

*A Model for Change to Evidence – Based –
Practice by Implementing and Auditing Evidence
Based Protocols in Otolaryngology
Head and Neck surgery.*

Deepa Bhargava, Kamlesh Bhargava and Rashid Al-Abri

Abstract

Aim

To develop a model that guides primary care physicians to specialists, through a systematic process by implementing evidence based protocols for the change to evidence based practice (EBP) and improved quality of care.

Method

Based on the findings of a questionnaire survey a model has been developed as an organized frame work based on theoretical, research literature related to evidence based practice, Information mastery, and research utilization. In this model general physician, residents, specialists are guided through the entire process of developing evidence based protocols, and integrating an evidence base practice change. Review topics were focused on the common important and relevant conditions for primary care. The model was developed using sources identified on Medline searches, systematic reviews, guidelines. The other sources included clinical expertise and quality improvement information.

Results

Questionnaire survey revealed 85% of practitioners lack information mastery skills to apply primary evidence in their day-to-day practice at point of care. 95% of residents, and 66% of specialists strongly agreed for evidence based protocols at point of care. 78% agreed EBP raises the standards of care. Based on these findings the model was prepared in the form of seven steps.

Conclusion

Pre appraised evidence with its level of evidence and grades of recommendation in the form of evidence-based protocols are needed at point of care. Otolaryngologists believe Embedding of such protocols in hospital information systems would enhance EBP at point of care and improve quality of care.

Outcome based research and audits are needed to study the degree of improvement of quality of care after implementing the described EBP Model of care.

Introduction

As the volume of literature expands, the task of putting research findings into clinical practice becomes obscure and over whelming. The practice of

Evidence-Based- Medicine claims to free the clinicians from practicing medicine by rote, guesswork, variable experience. It also ends their dependence on out of date authority, and enables clinicians to work with the patient and use the literature as a tool to solve the patient's problems. It provides the clinicians access to what is relevant and the ability to assess its validity and applicability. In other words, it puts the clinicians in charge of the single most powerful resource in medicine. ¹

Evidence based medicine (EBM) is the integration of best research evidence, with clinical expertise and patient values. When these three elements are integrated, clinicians and patients form a therapeutic alliance which optimizes clinical outcomes and quality of life. ²

At one hand otolaryngologists are facing information overload and lack of time on the other hand quality measures are being applied to assess quality of care, by the internet patients also have access to latest treatment options and research.

By adopting a strategy of practicing EBM the otolaryngologists can effectively and efficiently remain up-to-date, are empowered by improved decision making, be cost effective and provide improved quality of health care.

However currently health care professionals are overwhelmed and bewildered by the volume of expanding medical literature.

To complicate matters further manufacturers of drugs and devices can provide exaggerated claims and there is a growing volume of literature of doubtful validity.

We believe all the above problems could be solved to some extent by using Evidence based practice protocols (EBPP)

We defined Evidence based practice protocols (EBPP) as systematically developed protocols incorporating the current best evidence, combined with insights from clinical experience and incorporating the individual patients values and preferences.

The aim of the presented study was to identify the need and acceptance of Evidence Based Protocols by practicing clinicians at a tertiary care center in Oman. The objective was to develop a model that guides primary care physicians to specialists, through a systematic process by implementing evidence based protocols for the change to evidence based practice (EBP) and improved quality of care.

Methods

A questionnaire survey was conducted to identify the knowledge and attitude of physicians and surgeons towards information mastery, evidence based practice (EBP) and evidence based protocols (EBPP).

Based on the findings of this questionnaire survey a model has been developed as an organized frame work based on theoretical, research literature related to evidence based practice, Information mastery, and research utilization. In this model general physician, residents, specialists are guided through the entire process of developing evidence based protocols, and integrating an evidence base practice change. Review topics were focused on the common important and relevant conditions for primary care. The model was developed in the form of seven steps.

Results

The results of the questioner survey revealed;

85% of practitioners lack Information mastery skills to apply primary evidence in their day to day practice at point of care. 95% of residents, and 66% of specialists strongly agreed for evidence based protocols at point of care. 78% agreed EBP raises the standards of care.

Based on the results of this survey the following model has been developed and implementation recommended.

The model comprised of seven steps (**Figure 1**):

Figure 1. A model for change to Evidence – Based – Practice by implementing and auditing Evidence based Protocols in Otolaryngology Head and neck surgery.



Step 1

The relevant common Otolaryngological clinical conditions seen at primary care and acute care to be identified. Type of protocol diagnosis/management decided.

Step 2

Searching the literature; the highest level of evidence and highest grade of evidence, based on hierarchy of evidence will be selected.³

Step 3

Critical appraisal of literature; Pre-appraised literature in form of systematic reviews, metanalysis, and guidelines to be preferred. However if not available the relevant literature will be critically appraised.³

Step 4

Preparing the protocol; the protocols are prepared in a set format incorporating level of evidence and grade of recommendation.

Step 5

Protocols to be discussed with concerning departments to get a consensus and incorporate consensus modifications before applying the protocol in clinical situation.

Step 6 Embedding protocols in hospital information system to facilitate evidence at point of care.

Step 7

Audit the improvement in quality of care.

Discussion

It is a well known fact that inspite of relevant clinically translational research findings present in literature very little is applied to patient care. There are a number of reasons for this; knowledge explosion at one end and lack of information mastery skills on the other end; also in the presented study 85% otolaryngologists lack information mastery skills and are unable to asses the quality of research findings. The use of EBPP become more relevant and justified as they include pre-appraised literature findings .

