A pilot study investigating the importance given by BTHA members to evidence based management in clinical medicine

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Government and professional bodies emphasise the importance of an evidence and researched basis for clinical management, which is of particular relevance to pragmatic travel related medical practice.[1,2,3,4,5,6] Barriers and limitations to its implementation have been identified,[7] with accepted use considered a challenge in contemporary medicine.[8] The adequacy of the evidence base of travel related medicine has been recently questioned.[9] Supportive evidence and research results are disseminated by scientific publications, but reading resources appear to be poorly utilised by doctors and nurses working in the travel health field.[9] The drive towards an established evidence base in health care has led to a proliferation of guidelines purporting to be evidence-based for guiding management and diagnosis,[4] but their recommendations are not routinely followed.[10] The significance of elements in the decision making process used by doctors and nurses, in acquisition of the evidence base for rational clinical management, is poorly understood, particularly in travel related medicine. Their importance is even greater in a new discipline.[11] This pilot study used a survey to identify the reliance placed on the evidence base by travel health professionals in their clinical management of travellers. The overall objective was to investigate the resources used by health professionals in management of clinical consultations, the perception of the importance placed in the various elements of this process and published sources relied upon.

Method

A 12 point branched questionnaire delivered by e-mail to the 328 members of the British Travel Health Association, for whom email addresses were available. (Fig 1) This was a word document, to be completed and returned by e-mail within a three week time span. Question categories were determined from anecdotal observations of professionals regarding management decision making. As clinical experience and personal medical education (questions 3a and 3b)related to past knowledge, it was considered they might be assessed together in the results. Guidelines are usually research based and they were also combined with the research category (questions 3b and 3d) in analysis. Comparative and descriptive analysis was performed using Microsoft excel software.

Results

Respondent characteristics are summarised in table 1.

When asked the question – **"What was the priority basis for management of a clinical consultation?"** 50.7% of respondents opted for clinical experience as their first rank choice, 14.7% placed the combination of previous clinical experience and personal education in first rank, a further 20% give first priority to research evidence. The remaining 15% placed the combination of research evidence and guidelines in first place.

In the **travel health consultative process**, 49.2 % ranked clinical experience as a first priority in management, with a further 9.8% placing the combined categories of clinical experience and personal education in first place. 27 % gave first priority to research and the remaining 14% to research and guidelines together. When comparative analysis of all doctor and nurse responses was undertaken, marked differences were apparent (table 2). Within a general clinical consultation, there was a marked weighting difference between doctors and

nurses responses, with doctors [3.7%] giving less priority to research evidence than nurses [15%]. A further small difference was also identified when categories were combined as research/guidelines and clinical experience/personal medical education.

In response to the question "If you were to participate in a travel health related consultation which of the following would your management be based primarily on?", further differences were identified between doctors and nurses, in relation to those who incorporated research evidence and clinical experience within the consultation. As in the general medical consultation, doctors were found to give less weight to research evidence than nurses.

Table 1
Respondent demographics (N=71)

	Number (%)
Gender	
Male	25 (35)
Female	46 (65)
Profession	
Nurse	39 (56.3)
Doctor	29 (40.8)
Pharmacist	2 (1.4)
Other	2 (0.7)

More doctors appeared to prioritise guidelines than nurses, However, fewer doctors relied on clinical experience (table 3).

In a supplementary question (question 4) regarding a travel health consultation, responders were asked – If their management would be based mainly, partly or not at all on the 5 categories? Results are presented in table 4. The results broadly support the results in table 2. Responses to the main basis for Travel Health consultation management generally mirror those responses for general clinical consultation management, but doctors give more weight to websites in travel health consultations and nurses appear to acknowledge less value in websites in this situation.

In regard to reported research and information sources, the reading of peer reviewed scientific journals such as British Medical Journal and Nursing Journals were listed by 33.4% of responders as their main source. The BTHA Journal by 25.3 % and the Journal of Travel Medicine by 23.9%. The most frequently read Travel Health related journal was found to be the BTHA Journal 45% with 26.7% identifying the Journal of Travel Medicine, and 9.8% nursing journals. 15% of responders replied that the reading of a research based peer eviewed article would often change their clinical management with 75.5% believing that this would occur occasionally. A very small number (5%) of the whole group had participated in personal research in the previous 5 years.

