Toward a wiki guide for obstetrics and gynecology trainees in Ireland.

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Towards A Wiki Guide For Obstetrics & Gynecology Trainees In Ireland

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Conflict of Interest: None

Key Words: Trainee, Wiki, Web 2.0, Stress, Migratory, Integration

Synopsis: This paper describes the development and pilot study of an Internet-based Wiki platform to facilitate a mobile medical workforce more efficiently.

Abstract: 197 Words
Text: 2441 Words

Abstract

Objective:
This paper describes the implementation of a novel, web-based comprehensive national information hub for trainees (n =210) in obstetrics and gynecology [OBGYN] in Ireland. This was a unique development in the context of an entire medical specialty in Ireland, and was aligned with the communication strategy of the governing professional body.

To date, trainee doctors working in Ireland endure an incoherent and inconsistent new staff induction and handover. In the healthcare setting, staff integration can have a significant impact on the quality of patient care.

Methods:
The free Wiki software platform pbworks.com was used for the website and for Google Analytics, freely available software was used to determine user interaction.

Results:
In the first year, 442 user visits were recorded. User interactions and levels of engagement were also measured. The average site visit duration of 4 minutes 39 seconds, comparing favorably with the original Wikipedia's four minutes.

Conclusion:
The project was a success as a proof concept and in practice. Other medical faculties have expressed an interest in adopting the concept and developing it for their trainees. This concept is widely applicable to other countries with the negligible cost being of relevance to resource poor countries.

Introduction

In 2011 there were 5498.5 trainee medical posts in Ireland, of which there were 210 obstetric and gynecology [OBGYN] trainees [2]. These doctors rotate through specialty, department, hospital and county on an annual or biannual basis depending on their stage of career development and particular career choice. To date there is no coordinated communication either to this group or within this group. The professional body responsible for training the Institute of Obstetricians and Gynaecologists Communication Plan acknowledged in 2010 that newer technologies have not been harnessed to their fullest potential in the Irish setting and that there is a disconnected membership [3].

Aims:

The aim of the project was to commence the development and pilot a dynamic, contemporary database of information for obstetrics and gynaecology trainees in Ireland which will facilitate their migration throughout the Irish healthcare system. This is the first relevant, accessible trainee national information network for a single specialty in Ireland.

What is the need?

Adapting to a new job, new people, new skills, is not an easy process [4]. For persons changing jobs, integration with new colleagues is vital [5]. New employees are advised to minimize the transition period by learning the specifics of the job as quickly as possible. [6] The obgynnetwork.ie website facilitates this recommendation.

In 2007, the HSE commissioned an audit of trainees working in the heath services in Ireland. It highlighted the lack of continuity in organizational structure overseeing the stewardship of trainee doctors in Ireland. Work-related stress has a significant effect on the job satisfaction of healthcare professionals. [7] Taking into account that a basic specialist may hold up to eight different posts over a two-year period, it is crucial that these professionals be inducted appropriately to each post. [2] Particularly as trainees may only have a few months notice of the location of their next training post. The potential benefit of better-prepared trainees means a safer more efficient environment for patients and a less stressful working environment for members. Staff orientation is a crucial component of integrating staff and maximizing their satisfaction and ultimately their productivity [5]. As far back as 1968 it was recognised the highly mobile nature of the medical population in the UK, and the difficulties caused. [8]

The international economic decline provides a backdrop for the project and the need for organizations to innovate and explore newer effective technologies. The adoption of web 2.0 strategies may provide a stepping-stone towards a solution that enables staff to have the right knowledge and

right skills at the right time, thereby helping to address the doing more with less conundrum. [9] The article on 'The Four Habits of High value Healthcare Organizations' refers to tailoring staff training and information supply. [10] This Wiki network provides some of that better information supply and structural organization [11].

In the Irish context, the Health Service Executive (HSE) have produced: Ireland's Interns 2011. [12] A Guide to Application and Appointment to Intern Training in Ireland 2011. This is a promising step and puts structure on the entry point to Ireland's postgraduate medical training. However, it is a static document and is already outdated and less relevant in the ever-changing environment of the Irish healthcare setting.

