ask questions and that they expected reliable information on various topics, including preparation for parenthood. Information and advice on pregnancy has been shown

to be well received by the pregnant women and that it leads to more confident and positive parenting later. Unfortunately, sometimes communication between the midwife and the pregnant woman was unilateral, with little contribution from the pregnant woman and even less from the partner [2].

A high percentage of Australians have access to Internet. A recent survey on the level of Internet usage on government websites shows that traffic has increased significantly to 48% of the adult population (at least once in the past 12 months) compared with 39% in 2004 – 2005[3]. Most of the surveyed respondents (65%) said they used the Internet at least once a day [3]. Time and convenience were cited as the key motivators for the respondents in using the Internet.

The Internet is also seen as the primary channel for obtaining information, including medical and financial information and other services and transactions. New web based applications such as webcasts, wikis and blogs form a large part of today's communication pattern and are readily available to all Internet users. These web based applications are collectively referred to as "Web 2.0" as they give Internet users the ability to produce/ publish and exchange information, experiences, and opinions and allow them to instantaneously regulate the content of the published information on the Internet. Unfortunately, there have not been many studies into the phenomenon of using health related blogs, wikis and social networking sites.

Knowledge of pregnant womens' use of the Internet as a source of health information is also limited. Larsson [4] found that although pregnant women often use the Internet to find information on various topics related to pregnancy, childbirth and the baby, and generally found the information reliable, they rarely discuss this information with their midwives. Generic Internet related studies have published results where participants did not regard the Internet as 'official enough' and information provided was considered less than reliable and the currency questionable [3][5][6][7]. Rozmovits and Ziebland [8] found in their studies that experienced Internet users tend to avoid commercial and less reliable Internet sites and relied more on information they found on web pages from universities and/or from the official government sites. Other literature is predominantly editorial, written from the perspective of bloggers or discusses the potential roles for blogs in educating nurses and medical students [9] [10].

The aim of this study was to explore the functional themes across blogs, wikis and social networking

sites relating to pregnancy, through a thematic analysis of data contained within a selection of individual websites. A research question, which could be answered by this study is, "What information and applications are individuals sharing and accessing on pregnancy related websites?" The discussion will illustrate different ways Web 2.0 technologies can be or are being accessed in practice and to highlight issues that future research on this topic should address.

1.1 Integration of Web 2.0 Technologies in Consumer Health Informatics

1.1.1 Trends

Evidence suggests that the Internet and Web 2.0 technology is changing the extent to which old media channels of communication are used [9]. Web 2.0 technology is characterised by a rich user experience, user participation, dynamic content, metadata, web standards and scalability [11]. Three further characteristics that Best does not mention about Web 2.0 include openness, freedom and collective intelligence by way of user participation – all should be viewed as essential attributes of Web 2.0 technology. The ability to harness these new technologies may empower pregnant women and assist them in forming a true partnership with their doctors and midwives in achieving their desired health outcomes.

The usage of Web 2.0 web applications has increased exponentially. According to CyberJournalist.net [12], Technorati, an internet search engine for blogs, tracked its 50 millionth blog in 2006 and reported that the 'blogosphere' is doubling about once every six and a half months. A blog (an abridgment of the term weblog) is a website that contains dated entries in reverse chronological order. Blogs function as an online journal and can be written by one person or a group of contributors. Each entry may contain commentary and links to other websites and images. Standard blogs include easy posting, archives of previous posts, and a standalone web page for each post to the blog with a unique Universal Resource Locator (URL). A blogger may post using text, videos (videoblog), photo (photoblog) to a potentially world wide audience on the Web.

Social networking applications are also growing very quickly. As of September 2008, Facebook.com had more than 100 million active users, making it the fourth-most trafficked site in the world [13]. Furthermore, MySpace.com has over 100 million users and is signing up 500,000 new users each

week [14]. Users on these sites create profiles that include their name, age, occupation, location, interests, social orientation, and other information. They are able to search for other users who they already know or with whom they share common interests. They may join and form groups to inform fellow users of upcoming events or to facilitate community mobilisation efforts.

