Learning in the Digital Era – Awareness and Usage of Free Open Access Meducation (FOAM) Amongst Emergency Department Doctors

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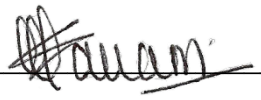
A Research Report submitted to the Faculty of Health Sciences of the University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Master of Medicine in Emergency Medicine

Johannesburg, 2020

DECLARATION

I, Sashriqua Luscenda Palliam, hereby declare that this research report is my own work and has not been submitted or presented for any other degree or professional qualification at this or any other Institute. This research was undertaken in the Division of Emergency Medicine, University of the Witwatersrand, Johannesburg.



Date: 15 January 2020

Sashriqua Luscenda Palliam

ACKNOWLEDGEMENTS

Firstly, I would like to express my sincere gratitude to my supervisors, Prof Zeyn Mahomed and Prof Abdullah Laher for their constant encouragement and support. I am also thankful and would like to also extend my gratitude to Dr Deidre Hoffman and Dr Alison Bentley for their role in the completion of this research. To the heads of departments at the participating hospitals as well as the participants, thank you for supporting this study and contributing towards continuous growth and development in this digital era.

SUBMISSION FORMAT OF THIS RESEARCH REPORT

As per University of the Witwatersrand Faculty of Health Sciences guidelines, this research report is being submitted in the following format: article published in an accredited journal.

The article was published in the journal *"Cureus"* on 24 November 2019 – Palliam S, Mahomed Z, Hoffman D, Laher AE. Learning in the Digital Era – Awareness and Usage of Free Open Access Meducation among Emergency Department Doctors. Cureus 2019; doi: 10.7759/cureus.6223. The journal is indexed in various databases including PubMed and Web of Science.

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MANUSCRIPT FOR SUBMISSION

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TYPE OF ARTICLE

Original research

TITLE OF MANUSCRIPT

Learning in the Digital Era – Awareness and Usage of Free Open Access Meducation (FOAM) Amongst Emergency Department Doctors

RUNNING TITLE

FOAM usage amongst ED doctors

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WORD, FIGURE AND TABLE COUNTS

Abstract: 237

Manuscript: 1910

No. of tables: 2

No. of figures: 1

CONFLICT OF INTEREST

The author declares no conflict of interests and no specific funding was received for this study.

AUTHOR CONTRIBUTIONS

SP: Responsible for the study design, administering of the survey, data analysis and write up.

ZM: Contributed towards review, revision and approval of the manuscript.

DH: Contributed towards writing, review, revision and approval of the manuscript.

AL: Contributed towards writing, review, revision and approval of the manuscript. Corresponding author.

SUBMISSION LETTER TO THE EDITOR

Dear Editor- "Cureus" journal of medical science

Thank you for considering our article entitled: ***"Learning in the Digital Era – Awareness and Usage of Free Open Access Meducation (FOAM) Amongst Emergency Department Doctors".***

Information and communication technology has revolutionised the space of medical education. Technologically agile pedagogical approaches that include the use of FOAM – Free Open Access Meducation (Medical Education) blogs, have dramatically advanced accessibility to continuous medical education globally. It utilises multiple online platforms such as podcasts, blogs, videos, tweets (Twitter), Facebook groups and other web-based media to develop and distribute medical education. FOAM provides an important medium for the sharing of ideas and fast-tracking the translation of medical developments into clinical practice.

Despite the increasing popularity of FOAM globally, data relating to its awareness and usage in Africa is lacking. We conducted a questionnaire-based study with the aim of exploring the awareness and usage of FOAM amongst doctors working at select emergency departments in Johannesburg. We are certain that this article will appeal to the readership of the *"Cureus"*. Furthermore, it carries a high citation potential, as it is applicable to almost all fields of Medicine.

ABSTRACT

Introduction: Information and communication technology has revolutionized the space of medical education by providing a multitude of up-to-date evidence-based data to healthcare practitioners. Despite the increasing popularity of FOAM – Free Open Access Meducation (Medical Education) globally, data relating to its awareness and usage in Africa is lacking. In this study, we explore the awareness and usage of FOAM amongst doctors working at select emergency departments in Johannesburg.