WEB 2.0

For the past 15 years, the Internet has provided an increasingly effective medium for the distribution of educational information [13]. Wikipedia (www.wikipedia.org) an online collaborative encyclopedia has become one of the world's most trafficked Web sites, with more than 3 million English-language articles (Wikipedia. About –May 29th 2012). (http://en.wikipedia.org/wiki/Wikipedia:About.) Formally launched on 01/15/2001, is the largest wiki and has become the de facto first-line encyclopedia for a large percentage of the general population [13]

The proliferation of tools has been described collectively as 'social media' – these being a group of Internet-based applications that allow the widespread creation and dissemination of user generated content. [14] The Wiki Guide to OBGYN in Ireland project aimed to connect and empower a group of medical trainees in Ireland and ultimately facilitate a more efficient, safer healthcare environment for service users and providers. Different users can edit the same page. The editing of any text may take place at any time and as often as wished. It has been noted that the content on the wiki site can change constantly and quickly to reflect the latest news and data. [15] The Wiki system provides a detailed history of changes. A wiki enhances the sharing and collaborative work.

Vandalism within wikis

Skeptics of wikis have concerns regarding the accuracy and potential for malicious misinformation on wiki websites. Early concerns that wikis would be prone to vandalism or major inaccuracies have not materialized. A large and active author base combined with wiki's openness seems to foster a socially Darwinian process [13]. Comparing Wikipedia and the Encyclopedia Britannica, similar numbers of errors in both the online encyclopedias, indicating that their accuracy may also be similar. [15] No factual errors were found in Wikipedia versus Medscape Drug Reference. [16]

Methods

In 2011 the authors, developed and piloted a website, nominally called A Wiki Guide to Obstetrics and Gynecology in Ireland, www.obgynnetwork.ie. The authors used pbworks.com, freely available software as the platform for the wiki.

A short word document pro forma [Appendix One] incorporating details regarding each OBGYN unit as they pertain to trainees was complied. This was emailed to the trainees whom the authors had direct email access to trainees were simultaneously given access to the wiki site. This involved using their active email address and a randomly generated password. All trainees contacted were automatically given 'writer privileges' on the wiki. Trainees were specifically instructed not to provide confidential information either about their local unit or patients. Specific targeted emails to senior staff in regional and metropolitan units included a draft proposal, a blank pro-forma, and an access code to the site.

Trainees replied via email with the directory information about their local OBGYN unit. Given that the units had multiple trainees, it only required a single trainee per site to give an overview to the unit. Initially the first author uploaded details regarding the units. Where more trainees replied they accessed the website and edited material accordingly.

In addition to the clinical unit details, trainees provide useful information details to facilitate staff integration into the city or town, for example, accommodation, shopping, and entertainment facilities. The essence is the provision of a distilled directory aimed specifically at mobile trainees. For the first time an accessible repository of contemporary information exists for a trainees' new training location.

All medical specialists may visit the site and request access complete the template as it applies locally and upload it. Editorial rights can be distributed easily so all changes are made easily and are entirely traceable, and are electronically signed with the users email address.

In order to highlight the new website, the first author presented to representatives within the national training body and published a paragraph on the topic in the first E-Zine edition of the Matrix - an information publication aimed at and produced by the members of the Institute.

Making the website:

The authors used a free, web 2.0 enabled, collaborative software www.pbworks.com and hosted the pilot site through the Health Education Authority Network.

Google Analytics, free quantitative analytic software, is embedded in the site (http://www.google.com/analytics/) to facilitate accurate and continued evaluation of the site activity.

RESULTS

Between June 10th 2011, and May 26th 2012 there were a total of 422 site visits with average visit duration of 4 minutes 39 seconds, and average pages per visit of 3.7. Of the website visitors Internet provider addresses 94.5% were located in Ireland (n= 418). The remainder of visitors IP addresses is accounted by trainees travelling in Canada, USA, France and India. [Figure 1] Ten of the 19 maternity units are currently represented on the website.