Dramatic changes in health care and the growth of integrated delivery systems have intensified practitioners' efforts to access new information about more efficacious approaches that enhance discipline – specific and interdisciplinary contributions to patient outcomes. In the new health care environment, practitioners can no longer rely solely on clinical experience, patho-physiological rationale and opinion-based processes. ⁴

Decision-making is a complex activity, especially in clinical setting.

Every day, clinicians make dozens of patient management decisions. Some are relatively inconsequential, whereas others are important. Each one involves weighing benefits and risks, gain and losses, and recommending or instituting a course of action judged to be in the patient's best interest. Implicit in each decision is a consideration of the relevant evidence, an intuitive integration of the evidence and a weighing of the likely benefits and risks in light of the patients preferences. When making choices, clinicians may benefit from structured summaries of the options and outcomes, systematic reviews of the evidence regarding the relationship between options and outcomes, and recommendations regarding the best choices. ⁵

Most otolaryngologists believe that by providing Evidence based protocols at point of care in the form of embedded pathways in the hospital information system practice of EBM will be facilitated and this will ultimately lead to improved quality of care.

Health professionals' failure to practice in accordance with the best available evidence cannot be attributed entirely to ignorance there are many factors involved like, lack of time, information overload, moreover effective health care strategies take years to catch on. ⁶All these reasons leading to failure to apply best

available evidence to patient care can be addressed by implementing the described model. While there is an expectation that the use of protocol based care tools lead to the standardization of care, little is known whether it actually does so in terms of quality measures. The results of the presented survey also showed 78% of the participants believed EBPP could lead to improvement in quality of care. Whether it actually does so will be known after the results are audited.

The Cochrane Group have summarized literature from research trials on what is and what is not effective in changing professional practice- both in promoting effective innovations and in encouraging professionals to resist "innovations that are ineffective or harmful".⁷

Currently there is a wide chasm of attitudes between front-line clinicians and back room policy makers the policy makers tend to love guidelines were as front-line clinicians have a strong aversion to the guidelines. There are many real and perceived drawbacks of guidelines. Protocols are instructions on what to do in a particular circumstance. They are similar to guidelines but include less room for individual judgments, are often produced for less experienced staff, or for situations where eventualities are predictable.^{7,8}

Since the authors work in a practice setting with the initial workflow being managed by trainee residents with less experience implementing the model appears to be relevant in our setting.

With the above-presented medical literature facts we believe the novel presented model of implementing translational research at point of care would improve quality of patient care.

The advantages of using EBPP over routine protocols are they include the best current evidence from research literature, they also combine this evidence with clinical experience of the clinician and the patient values hence the application is flexible.

The applicability and feasibility of EBPP needs to be studied.

The advantage of using EBPP is the protocols are developed on critically appraised literature of the best current evidence, they empower the users of the protocols, reduce clinical risk of providing outdated treatment, there is a standardizations of patient care, improved standard of care, and transparency of care. Although it has not been studied there is a possibility that EBPP could be cost effective too.

The disadvantages include; decreased personalized care, require a lot of staff commitment as preparing protocols is time consuming more over staff motivation is needed to use the protocols, require establishment and organizational support.

Conclusion

- Otolaryngologists should acquire EBM Skills
- Pre appraised evidence with its level of evidence and grades of recommendation in the form of evidence-based protocols are needed at point of care.
- Otolaryngologists believe Embedding of such protocols in hospital information systems would enhance EBP at point of care and improve quality of care.

- Outcome based research and audits are needed to study the degree of improvement of quality of care after implementing the described EBP Model of care

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References

1. Sackett DL, Richardson WS, Rosenberg WMC, Haynes RB. Evidence – based medicine: how to practice and teach EBM (2nd edition). London: Churchill-Livingstone, 2000; 7-12.
2. Guyatt GH, Rennie D. Users’ guides to the medical literature. Essentials of Evidence- Based Clinical Practice. Evidence-Based Medicine Working Group. JAMA 2002. www.ama-assn.org
3. Dawes M Critical appraisal skills. In: Gleeson M eds. Scott-Brown’s Otorhinolaryngology, Head and Neck Surgery. (7th edition) London: Hodder Arnold, 2008; 649-671.
4. Ellrodt G, Cook DJ, Lee J, Hunt D, Weingarten S. Evidence- based disease Management. Journal of the American Medical Association (JAMA) 1997; 278 :20:1687-1692.
5. Guyatt GH, Rennie D. Moving from evidence to action In: eds. Guyatt GH, Rennie D Users’ guides to the medical literature. Essentials of Evidence-Based Clinical Practice. Evidence-Based Medicine Working Group. JAMA 2002; 286-306. www.ama-assn.org
6. Greenhalgh T. Getting evidence into practice In: How to read a paper. The basics of evidence- based medicine (4 th edition) London: Wiley- Blackwell BMJ 2010; 199-209.
7. Mowatt G, Grimshaw JM, Davis DA, Mazmanian PE. Getting evidence into practice: the work of the Cochrane Effective Practice and Organization of care Group (EPOC) JContin Edu Health Prof 2001; 21(1): 55-60.
8. Greenhalgh T. Papers that tell you what to do (guidelines) In: How to read a paper. The basics of evidence- based medicine (4 th edition) London: Wiley-Blackwell BMJ 2010; (10): 132-133.