Methods: The study comprised a prospective, questionnaire based, cross-sectional survey of medical doctors working at five academically affiliated emergency departments in Johannesburg. Data was described and compared.

Results: One-hundred and four participants completed the survey. Most of the respondents were aged between 31 – 39 years (n=40, 43.9%). There were no significant differences between the proportion of females and males that used FOAM (p=0.56). Most participants (n=91, 87.5%) were aware of FOAM, while 82 (78.8%) used FOAM, 13 (12.5%) were unsure if they used FOAM and 9 (8.7%) did not use FOAM. Majority of those that used FOAM, only used it once a week (n=47, 57.3%). Most participants spent between 1 – 2 hours per day on FOAM (n=29, 35.4%). Smartphones were by far the most commonly used device to access FOAM (n=91, 87.5%).

Conclusion: The level of awareness of FOAM is high and its usage prevalent amongst emergency medicine healthcare professionals in Johannesburg. As technology becomes more prominent, institutions must aim to adapt to the digital era in their teaching methods.

INTRODUCTION

"If you want to know how we practiced medicine 5 years ago, read a textbook. If you want to know how we practiced medicine 2 years ago, read a journal. If you want to know how we practice medicine now, go to a good conference. If you want to know how we will practice medicine in the future, listen in the hallways and use free online medical education" [1].

The hallmark of the medical profession is to deliver health care that is consistent with patients' needs within the modern health system [2]. Health care professionals are expected to stay abreast with recent medical developments, evolving health care standards and best clinical practice [3]. Information and communication technology has revolutionized the space of medical education [4]. Technologically agile pedagogical approaches that include the use of FOAM – Free Open Access Meducation (Medical Education) blogs, have dramatically advanced accessibility to continuous medical education globally [5].

FOAM originated in 2012 at the International Conference of Emergency Medicine in Dublin as a globally sourced and accessible educational resource to enhance traditional educational methodologies [6]. Over the years, there has been an increase in the number of Emergency Medicine and Critical Care blog databases with there being currently over 460 FOAM resources available [7].

FOAM provides an important medium for the sharing of ideas and fast-tracking the translation of medical developments into clinical practice [8]. It utilizes multiple online platforms such as podcasts, blogs, videos, tweets (Twitter), Facebook groups and other

web-based media to develop and distribute medical education. These interactive databases have created a dynamic online community and a family of FOAM users worldwide [9]. Since FOAM leans towards self-directed problem based learning, various medical schools across the world have also embedded it into their curriculum [10–12].

Despite the increasing popularity of FOAM globally, data relating to its awareness and usage in Africa is lacking. We therefore aimed to explore the awareness and usage of FOAM among doctors working at select Emergency Departments in Johannesburg.

MATERIALS AND METHODS

This self-administered, questionnaire based, cross sectional study was conducted between 01 November 2017 and 31 January 2018. The study comprised a convenience sample of 104 medical doctors working at the Emergency Department of one of five hospitals in Johannesburg. All 5 hospitals were affiliated to the University of the Witwatersrand.

Questionnaires were distributed to potential participants (doctors) working at the respective EDs. Participants included Emergency Medicine Physicians (EMPs), Emergency Medicine Registrars (EMRs) and Emergency Medicine Medical Officers (MOs). Doctors registered to practice as specialists in the field of Emergency Medicine were classified as EMPs, whereas doctors that were training to become specialist in the field of Emergency Medicine were classified as EMRs. All other doctors who had completed their medical internship and were employed at each of the included hospitals EDs were classified as MOs. Medical interns and undergraduate students were excluded from the study.

After conducting a pilot study on 5 random subjects in July 2017, the final questionnaire was adapted from the questionnaire that was utilized in the study by Thurtle et al. [13]. The questionnaire assessed awareness and usage of FOAM, reasons for not using FOAM and devices used to access FOAM. In addition, the most popular FOAM blog used by study participants was also determined [8].

Ethical clearance to conduct the study was obtained from the Human Research Ethics Committee (Medical) of the University of the Witwatersrand (clearance certificate M170723). Further written approval was granted by the Chief Executive Officers and Heads of the Emergency Department of each of the participating hospitals.

The participant information sheet and questionnaire were distributed by the primary investigator to consenting participants at the respective departmental academic meetings. No identifying data was collected. The questionnaires were completed in confidence and returned into a sealed box that was provided.