Figure Two and Three demonstrate the geographical distribution of the Irish visits to the wiki site with the total visits to the site of 422, with an average of 3.9 pages per Irish originating visit and average Irish originating visit duration of 4.52mins. This distribution is in keeping with the density of practitioners in Dublin but also shows the geographical diversity of the practitioners. [Figure 2]

The wiki generated interest from ten cities and towns in Ireland. The Leinster province generated the majority of visits [n=347] with Dublin visits averaging 3.8 pages per visit. Munster was the next most active province with Cork City generated 45 site visits with 5.1 pages per visit. 14 visits from IP addresses based in Limerick City with an average of 3 pages viewed per visit. Connaught generated 26 visits. Galway Cityaccounted for 12 site visits, with an average of 1.5 pages visited.

Figure Four shows graphically the number of visits to the site according by calendar month. A total of 1,645 pages were viewed during the study period, with 52.5% of the 442 visits representing return visits. [Figure 4]. 161 [36.6%] of the total 442 visits lasted for more than 60 seconds and accounted for 1093 [66.3%] of the 1,645 total pages viewed.

Discussion

The results of this project are promising. Despite limited resources, no budget and limited support from administration, trainees still accessed the site successfully. With average of the 442 user times of 04:39, well in excess of the original Wikipedia's 04:00minutes, there is reason for optimism. [1] The nature of the short interaction defines the targeted information search of the users.

The majority of users were based in the capital Dublin, as expected as three of the largest maternity units are based there along with the Institutes headquarters. The geographical diversity of the membership is evident despite the limited resources and advertising put into the project. With a

little further support and activity it is not inconceivable that all maternity hospital be represented within another twelve months. The fact that users outside the capital had significantly longer average visit times may demonstrate their wish to be connected with events around the country.

The peaks in activity coincide with the major trainee doctor changeovers in July, job applications and interview times. The peak activity also coincides with presentations the authors made highlighting the site.

While the authors initiated a bold national project that based on the criteria of 100% hospital site participation at any level, it was unlikely to succeed. There have been 'quick wins'. Contributors based at more than half of the hospital sites contributed, including the four largest units.
The potential knock on effect in healthcare staff satisfaction, wellbeing and stress has yet to be examined.

The sustainability of the project is dependent on maintaining the momentum and enthusiasm to date. The linking with the development of a national guideline application for smartphone technology offers tremendous potential. Within organizations there needs to be the will, to improve employees' work environment and to develop strategies to minimize professional stress. [17] This pilot study goes some way towards that goal.

Social media use is on the rise, affecting all aspects of mainstream society [18] Educators in all specialties of medicine are increasingly studying Web 2.0 technologies to maximize postgraduate medical education. Advanced informatics resources will be part of physician lifelong learning and clinical practice [19]. Wikis have proven effective in the collaborative creation and maintenance of knowledge on the web. They are easy to use, and the technology is widely available with open source, free or low-cost software and hosting options [13].

Future plans.

There will need to be a clear strategy for how the site will be integrated into the roles and responsibilities of the educational bodies. Having made the decision to quantitatively assess the success of the project the authors look forward to the next phase, which will involve a qualitative assessment of the project and its impact. We aim to link the website with the mobile distribution of national clinical guidelines. We will work with health service providers and regulators to develop policies on the incorporation of social networks into practice [20].

Limitations

While an aspiration of the project, in part, set out to reduce the stress level of migratory trainee staff it is premature to formally assess this yet. The projects systemic implications on the health care infrastructure have yet to be examined.

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The population base of doctors working in maternity services in Ireland is small, perhaps too small to apply the Darwinian editorial rules. The use of Google Analytics produced crude data on a relatively short timeframe as a measure for engagement. A more useful measure might be to look at guideline access and subsequent guideline adherence.

The use of a locked Wiki web site reduced the accessibility and interaction of the targeted users. Thus one could assume that the adoption or uptake was reduced. This additional security measure is arguably unnecessary that acts of vandalism within the Wikipedia site were short lived and quickly edited [21]. The openness of the site is a source of strength and weakness.

