**Title of research:**

Study of Air pollution trends in various Part’s of Maharashtra, India

**Objectives:**

* To categories various cities based on the Air Pollution Pattern.
* Analyze impact of various factors influencing Air Pollution Patterns.
* Understand the interaction between these factors.
* To predict when the air pollutant levels go beyond accepted WHO standards

**Summary:**

**Attempt 1:**Air pollution can be attributed as a cause of 12.5% of deaths in India[1]; For the year 2017 12.4 lakh deaths Half of these deaths were in individuals younger than 70 years.

We will be analyzing Air Pollution trends within different region of Maharashtra in detail.

Firstly, by categorizing various cities via clustering and verifying if city progression maps to its air pollution pattern.

Secondly, we will study the relationship between various factors and the pollutant via PCA. Followed by predicting the future state of Air pollution via timeseries analysis.

**Attempt 2:**

Air pollution can be attributed as a cause of 12.5% of deaths in India[1].

We will limit our analysis to understanding the distribution of pollutant within Maharashtra using clustering. PCA will be used to understand the relationship between pollutant along with timeseries based prediction to project future Air pollution level.

**Please give a brief justification of your proposed research project:**

**Motivation**

**Background**

**Methods that we plan to use, what why**

**Research question**

**Hypothesis or eda based generate hypothesis**

**Hypothesis:- how aacurately can we predict pollution pattern, or**

**attributes involved in that association**

**explore what are possible association beteen tehs efactor to pollution**

**city progresstion maps to pollution**

**why is this important, to undetsa tehat the stae and rate of increase of air pollution level and spread awareness**

The aim of this focus group study is to identify key issues relating to the engagement with research of health librarians with research and in particular, their consideration of research development in the contexts of their professional practice.

The existing healthcare system is based on accountability, cost containment, and quality of care; fundamental to the achievement of these is the integration and application of the results of sound, reliable research and therefore the practice and delivery of evidence based patient care1-3. The latest Government documents which consider the future of the NHS confirms the continued Government prioritisation of this in highlighting the need to develop a strategy for leadership in health related research1-4. The development of research capacity goes hand in hand with research and development activities and the Department of Health proposes that building research capacity will be achieved primarily through the application of collaborative practice models5-6.

Librarians are fundamentally associated with research; their work involves the organisation and management of the knowledge that is generated from research. The recent review of NHS library services7 identifies research as one of the four key areas where librarians have an essential role and recommends that the Department of Health issues formal guidance indicating this. Given this recommendation health librarians will in the future increasingly need to become more engaged with research. Furthermore, as research capacity building is becoming increasingly significant within the current climate of research and development in health, it is necessary to consider the role of health librarianship in this context. This is particularly pertinent in light of the recent Hill Report9 which specifically recommends that “research to measure the impact of the application of best available evidence in decision making should continue to be pursued vigorously and routinely by health librarians, in partnership with researchers”.

It is hoped that the end result of this focus group study will be a clearer identification of the priorities and barriers in relation to research development in health librarianship and to reach a consensus agreement which will inform the development of a national questionnaire survey which will explore these issues in greater depth.