Collected data was captured into an electronic data spread sheet (Microsoft® Excel®) and thereafter analyzed. Results were predominantly described using frequency and percentage tables and a graph. The Chi Square test was used to compare differences between the proportion of females and males that used FOAM blogs, while the Fisher's Exact test was used to compare the awareness and usage of FOAM between MOs, EMRs and EMPs. The level of significance was set at $\alpha=0.05$.

RESULTS

Of the 129 potential subjects that were approached, 104 completed the survey, giving a response rate of 80.6%. Fifty-one percent (n=53) of respondents were female. Of the total number of respondents, MOs comprised 56.8% (n=59), EMRs 28.8% (n=30) and EMPs 14.4% (n=15). Most of the respondents were aged between 31 – 39 years (n=40, 43.9%). All the EMRs were under the age of 50 years, while all the EMPs were older than 30 years.

Most participants (n=91, 87.5%) were aware of the existence of FOAM, however only one participant had started their own FOAM blog. Eighty-two (78.8%) participants used FOAM while 13 (12.5%) were unsure if they used FOAM and 9 (8.7%) did not use FOAM. Majority of those that used FOAM, only used it once a week (n=47, 57.3%). There were no significant differences between the proportion of females (n=43) and males (n=39) that used FOAM (p=0.56). Smartphones were by far the most commonly used device to access FOAM (n=91, 87.5%). Details of the above are described in Table 1.

Table 1. Description of gender, age group, awareness of FOAM, usage of FOAM, frequency of usage of FOAM and devices used to access FOAM amongst participants with various levels of training

	MO (n, %)	EMR (n, %)	EMP (n, %)
GENDER			
Female (n = 53, 51.0%)	32 (60.4)	10 (18.9)	11 (20.7)
Male (n=51, 49.0%)	27 (52.9)	20 (39.2)	4 (7.9)
AGE GROUP (YEARS)			
≤ 30 (n = 42, 40.4%)	34 (80.9)	8 (19.1)	0 (0)
31 – 39 (n = 44, 42.3%)	15 (34.1)	19 (43.2)	10 (22.7)
40 – 49 (n = 11, 10.6%)	6 (54.6)	3 (27.2)	2 (18.2)
≥ 50 (n = 7, 6.7%)	4 (57.1)	0 (0)	3 (42.9)
AWARENESS OF FOAM			
Entire cohort (n=91, 87.5%)	47 (51.6)	29 (31.9)	15 (16.50
≤ 30 years (n = 37, 40.7%)	29 (78.4)	8 (21.6)	N/A
31 – 39 years (n = 40, 43.9%)	12 (30.0)	18 (45.0)	10 (25.0)
40 – 49 years (n = 10, 11.0%)	5 (50.0)	3 (30.0)	2 (20.0)
≥ 50 years (n = 4, 4.4%)	1 (25,0)	N/A	3 (75,0)
USAGE OF FOAM			
Entire cohort (n=82, 78.8%)	41 (50.0)	28 (34.1)	13 (15.9)
≤ 30 years (n=31, 37.8%)	24 (77.4)	7 (22.6)	N/A
31 – 39 years (n=39, 47.6%)	12 (30.8)	18 (46.1)	9 (23.1)
40 – 49 years (n=8, 9.8%)	4 (50.0)	3 (37.5)	1 (12.5)
≥ 50 years (n=4, 4.8%)	1 (25.0)	N/A	3 (75.0)
FREQUENCY OF USAGE OF FOAM			
Daily (n=24, 29.3%)	9 (37.5)	10 (41.7)	5 (20.8)
Weekly (n=47, 57.3%)	24 (51.0)	17 (36.2)	6 (12.8)
Monthly (n=11, 13.4%)	8 (72.7)	1 (9.1)	2 (18.2)
DEVICES USED TO ACCESS FOAM			
Smartphone (n = 91, 87,5%)	50 (54.9)	28 (30.8)	13 (14.3)
Tablet (n = 37, 35,6%)	12 (32.4)	15 (40.5)	10 (27.1)
Computer/Laptop (n = 49, 47,1%)	22 (44.9)	17 (34.7)	10 (20.4)
MP3/iPOD (n = 2, 1,9%)	1 (50.0)	1 (50.0)	0 (0)