The difficulty in accessing the emails of the target audience no doubt hindered the overall outcome. The direct nature of the email contact certainly introduced bias. While the authors publicized the project through presentations, potential users and collaborators were certainly missed. There was no alternative for those who were not regular or active users of the Internet to input or access data.
There were significant external factors that impinged on the overall success of the project. The future linking with the national guideline programme for obstetrics and gynecology will be important in the future success of this endeavor.

6.3 Conclusion

It has been suggested that research should be conducted to determine the best ways to integrate these new web 2.0 tools
Web 2.0 technologies, which provide ample opportunity to engage with a mobile dynamic workforce. [22] While Web 2.0 has its detractors, the opportunity to use emerging cheap technology in postgraduate medical education is well supported internationally, within the healthcare setting. [23]

The obgynnetwork.ie concept has the potential to contribute inexpensively to workforce planning aspects of obstetrics and gynecology service delivery into the future. Staff integration could be improved dramatically allowing units to draw on successes from within their networks. The irrefutable evidence of the negative impact of stress on employee performance can be addressed. The successful implementation of the concept could mean a 'win-win' situation not only for trainees and trainers alike but patients and their families. Mass collaboration could change everything. [24] Web 2.0 technologies will become critical not only to the practice of medicine in the twenty-first century but crucially may provide answers to how organizations can address the problem of physician burnout. [25]

Table of Figures

Visits ▾

| | 1 ▓▓▓▓ 422 | | | |

Visits	Pages/Visit	Avg. Visit Duration	% New Visits	Bounce Rate
442	**3.72**	**00:04:39**	**47.29%**	**50.68%**
% of Total: **100.00%** (442)	Site Avg: **3.72** (0.00%)	Site Avg: **00:04:39** (0.00%)	Site Avg: **47.29%** (0.00%)	Site Avg: **50.68%** (0.00%)

Figure1: International distribution of pilot site users

Visits ▾

	Visits	Pages/Visit	Avg. Visit Duration	% New Visits
	422	**3.85**	**00:04:52**	**45.73%**
	% of Total: **95.48%** (442)	Site Avg: **3.72** (3.47%)	Site Avg: **00:04:39** (4.74%)	Site Avg: **47.29%** (-3.28%)

Figure 2: Demonstrates the geographical distribution and quantitative measure of the Irish visits to the pilot site

	City	Visits ↓	Pages/Visit
1.	Dublin	337	3.80
2.	Cork	45	5.13
3.	Limerick	14	3.00
4.	Galway	12	1.50
5.	Waterford	3	4.67
6.	Athlone	3	3.33
7.	Cavan	1	2.00
8.	Dundrum	1	1.00
9.	Leixlip	1	15.00
10.	Kilkenny	1	4.00