Wikis are also web-based content management applications that allow users to add and edit content. Wikis can be used as a source for obtaining health information and knowledge. They are also used as a method of virtual collaboration, for example, to share dialogue and information among peers with common interests and situations, and to engage in shared learning. Engaging in the collaborative environment of wikis enables users to enhance their knowledge and to become part of a virtual community of interest.

1.2 Using Web 2.0 Applications

Part of the appeal of this new media is its interactivity and information sharing capability that may lead to clarity of thought and increased personal empowerment. Bloggers' primary interests include social connectedness and interest in helping others

in situations similar to their own. Other studies reported that nearly half of all bloggers use the technology as a form of personal therapy [15].

Many health related groups exist on social networking sites which cover a variety of health topics, from preventing AIDS to diabetes care to pregnancy and childbirth. Because users are able to search for groups based on a particular public health topic and concern, social networking sites are ideal places to communicate with health care consumers who may otherwise be difficult to identify and reach [9].

Wikis provide opportunities to collaborate with others in the creation of a document collectively through a web browser. They are best used as a form of health education where collection of best practices and know-how is created, assembled and documented from a bottom-up knowledgebase.

2 Materials and Methods

2.1 Web Search

A search was conducted on the Internet using Google to identify all related pregnancy related Web 2.0 applications on the Internet registered with a



Figure 1: Global 5 year trend on search terms pregnancy information and antenatal care from Google

Search engines	Search terms	Results	Relevancy	Comments
Google Blog	Antenatal care	104	46	Published in the last week from 30 Sept 08
	Pregnancy information blog	187	11	No difference with the additional word Australia
	Antenatal care in Australia	4	1	Published in the last week from 30 Sept 08
Google	Pregnancy information -eBay -price -news	226	23	Published in the last day from 30 Sept 08
	Antenatal care - eBay -price - news	7	1	Published in the last day from 30 Sept 08
	Antenatal care Australia	3	2	Published in the last day from 30 Sept 2008
	Pregnancy wikis	3	0	Published in the last month from 30 Sept 2008

Figure 2: Results from the web search

‘.au’ domain name. Keywords used were pregnancy, blogs, social networking, wikis, webcast (pod and vid), antenatal and combinations of these keywords. Timeframe criteria were applied to sites which have been updated in the last one to thirty days and have the domain extension .au – denoting the site has been registered with an Australian domain name.

Safe search filter was also applied to eliminate adult content. The researcher is only interested in English language sites, registered with an Australian domain name extension (.au).

2.2 Web Analysis

Monitoring Web 2.0 user behaviour is an important evaluation skill that can provide key feedback regarding reach and trends in usage. Monitoring website activity is done through both log file analysis and page tagging. Google trends monitor software was initially used to gain an understanding of the search profile of both the terms used in this study: pregnancy information and antenatal care. The thematic content and identified functions of the websites was then grouped and coded accordingly

using a thematic analysis approach. Thematic analysis is an approach to dealing with the data that involves the creation and application of codes to data. This was conducted through the creation of categories in relation to data and the grouping together of different instances of datum under an umbrella term that can enable them to be regarded as ‘of the same type’ [16]. The review focused on tools for information provision, communication possibilities and topics addressed both formally by the web designer and informally in discussion groups. A similar methodology was used in one study analysing a weight loss promotion site and a site where patients with rare diseases can record their experiences with medications [17].

3 Results

3.1 Search Statistics

During the web search, the initial result yielded a minimum 1,000,000 hits. The search trends around the world on the terms pregnancy information and antenatal care, in the last 5 years are captured through Google Trends (Figure 1). When the researcher limited the trend search to Australia, no significant data output was produced as the percentages were too small. However, a large spike in June 2008 was noticed which may be attributed to the news of the birth of Nicole Kidman’s baby.

From the global result, the researcher also noted that Perth and Brisbane are the two Australian cities, which lead the majority of the searches on pregnancy information within Google. Globally, Australia was ranked third in the world. This positive trend indicates the high search traffic churns within Australia on pregnancy information and antenatal care.