MO – Medical Officers, EMR – Emergency Medicine Registrars, EMP – Emergency Medicine Physicians, N/A – not applicable

Awareness and usage of FOAM was significantly lower in MOs compared to EMRs (p=0.024 and p=0.014 respectively). There were no statistically significant differences between MOs and EMPs (p=0.109 and p=0.327 respectively) or EMRs and EMPs (p=1.00 and p=0.591 respectively). Figure 1 describes the number of hours spent by

participants per day on FOAM. Most participants spent between 1 – 2 hours per day on FOAM (n=29, 35.4%).

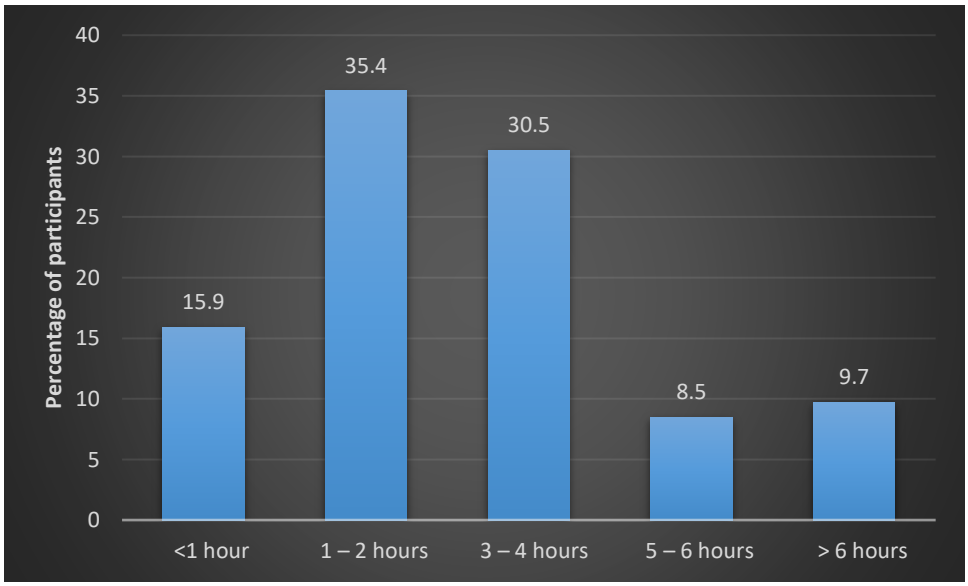

Figure 1: Hours spent per day on FOAM

Among the 9 respondents that didn't use FOAM, reasons included; unfamiliarity with social media (n= 4, 44.4%); lack of time (n=3, 33.4%); lack of access to free internet in the department (n=1, 11.1%) and reluctance to use social media (n=1, 11.1%). Most of the participants (n=83, 79.9%) reported that a tutorial on how to access FOAM would increase their use of FOAM. More than three-quarter of subjects (n=82, 78.8%) agreed that FOAM is an interactive tool, while 74 (71.2%) agreed that FOAM encouraged collaboration within the medical community. The most popular FOAM blog among participants is described in Table 2.

Table 2. Most popular FOAM blog amongst participants

FOAM blog	Country of Origin	n (%)
Life in the Fast Lane	Australia	67 (73.6)
EmCrit	USA	8 (8.8)
Academic Life in Emergency Medicine	USA	6 (6.6)
FOAM EM RSS	USA	4 (4.4)
St Emlyn's	England	2 (2.2)
The Skeptics Guide to Emergency Medicine	Canada	2 (2.2)
Pulm CCM	USA	1 (1.1)
Resus.me	USA	1 (1.1)
Boring EM	Canada	0 (0)
The Trauma Professional's Blog	USA	0 (0)

DISCUSSION

It is rare to find a profession that has not been impacted by the digital revolution. The ubiquity and rapid increase in availability of digital media in the field of Emergency Medicine has led to calls for the formal integration of online learning into residency training programs [14]. FOAM has the potential to fill the gaps in medical training, especially in resource constrained economies [15].