Figure 3: Pilot Site visits by cities and towns in Ireland

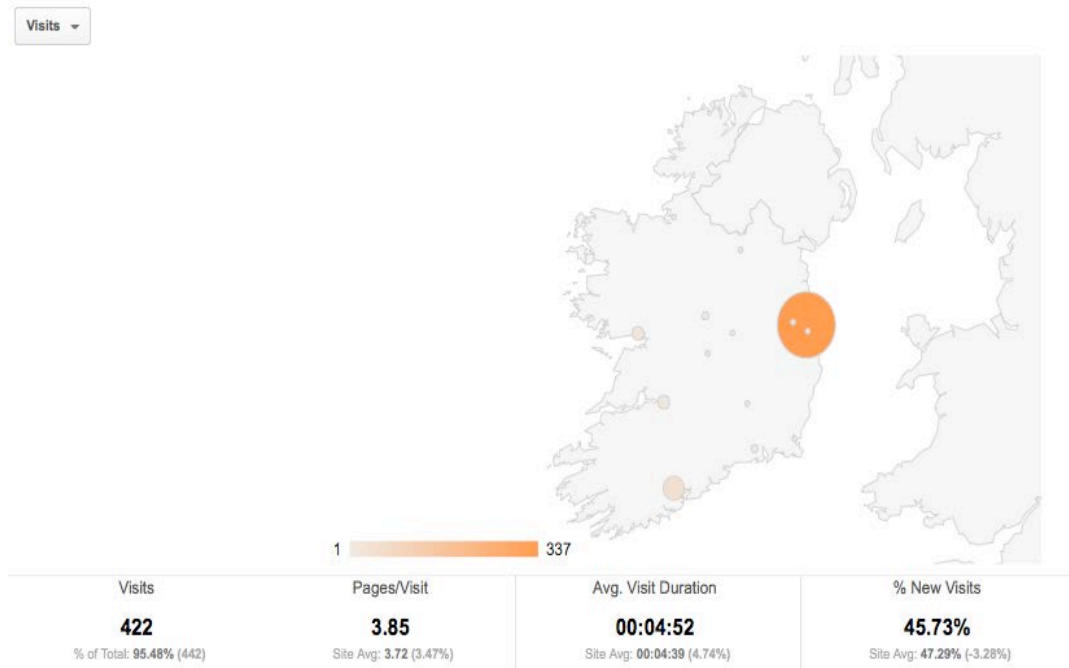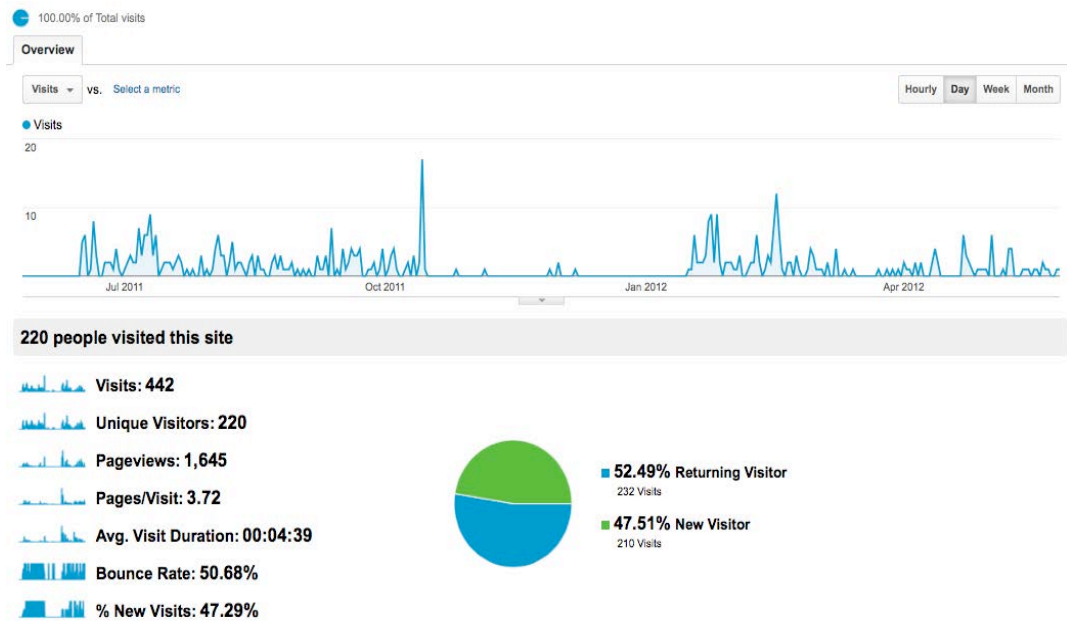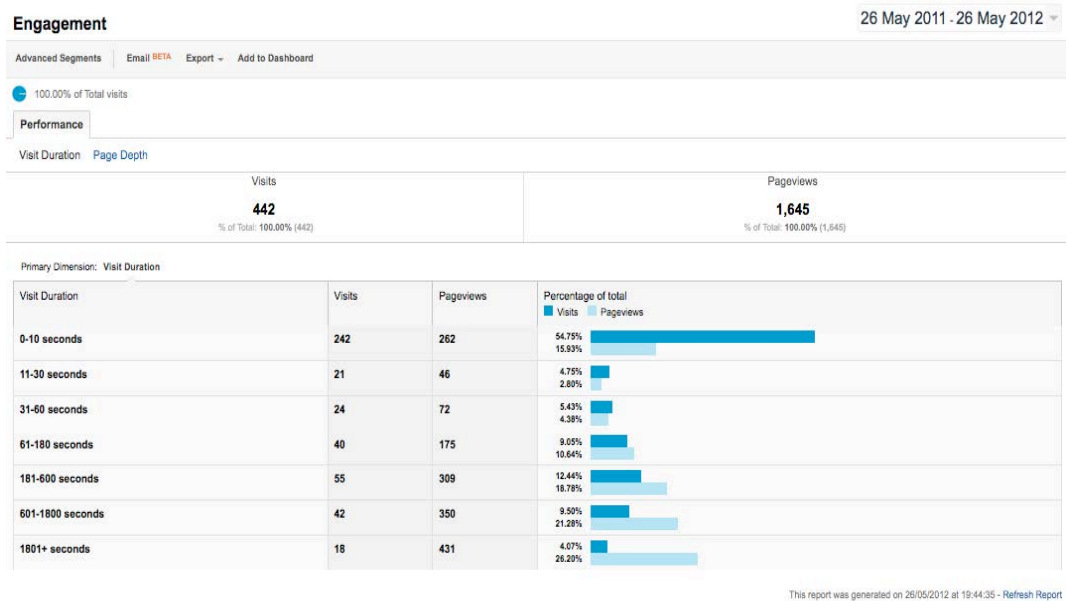Figure 4: Pilot Site visits by time