The researcher further extended the search criteria using GoogleBlog and GoogleWeb. Due to the number of returned results, the researcher made some adjustment to the search terms. The researcher

Content/ Functional Categories	Goggle Blog			Total
	Antenatal care	Antenatal care in Australia	Pregnancy information blog	
Pregnancy items/gadgets	1	1	1	3
Personal opinion on health information relating to childbirth (unreferenced)	5	1	4	10
Political/policy action campaign	7	2	2	11
News article	8		4	12
Government	4			4
Review of childbirth/pregnancy books	2			2
Legal	1			1
Pregnancy experience	12			12
Doctors’ account	1			1
Midwives’ account	2			2

Figure 3: Content and functional categories of the relevant websites (Google Blog)

Content/ Functional Categories	Goggle Web				
	Antenatal care	Antenatal care in Australia	Pregnancy information	Pregnancy wikis	Total
Pregnancy items/gadgets/Rx		1	1		2
Personal opinion on health information relating to childbirth (unreferenced)	1		3 (podcasts) 12 (websites) 3 (forums)		19
Political /policy action campaign				1	1
News article	2		2	1	5
Government	3	1	0		4
Review of childbirth/pregnancy books				1	1
Legal					
Pregnancy experience			2 (blogs)		2
Doctors' account					
Midwives' account					

Figure 4: Content and functional categories of the relevant websites (Google Web).

added additional terms to omit sites, which contained price information, newspaper sites and eBay sales items. The resulting web search yielded the following results:

The researcher combed through each individual website, blog and wiki to identify and group them into content and functional categories as identified in Figures 3 and 4.

The results above were meticulously filtered, as some sites served several functions and the researcher has grouped them within the category that best matches the majority of the website functions. A majority of the sites were classified as containing health information given out by lay persons through blogging sites, social networking sites and other forum/discussion lists on childbirth and pregnancy. These sites provided public access to consumers' personal experience with medications, health care providers, health care facilities, and other childbirth issues. Archived comments were listed in a simple

table structure, which allows for easy retrieval of past comments and advice.

Journaling and documenting pregnancy experiences through these Web 2.0 applications also proved a popular choice for pregnant women. One interesting aspect of these sites is the personal nature of the information that pregnant women choose to display. The users were generally registered with a pseudonym as their user name, but their websites were not necessarily private, protected or anonymous. The information on their sites often included geographical information, ultrasound pictures, and over time their daily posts revealed more and more personal information.

The third most common theme is the availability of articles relating to pregnancy. These articles range in topic from the release of new medications on the market to discussion on maternity leave or the availability of beds/doctors in maternity wards. Government announcements, such as maternity payment

Content/ Functional Categories	Selected websites							
	Motherandbaby	Kidspot	Mumzone	Babycenter	Birth	Huggies	Bubhub	Pregnancycounselling
Pregnancy items/gadgets/Rx	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Personal opinion on health information relating to childbirth (unreferenced)	Yes (within forum)	No	Yes (within forum)	Yes (within forum)	Yes (within forums)	Yes (within posts)	Yes (within forum)	Yes
Political /policy action campaign	No	No	No	No	Yes (within forums)	No	No	No
News article	Yes	Yes	Yes	Yes	Yes	No	No	No
Government	No	No	No	No	No	No	No	No
Review of childbirth/pregnancy books	No	No	Yes	No	Yes	No	Yes	No
Legal	No	No	No	No	No	No	No	No
Pregnancy experience	Yes (within forum)	Yes (with in journal)	Yes (within discussion forum)	Yes (within bulletin)	Yes (within forum)	No	Yes (within forum)	No
Doctors' account	No	No	No	No	No	No	No	Yes
Midwives' account	No	No	No	No	Yes	No	No	Yes
Directory/Resources	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
HON code certified website	No	No	No	Linked from a certified site	Linked from a certified site	No	Linked from a certified site	No
Forum facility	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No (phone in)
Calculators	No	Yes	Yes	No	Yes	No	Yes	No

Figure 5: Thematic content and functional breakdown by selected sites.

policy also generated significant web traffic and interest. The researcher also found that sales of pregnancy related products also figured quite prominently among all the sites studied.