The data showed that FOAM awareness was widespread (87.5%) among doctors at the studied Emergency Departments. This is in keeping with the findings of Thurtle et al. in 2015 who reported that 82% of Emergency Medicine doctors in both developed and low resource settings were aware that FOAM existed [13]. With regards to FOAM usage, Pearson et al. reported that 41% of respondents in their study placed a "low" or "very low" importance on the use of social media in Emergency Medicine, but rather preferred to use social media for their own personal use [16]. This trend could be changing as evidenced by our findings whereby more than three-quarter of respondents (78.8%) indicated that they had used FOAM. The majority of study participants used FOAM on a weekly basis (57.3%), which exceeds the findings of Thurtle et al., where most participants only used FOAM 1-2 times per month [13]. Due to its longer battery life,

cost effectiveness and portability [17], it is not surprising that most study participants (87.5%) accessed FOAM blogs using their smartphone.

Although females have been proven to be more proficient when it comes to the ease of use of social media [18], we did not find any significant differences between the proportion of females and males that used FOAM (p=0.56). Previous studies had shown that the reluctance by some healthcare providers to utilize FOAM as a learning tool was attributed to its lack of peer review, possible violation of patients' rights and information overload [19,20]. In contrast, reasons for not using FOAM amongst participants of this study included time constraints, lack of free Wi-Fi and unfamiliarity with social media.

There has been little study of the educational needs and time spent online by healthcare professionals in general [21]. While it is a known fact that the younger generation has readily adopted the use of technology to supplement their learning [22], increasing practitioner age (especially those older than 50 years) has been recognized as a barrier to the adoption of technologically driven health systems [23,24]. Brown et al. conducted a study on a random sample of doctors including EM doctors in Australia. They found that senior HCPs were not keen on making social media a part of their daily practice and did not subscribe to it despite the large amount of freely available information. The study further found that the extent of social media incorporation into daily practice differed greatly from individual to individual even within one hospital. The authors thought that this might be a result of limited online capabilities of senior healthcare practitioners in Australia [19]. The impact of age on the use of FOAM could not be assessed in our study as only 4 participants were aged older than 50 years. The lack of older doctors employed at the studied facilities may be attributed to the fact that Emergency Medicine

is a relatively new specialty in South Africa [25]. In keeping with the findings of Burkholder et el. [8], Life in the Fast Lane was also the most popular FOAM blog in this study. EMCrit and Academic Life in Emergency Medicine have also been reported as popular Emergency Medicine FOAM blogs.

Low and middle-income countries (LMIC) face many challenges in their medical training programs, one of them being a shortage of faculty staff [26]. FOAM has the potential to serve as a platform for the sharing of the latest medical information in these settings. Although EM trainees in both developed and LMIC were aware of the existence of FOAM, trainees in LMIC were less aware of specific FOAM resources [13]. Future research into FOAM usage in LMIC would be helpful to identify the gaps in educational resources and ascertain whether FOAM has the potential to mitigate this.

A limitation to our study findings is that this was a regional study that was conducted at only five hospitals in Johannesburg. Furthermore, all included facilities had an academic affiliation. Hence, our findings may not be representative of the awareness and usage of FOAM among Emergency Medicine doctors in general. Also, since this was a questionnaire-based study, self-reporting of data by respondents may have been subject to bias. Despite these limitations, this study has added to our understanding on the awareness and usage of FOAM in an African context. Hopefully, this study will inspire similar larger scale studies across a broader range of specialties.

CONCLUSION

The level of awareness of FOAM is high and its usage prevalent among Emergency Medicine healthcare professionals in Johannesburg. Smart phones stood out as the

preferred device utilized to access FOAM, while Life in the Fastlane was the most popular blog. The increasing rate of adoption of FOAM by healthcare professionals is a call for the conduction of larger studies and the formal incorporation of FOAM into training curricula.

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RESEARCH PROTOCOL

Learning in the Digital Era – Awareness and Usage of Free Open Access Medical Education (FOAM) Amongst Emergency Department Doctors

Research protocol in partial fulfilment for the degree in Master of Medicine (Emergency Medicine)

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Supervisors: Prof Zeyn Mahomed

Prof Abdullah Laher

INTRODUCTION

"If you want to know how we practiced medicine 5 years ago, read a textbook. If you want to know how we practiced medicine 2 years ago, read a journal. If you want to know how we practice medicine now, go to a (good) conference. If you want to know how we will practice medicine in the future, listen in the hallways and use free online medical education" [1].