Discussion

Many doctors and nurses appear to prioritise clinical experience and medical education and give a low rating to research evidence as a basis to the clinical management process. Clinical experience was rated first, by half the doctors in general medical consultation, and by one

third of the doctors in travel related consultations. Research evidence was a first or second choice priority in the management process for a minority only. Research evidence was rated considerably below clinical experience in both groups. Doctors appear to give little weight to research and only marginally more to guidelines. Supportive evidence and research results disseminated by scientific publications depend upon their readership, circulation and willingness of readers to act on published findings and change management where appropriate.**5** The apparent limited commitment of professionals to the importance of research based clinical management reported here, is supported by the small number 30-40% of doctors and nurses in the sample who admit to reading professional journals. Only a tiny number participate in research. These results suggest limited uptake, of access to peer reviewed scientific papers by travel health professionals and possible disinterest in scientific research. Few admit to regular reading of weekly peer reviewed general medical and nursing journals. Only 15% believed that their reading of journals often changes their management. Health professionals seem to be explained by their different roles and training, however placing less emphasis on research and guidelines than government and professional bodies would like and assert. This is an important consideration in efforts to raise standards.

Table 2
Doctors and nurses prioritisation of first choice factor influencing the general clinical management process

Percentage where the category listed as a first choice					
	Clinical Experience	*Research evidence*	*Personal medical education*	*Professional guidelines*	*Travel health websites*
Doctors N=29	63	3.7	7.4	22	3.7
Nurses N=39	50	15	17.5	17.5	3.7

Marked differences between groups may be nurses seem to value research evidence more than doctors in the general clinical consultation. In travel clinic consultation many doctors seem to rely less on clinical experience and past education and more on guidelines than nurses.

Table 3
Prioritisation of elements in travel health clinical management process %

Percentage where the category listed as a first choice					
	Clinical Experience	*Research evidence*	*Personal medical education*	*Professional guidelines*	*Travel health websites*
Doctors N=29	36	4.6	9	36	13.8
Nurses N=39	40.5	10.8	5.4	16	27

Recent papers[13] have suggested that there is a tenuous evidence base for the practice of travel related medicine. These findings imply that health professionals attribute little weight to the underpinning of clinical management decisions from a research evidence base. Most health professionals appear to rely on clinical experience in this process. The response rate would have been improved if e-mail addresses had been available for all members and these results relate to those e-mail accessible and people who read BTHA publications.

Table 4
Stated main basis in management process of a travel health consultation

Percentage where the category listed as a first choice					
	Clinical Experience	*Research evidence*	*Personal medical education*	*Professional guidelines*	*Travel health websites*
Doctors N=29	56	13	8.6	13	39.4
Nurses N=39	50	27.5	7.5	12.5	2.5

This was a small pilot study, which may not be representative of the whole BTHA membership and is not generalisable. The results however identify a need for an in depth-study of a large cohort of health professionals, to investigate the attributes they consider important in the clinical management process and in particular the importance both doctors and nurses give to research evidence in decision-making.

Figure 1
British Travel Health Association Survey Questionnaire

1 **Age** Under 45 years…… Over 45 years……
2 **Gender** Male…… Female……
3 **Which of the following** do you consider the most important element in determining your *management of the majority of general medical consultations?*

a) Clinical experience.
b) Research evidence base
c) Personal medical education
d) Published professional guidelines.
e) Other… please name…….

Prioritise items in order of importance by **numbering from 1-5**
a)…… b)…… c)…… d)…… e)……

4 If you undertake or were to participate in a travel health related consultation **would your management be based on:**

Clinical experience mainly…… partly…… not at all……
Research evidence mainly…… partly…… not at all……
Personal medical education mainly…… partly…… not at all……
Professional guidelines mainly…… partly…… not at all……
Other (name)……mainly…… partly…… not at all……

5 **Prioritise these items** in order of importance by **numbering from 1-5**

a)…… b)…… c)…… d)…… e)……

6 **Do you read a peer reviewed scientific medical journal?**

Weekly…… occasionally…… monthly…… not at all……

7 Name the journal……

8 **Which travel health journal** do you read most frequently?……

9 Does the **reading of a researched-based peer reviewed medical article** change your future clinical management?

sometimes…… often…… rarely…… never……

10 Have you **personally initiated clinical research** (not audit) in your practice in:

The last year…… five years…… 10 years…… never……

11 **Do you read the BTHA Journal?**

always…… regularly…… rarely…… never…….

12 **Do you read Travelwise?**

always…… regularly…… rarely…… never……

13 **Which sections of the journal do you read?**

Editorial…… features…… research…… news…… reviews……

14 Are you a doctor…… nurse…… pharmacist……other.(name)

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