The breadth of themes covered on pregnancy on the Internet was no surprise. However, the value of this information was difficult to determine. The Geneva based Health on the Net foundation has compiled some consensus ethical principles for publishers of health information, Health on the Net (HON) Code of Conduct. The aim of the code is to provide a “quality criteria” which would allow consumers to appraise the quality of a website. The researcher further selected some high traffic sites, which were featured prominently in Google as receiving significant hits by pregnant women in Australia to be analysed in greater detail. These were:

1. <http://motherandbaby.com.au>
2. <http://www.kidspot.com.au>
3. <http://www.mumzone.com.au>
4. <http://www.babycenter.com.au>
5. <http://www.birth.com.au>
6. <http://www.huggies.com.au>
7. <http://www.bubhub.com.au>
8. <http://pregnancycounselling.com.au>

The results are reported in Figure 5.

As displayed by the above results, none of the sites above subscribed to the HON code. In addition, the researcher found a common trend that almost all the sites offered a resource directory and calculator function. These functions added to the one-stop portal concept where the pregnant woman was able to exchange information, communicate ideas, trade, obtain advice, search for resources, use pregnancy directories, track pregnancy progress etc.

Groups	Count	Functions	Count
Applications	25	Calculator	16
		Diary/journal	4
		Cards and moods display	2
Groups	31	Pregnancy support	6
		Parenting support	3
		Political/policy campaign	4
		Self – help groups	2
		Items for sales	2

Figure 6: Facebook applications and groups by functions

Within the social network application facebook.com, similar web analysis was conducted. There were 489 hits on the term “pregnancy” and 19 hits on the term “antenatal care” when a generic search was carried out within the Facebook website. 23 groups were formed by Australians to discuss issues regarding pregnancy and there were 47 “pregnancy-related” applications developed for Facebook users. These applications and groups were further grouped by their functions and the results are presented in Figure 6.

Calculator applications featured very prominently as a function that was readily available as an application for Facebook users. The application exists in many forms and users have the ability to choose and pick the ‘skin’ of the calculator application. These calculator applications provide such information as dates when the baby is going to be born/conceived, in-utero growth charts and gender prediction. Other calculators featured on other sites provided similar functions in addition to the function of fertility/menstrual cycle calculation.

One interesting aspect was the personal nature of the information that pregnant women choose to display and discuss on the social networking sites. From the information provided, other users were easily able to either identify or and deduce such things as whether the woman is pro-choice, which hospital she will be using, when her due dates would be, the sex of her baby and if she attended antenatal classes. All this information could be gained by assessing the nature of groups she supported and joined and the applications she used to track the progress of her pregnancy.

4 Discussion

Pregnant women consult the Internet to seek health information and to find others who are in the same circumstances as them. The proliferation of the usage of Web 2.0 technology through blogs and social networking sites is clearly demonstrated in the web trend results above. Kwai and Wagner [18] explained this proliferation using the task-technology fit (TTF) model, where in a virtual community, tasks performed were driven by individuals’ needs and desires. TTF is defined as the degree to which a technology assists an individual in performing his or her portfolio of tasks [19].

For example, individuals are more likely to require informational support and emotional support when they are experiencing an unfamiliar and/or distressing event. Pregnancy may generate such emotional

and informational needs in the active Internet user. The success of Web 2.0 technology as a social technology is directly related to the fit of its technology features with the needs of its users. Other Internet technologies might be equivalent in their communication and information storing capabilities (such as email or discussion forums), and similarly may also command the attention of the active pregnant Internet user who has the desire to build a close relationship within her circle of friends, family and community. In return, they become very active users of the technology. Kwai and Wagner [18] described that the major social needs of habitual and active Internet users are to be seen to have large and active social circles, to be socially accepted and to maintain social exchange with their peers. Web 2.0 technology on the Internet allows their profile to be accessed freely by other users, thus allowing their goals for sociality to be achieved.