The pedagogy of medical education in many countries is moving away from memorisation of factual content**,** to problem solving and self-directed learning. Technology and social media platforms are transforming the way in which educational institutions engage in core activities [2]. Emergency Medicine is a rapidly progressive

field of medicine that requires one to consistently be at the cutting edge of developments in the field. Fittingly, FOAM – Free Open Access Meducation (medical education) was created in 2012 at the International Conference on Emergency Medicine (ICEM) as an "internationally available crowd sourced educational adjunct providing inline (contextual) and offline (asynchronous) content to augment traditional educational principles". FOAM has since developed at a rapid pace [3].

FOAM is an online internet database of medical resources including blogs, podcasts, online videos, tweets (Twitter), and Facebook groups made available to everyone, everywhere and at any time. It utilises social media as a platform for developing and distributing medical education [4]. FOAM is an important medium through which medical practitioners can benefit from medical developments as soon as they occur, anywhere across the globe [5]. Through FOAM, medical practitioners can access the advice of renowned specialist in any field of medicine instantaneously and at no cost. This interactive database and sharing of medical knowledge and education has created a dynamic online family of FOAM users with access to information worldwide [6].

A blog, which is a truncation of the term web log, is an informational website in the form of a discussion published by a user, known as the "blogger", on the World Wide Web [7]. Blogs are regularly updated online personal journals [8]. Blogs differ from standard web pages in four ways: blogs have a simple layout – a title, category and body of article; automated templates allow for easy upload of topics; topics may be filtered by various categories; and the "blogger" may invite other authors to comment and/or add to the content, allowing discussion to occur [9]. An educational blog is a blog created for educational purposes [10]. It is a publication tool that allows for self-directed,

asynchronous learning, which promotes open online discussion amongst a community [11].

There are currently over 240 blogs and podcasts dedicated to FOAM in Emergency Medicine and Critical Care [12]. Though mainly used in Emergency Medicine and Critical Care at present, it has the potential to spread throughout all fields of medicine [13]. At the University of Utah in the United States of America, participation in their Family Medicine Blog is a requirement for their specialising doctors (residents or registrars) [14].

FOAM is not peer reviewed nor is it scientific research, however there has been an initiative to incorporate peer review into established medical blogs. FOAM blogs are a convenient way of distributing and discussing current medical subjects, cases and research. The rapidly advancing universe of social media is revolutionising healthcare education and delivers the promise of a new, self-directed and socially engaged educational experience [15].

STUDY AIM

The aim of this study is to explore the awareness and usage of FOAM amongst doctors working at select Emergency Departments (EDs) in Johannesburg.

STUDY OBJECTIVES

- To determine the awareness of FOAM amongst study participants
- To describe the usage of FOAM amongst study participants
- To determine the most popular FOAM blog amongst study participants

METHODOLOGY

Study design

Prospective, cross-sectional, questionnaire-based study

Study site

The study will be conducted amongst doctors working at the EDs of the following five academic hospitals in Johannesburg: Chris Hani Baragwanath Academic Hospital, Charlotte Maxeke Johannesburg Academic Hospital, Tambo Memorial Hospital, Helen Joseph Hospital, and Thelle Mogoerane Regional Hospital.

Study population

The study population will comprise of doctors working at the above EDs.

Inclusion criteria

Medical officers, registrars and consultants will be included in this study.

Exclusion criteria

All medical interns and medical students will be excluded from the study.

Sample size estimation

There are 124 doctors fulfilling the inclusion criteria, that are currently working at the above-named facilities. An attempt will be made to enrol all these doctors.

Data collection

Data collection will commence after obtaining ethics approval and permission from all heads of department and CEO's at the above-mentioned hospitals. Data will be collected by the primary investigator who will attend departmental academic meetings at each of the participating hospitals. Participation will be voluntary. A participant information sheet and informed consent sheet will be distributed to potential study participants at these meetings. A self-administered, anonymous paper-based questionnaire will then be

distributed to the participating doctors. Questionnaires will be anonymous; no identifying data will be collected, and all questionnaires will be distributed and collected in envelopes which will be placed in a sealed cardboard box. To maximize the sample, size the investigator will visit the respective EDs academic meetings on more than one occasion. Each participant will only complete the questionnaire once.