1. National Institute for Health Research. *Transforming health research: the first two years: National Institute for Health Research: progress report 2006-2008*. London: National Institute for Health Research, 2008. Available from: <http://www.nihr.ac.uk/files/pdfs/NIHR%20Progress%20Report%202006-2008.pdf> [accessed 28 February 2008]
2. Department of Health. *World class commissioning: adding life to years and years to life.* London: Department of Health Commissioning. 2007. Available from: [www.dh.gov.uk/prod\_consum\_dh/idcplg?IdcService=GET\_FILE&dID=155367&Rendition=Web](http://www.dh.gov.uk/prod_consum_dh/idcplg?IdcService=GET_FILE&dID=155367&Rendition=Web) [accessed 11 March 2008]
3. Department of Health. *Best research for best health: a new national research strategy*. London: Department of Health, 2006. Available from: [www.dh.gov.uk/assetRoot/04/12/71/52/04127152.pdf](http://www.dh.gov.uk/assetRoot/04/12/71/52/04127152.pdf) [accessed 5 March 2008]
4. UK Clinical Research Collaboration (UKCRC). *Developing the best research professionals: qualified graduate nurses: recommendations for preparing and supporting clinical academic nurses of the future: report of the UKCRC Subcommittee for Nurses in Clinical Research (Workforce)*. London: UKCRC, 2007. Available from: <http://www.ukcrc.org/PDF/Nurses_report_summary_August_2007_Web.pdf> [accessed 24 January 2008]
5. NHS Networks. 2007. Available from: [www.networks.nhs.uk](http://www.networks.nhs.uk) [accessed 13 June 2008]
6. Care Services Improvement Partnership. *Designing networks for collaborative advantage: practice-based evidence on how to set up networks to improve partnership working and achieve positive outcomes*,. London: Care Services Improvement Partnership, 2006. Available from: [www.csip-plus.org.uk/RowanDocs/PartnershipworkingIssue1networkdesign.pdf](http://www.csip-plus.org.uk/RowanDocs/PartnershipworkingIssue1networkdesign.pdf) [accessed 13 June 2008]
7. Hill, Peter. Report of a national review of NHS library services in England: from knowledge to health in the 21st century. NHS Institute for Improvement and Innovation: Warwick, 2008. Available from <http://www.library.nhs.uk/nlhdocs/national_library_review_final_report_4feb_08.doc> [accessed 13 June 2008]

**Please outline the proposed sample group, including any specific criteria:**

The sample group will include a single representative for seven identified areas of health librarianship:

* Academic health librarians
* Clinical librarians
* NHS library service managers
* Other health librarians (non-NHS)
* Research librarians (in health)
* Senior information strategy managers
* Senior strategy group members

**Describe how the proposed sample group will be formulated:**

A call for representatives will be sent out to targeted groups and communities in the areas of representation identified, and through the use of cascading methods. This will include JISCmail groups, special interest and professional groups, and cascades through senior strategic managers and group Chairs.

**Indicate clearly what the involvement of the sample group will be in the research process:**

The main purpose of the focus group is to reach a consensus agreement which will inform the development of a national questionnaire survey. The results of the focus group will be used to develop the survey which will then be sent out to a large representative sample group of health librarians working in the seven different contexts of health librarianship identified.

**Specify how the consent of participants will be obtained. Please include within this a description of any information with which you intend to provide the subjects:**

Participants will be sent an information sheet and consent form giving full details of the study (see attached). Participants will be sent this information by email and asked to bring a signed copy on the day the focus group runs.

**Indicate any potential risks to subjects and how you propose to minimise these:**

Participation in this focus group presents no potential risks to the participants. Participants and their organisations will not be named in subsequent write ups and material submitted for publication.

**Describe the procedures you intend to follow in order to maintain the anonymity and confidentiality of the subjects:**

Participants and their organisations will not be named in subsequent write ups and material submitted for publication.

**RESEARCH CONSENT FORM**

Title of study

Research Capacity in Health Librarianship: The ReCAP Project

**Please read and complete this form carefully. If you are willing to participate in this study, ring the appropriate responses and sign and date the declaration at the end. If you do not understand anything and would like more information, please ask.**

I have had the research satisfactorily explained to me in written form by the researcher.   
**YES / NO**

I understand that the research will involve:

* A half day focus group event in which I will be representing one of the seven areas of librarianship
* Discussions with the other focus group members on the topic of research development in health librarianship and to identify key issues
* Identifying key questions which will be used to develop a national survey on the topic of research development in health librarianship

**YES / NO**

I understand that I may withdraw from this study at any time without having to give an explanation.  
**YES / NO**

I understand that all information about me will be treated in strict confidence and that I will not be named in any written work arising from this study  
**YES / NO**

I understand that any data collected will be used solely for research purposes and will be erased on completion of the research  
**YES / NO**

I understand that the data will only be discussed within the research team

**YES / NO**

I understand that study participants and their respective organisations will not be named in subsequent write ups and material submitted for publication.

**YES / NO**

I freely give my consent to participate in this research study and have been given a copy of this form for my own information.

**Signature: ………………………………………………………**

**Name (capital letters)…………………………………………..**

**Date: ……………………………………………………………**

**Contact details: (include address, email and telephone number)  
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