The discourse around Web 2.0 technology reiterates the same claims made 10 years ago about the opportunities and challenges of posting health information and resources on the web [17]. The use of the term Web 2.0 carries the implicit suggestion that the current generation of applications may transform the way health care is being delivered. It may also reflect the expectations that these Internet applications may increase patient independence and contribute to democratisation in health care process and delivery.

However, when studying these web applications and websites, the researcher discovered that although the majority of the sites' functional themes related to health information and resources, many were not certified by health care professionals. Occasionally, the researcher noted the intention of information and resources provision on these websites was not to educate but to sell or to convince the consumer to take a particular action that may or may not benefit their health circumstances. Coincidentally, almost all the 8 high traffic websites analysed have links to buy, to swap and/or to sell pregnancy related gadgets, vitamins, clothes and/or baby equipment.

Only one of the eight high traffic sites the researcher surveyed acknowledged that the health resources and information they provided originated from practising registered nurses and midwives. As mentioned earlier, none of the analysed websites subscribed to the HON code. The HON code is issued by the HON Foundation for medical and health websites to address the reliability and usefulness of medical information on the Internet. Although this is a voluntary certification, it has been the most used ethical code for medical and health related information available on the Internet.

This of course presents new challenges to midwives and doctors caring for pregnant women in helping them to understand and evaluate the information they have obtained from the Internet. Misinformation can lead consumers with life-threatening conditions to lose trust in their primary care providers, and take actions that undermine the effectiveness of their treatment [18]. Vulnerable consumers may also be compromised by biased or incomplete information from those with a financial interest in the information they provide. The Internet allows this problem to reach countless number of consumers who seek to validate and address their health related insecurities online.

Sharing details of the pregnancy experience through blogs and discussion forums is another functional theme that proved a popular choice for pregnant women. Topics covered in these fora include; weblogs on the progress of pregnancies, pregnancy symptoms, discussion on buying prams, recommendation and rating of midwives/doctors in various regions, comparing birth options, partner relationship issues, childcare issues, work related issues, family issues and losing weight after pregnancy. Various studies of Internet discussion groups have identified the exchange of information as being the key attractiveness to these forums [21][22][23][24]. New users regularly joined the forum and asked simple questions as to what to expect during pregnancy. The majority of these easy to respond to questions are received positively by more experienced mothers who instantaneously posted a reply, sharing their experiences and giving the new mothers an abundance of advice. It is therefore quite apparent that the online forum communities primarily function as a significant and often unique source of informational and emotional support.

Information exchange is also a first step in becoming 'expert patients', enabling consumers to apply relevant knowledge to their condition [22]. The researcher further identified that by sharing and reflecting on the experience of being pregnant, pregnant woman were able to proactively manage their pregnancy. The expectations associated with the 'expert patient' highlight the need for patients to take responsibility for the management of their health, as an adjunct to professional care [25]. This involves not only researching conditions independently of medical consultations, but then using the acquired information to facilitate communication with health care professionals and foster a collaborative relationship between patient and health care professionals. It would be advantageous to follow through this study with future research to under-

stand the commitments of pregnant women in following through with the advice received through their weblogs.

Among all these sites there is evidence of an under-representation of health care professionals' accounts of pregnancy related information. The researcher believes through the usage of wikis, health care professionals are able to continuously revise best practice information on pregnancy for public consumption online. As the Internet proved to be an important channel of health communication, wikis are able to perform a health educational function if they are configured appropriately. Health care professionals must be adept with new technologies for communication and take advantage of the Web 2.0 environment; they have to be competent in using Web 2.0 applications, know how to promote web content through the new Web 2.0 environment and be able to evaluate website usage [9].