DATA ANALYSIS

Collected data was captured into an electronic data spread sheet (Microsoft® Excel®) and to IBM SPSS Statistics for further analysis. Results were predominantly described using frequency and percentage tables and a graph. For comparing the groups, the Chi square or Fischer's exact test will be used to compare categorical data while an unpaired T-test/ANOVA or Mann-Whitney/Kruskal-Wallis test will be used for normally distributed and skewed data respectively.

ETHICS AND PERMISSION

The investigator will submit an application to the Human Research Ethics Committee (HREC) during July 2017. Anonymity of participants will be observed. No identifying data such as names and contact details will be used. The investigator will thus be blinded. In the unlikely event that an individual participant is identified, there will be no repercussions for the individual as FOAM is not a mandatory method for teaching and learning within the Division of Emergency Medicine at the University of the Witwatersrand. Permission to conduct the study will be obtained from the CEO's and ED heads of department of the relevant hospitals.

FUNDING

The study will be self-funded by the Investigator. The predicted budget will be an estimated total of R2400.00 as follows:

Description	**Each**	**Total**
Photocopies		
Consent Forms	R0,50	R150
Questionnaires	R0,50	R300
Protocol submission to HREC	R0,50	R100
Printing final research report		R500
Binding of final research report		R500
Stationery		R50
Travelling		
To distribute surveys		R300
To meet with supervisors		R500

TIMELINE

	Jun 2017	Jul	Aug	Sep	Oct	Nov	Dec
Literature review							
Preparing protocol							
Protocol submission							
Protocol assessment							
Ethics clearance							
Data collection							
Data analysis							
Writing up: report							

LIMITATIONS

Possible anticipated problems include incomplete surveys. A small sample size is a limiting factor and therefore broad generalization may not be possible.

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DATA COLLECTION SHEET

Kindly answer all of the questions below by encircling the applicable response.

1. What is your gender?
    a) Male
    b) Female

2. What is your level of training?
    a) Community service medical officer
    b) Medical officer
    c) Registrar
    d) Consultant (Emergency physician)

3. How old are you?
    a) ≤ 30 years
    b) 31 – 39 years
    c) 40 – 49 years
    d) ≥ 50 years

4. Have you heard about Free Open Access Medical Education (FOAM)?
    a) Yes
    b) No

5. Are you familiar with FOAM blogs?
    a) Yes
    b) No

6. How often do you use FOAM blogs?
    a) Daily. If so indicate how many times per day? _____
    b) Weekly. If so indicate how many times per week? _____
    c) Monthly. If so indicate how many times per month? _____
    d) Unsure
    e) I have not used FOAM blogs before.

7. If you have **not** used FOAM blogs before - what is the reason?
    a) This is not applicable to me as I do use FOAM blogs
    b) No free Wi-Fi available in the department
    c) Unfamiliar with social media
    d) Reluctant to use social media
    e) No time
    f) Other (please specify): _____

8. What devices do you use to access FOAM blogs?
    a) Smartphone
    b) Tablet
    c) Computer/laptop
    d) MP3 player/IPOD
    e) Other (please specify): _____

9. If you use FOAM blogs - how many hours **per day** do you spend on FOAM blogs?
    a) < 1 hour

b) 1 - 2 hours
c) - 4 hours
d) 5 - 6 hours
e) 6 hours

10. FOAM blogs allow more interaction with the medical community worldwide

Strongly Disagree	1	2	3	4	5	Strongly Agree

11. FOAM blogs encourage collaboration and teamwork

Strongly Disagree	1	2	3	4	5	Strongly Agree

12. Have you started your own blog?
    a) Yes
    b) No

13. Would you recommend that a class on 'how to use social media' be included for medical education?
    a) Yes
    b) No

14. Rate the following FOAM blogs in order of most commonly used to least commonly used.
    1 – most common to 10 – least common (If blogs are used equally then rate them the same)
    ___ Academic Life in Emergency Medicine
    ___ Boring EM
    ___ EMCrit
    ___ FOAM EM RSS
    ___ Life in the Fast Lane
    ___ PulmCCM
    ___ Resus.me
    ___ St Emlyn's
    ___ The Skeptics Guide to Emergency Medicine
    ___ The Trauma Professional's Blog