Figure 5: Engagement

This figure documents the engagement of the visiting population to the site in the first year.

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Appendix One: Pro-forma

A WIKI Guide to Obstetrics and Gynecology in Ireland

Unit Name
Unit Website address
O&G Dept Website address

Consultant Names & Specialty area & bleep, Telephone numbers not to be included without explicit permission.

SPR { How many, ATTACHED TO WHAT TEAM / TRAINER } { Bleeps }
REG { How many } { Bleep }
SHO { How many } { Bleep }

Rota Arrangements
    Who makes it
    Holiday arrangements
    Emails Tel no. of Medical Admin.

    Special considerations

DATE	CALL	AWAY	AWAY	EVENT	EVENT
10 JULY	SPR 1		SHO1	UCD EXAMS	
11 JULY	REG2		SHO1	SPR DAY	

CALL INFORMATION

Out of House
Number per month
A&E arrangements
Consults
Outside referrals

A WIKI Guide to Obstetrics and Gynecology in Ireland

Weekly Timetable

MEETINGS
JOURNAL CLUB
CAESAREAN SECTON MEETING
RESEARCH WHEN? WHERE?
      WHO ARRANGES
      WHO ATTENDS
      DETAILS OF ARRANGING
      WHAT NEEDS TO BE DONE

LIVING IN $%^
      Accommodation
      TravelFood Shopping
      Going Out

Everything you now know that you would have like to have known on day 1

THE FIRST WEEK

EVERYTHING AND ANYTHING THAT MIGHT MAKE THE TRANSITION EASIER
Id badges, car-parking, canteen, Medical admin, Occ Health

Research Opportunities

Research project projects to be handed over, Who ever completes is 1st author, who ever handed over gets 2nd author.

Contact names and numbers to know
Liason nurses
Ward numbers
Security

Dates for your Diary
Anything that happens locally, or even any (inter)national meetings

Salaries

Filling in sheets, timeframes, where to hand in

A WIKI Guide to Obstetrics and Gynecology in Ireland

Notes specific to £$^*

NOTES
COMPTER SYSTEMS
PECULIARITIES TO A GIVEN UNIT
Everything you now know that you would have like to have known on day 1

LINKS TO USEFUL SITES

LOG BOOK
FOR MONTH OF MAY & NOVEMBER AS INDICATION OF WHAT YOU DID AND NEW PERSON CAN EXPECT TO DO