In this case, information 'management' becomes a broader concept. The pregnant woman's role as a consumer of healthcare also extends beyond managing information for their individual health. For pregnant women accessing the Internet, the researcher observed that it became a pattern of usage in their interactions with Web 2.0 applications to fulfil their desire to not only seek health information but to trade information and socialise with others in the same situation. Ultimately, we are witnessing a progressive change in the way consumers are leading the way in democratising the health care process and delivery.

4.1 Limitations and Issues for Future Research

There are several limitations to the thematic analysis methodology applied in this study. There was, an implicit 'quantification' involved in some forms of the analysis, an interest in creating 'bundles' of instances of behaviour that can be described as 'alike' in some way or another. But this quantification does not sit easily with the kinds of assumptions that underlie many of the approaches to qualitative research which are often galvanised around the assumption that the differences between people and the contexts which make those differences profoundly important [16]. The thematic analysis of data in this study relied on systematic processes common to the grounded theory 'methodological package'. However, because of the purposeful sampling limitation, the study cannot claim to be 'pure' grounded theory.

The usage of purposeful sampling of websites may

not reveal the extent of Australian contributions on 'pregnancy' related information hosted on websites on a 'non-.au' domain name. This potentially limits the breadth of websites found during sampling. In addition, the possibility of the use of 'Safe Search' criteria filtering may have obscured websites, which potentially fit the profile of hosting legitimate "pregnancy" related information. Finally, the limitation of using only Google branded search facilities is also worth noting. The sampling procedures could be enhanced through the inclusion of more websites and combing through each individual website to eliminate those websites not meeting the criteria set out earlier. However, this would be an impractical exercise given that there are over 1,000,000 websites to investigate.

The study results brought forward a number of issues, which would benefit from additional study and future research. The identification of numerous websites masquerading as 'social network' sites, providing information and resources on pregnancy were identified as being aimed at not merely education, but were geared to sell or to convince the consumer to take a particular action that may or may not benefit their health circumstances. This issue deserves to be explored further in future research as many unaware health care consumers may fall prey to such websites, bringing about harm to both mother and baby.

The lack of privacy concerns exhibited by consumers when posting information online is also worth further investigation. Privacy issues have been an ongoing debate in electronic health care records for years, leading to disagreement between Government and others on how to establish sufficient privacy and confidentiality protection to the data [26]. The uninhibited behaviour demonstrated online by pregnant woman may potentially change the landscape of electronic health care records.

In addition, with the increased usage of the Internet to gather information and advice provided through pregnancy forums and weblogs independently of medical consultations, it would also be worthwhile to investigate if pregnant women will use the acquired information to facilitate communication with health care professionals and to foster a collaborative relationship with them. It would be advantageous to follow through this study with future research to understand the commitments of pregnant women in following through with the advice received through their weblogs.

5 Conclusion

In many respects, the ideas discussed here are not new; certain categories of patients have been encouraged to keep diaries for years and when consumers have to face a new situation, for example pregnancy, the majority of such consumers discuss their symptoms and situation with their family, friends and even neighbours. They would go seeking for information and resources regarding the pregnancy whether it is online or through family members and friends. They would share their experience with friends and family. These are common occurrences now as they were before the advent of the Internet.

Nonetheless, the changing nature of where these interactions now more increasingly occur (the Internet) is driving the increased usage of Web 2.0 applications to meet the demand of the consumers. Web 2.0 usage is becoming mainstream as more users recognise its value as a platform for social praxis. This new evolution represents a new frontier in the changing face of health care process and delivery. The uniqueness of Web 2.0 technologies is found in the blending of many different tools together in a single interface where information creation, retrieval and management are not only made easier and interactive, but also speedier. This study has tried to illustrate that health care consumers are taking it upon themselves to utilise these and other publicly available applications for health purposes. Understanding what tools and functions the consumer seeks online and how they use them will also enable health care providers to capitalise on these easy to use applications for patient education, health promotion or for changing policy and improving health care services.

Despite its promise for health communication and health promotion, evaluation is still required to identify best practice. Therefore, the creation of awareness through understanding the functional themes in the landscape of pregnancy related Web 2.0 applications on the Internet is the first step toward advancing additional research in this sphere.

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