15. List **your** 3 most common FOAM blogs that you use
1. _____
2. _____
3. _____

APPENDIX 1 – ETHICS CLEARANCE CERTIFICATE

R14/49 Dr Sashriqua Luscenda Palliam

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M170723

NAME: (Principal Investigator)	Dr Sashriqua Luscenda Palliam
DEPARTMENT:	Emergency Medicine Chris Hani Baragwanath Academic Hospital Charlotte Maxeke Johannesburg Academic Hospital Helen Joseph Hospital Tambo Memorial and Thelle Mogoerane Hospitals
PROJECT TITLE:	Learning in the Digital Era - An Audit of the Most Popular Free Open Access Medical Educations (FOAM) Blogs used by Emerency Medicine Doctors in Johannesburg, South Africa
DATE CONSIDERED:	28/07/2017
DECISION:	Approved unconditionally
CONDITIONS:	
SUPERVISOR:	Dr Deidre Hoffman
APPROVED BY:	Professor P. Cleaton-Jones, Chairperson, HREC (Medical)
DATE OF APPROVAL:	27/10/2017

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

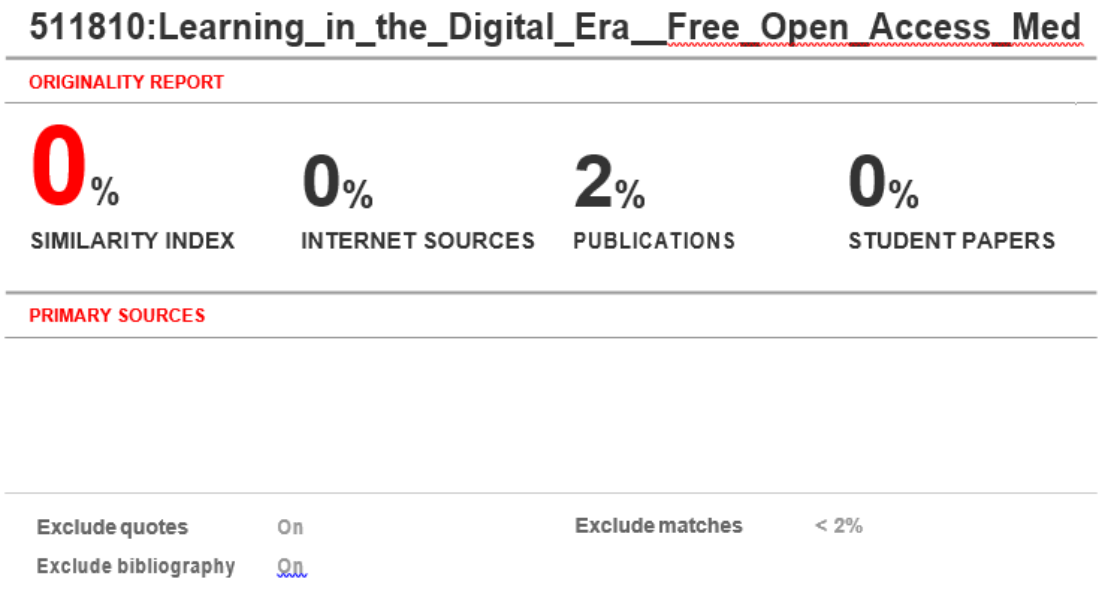
DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Research Office Secretary on the 3rd floor, Phillip Tobias Building, Parktown, University of the Witwatersrand. I/We fully understand the conditions under which I am/we are authorised to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit to the Committee. **I agree to submit a yearly progress report**. The date for annual re-certification will be one year after the date of convened meeting where the study was initially reviewed. in this case, the study was initially review July and will therefore be due in the month of July each year. Unreported changes to the application may invalidate the clearance given by the HREC (Medical).

Principal Investigator Signature Date

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

APPENDIX 2 – TURN-IT-IN PLAGIARISM REPORT



511810:Learning_in_the_Digital_Era__Free_Open_Access_Med

ORIGINALITY REPORT

0%	0%	2%	0%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

Exclude quotes	On	Exclude matches	< 2%
Exclude bibliography	On		