On the Use of Reading Journals - by a medical doctor

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Medical doctors read journals for many different purposes throughout a medical life, the most important of which for me has been to keep up to date. Medical knowledge is changing very fast and influences medical practice from high to low, not only in basic science which is related to treatment but also in the collection of information for planning and evaluating treatment in one's own patients as well as in the service(s) of which one is a part. It is important to recognize the old bits of knowledge that are still valid and add the new that are essential for better practice and teaching.

New knowledge comes through a number of channels, but for me reading current journals in my own fields, yearbooks and the larger review journals like American Clinics, Epidemiologic Reviews have been most important.

In addition, one reads for general knowledge in medicine. I do this by scanning journals not of immediate interest now, to see if there might be anything vaguely related to my interests or those I work with, for later use. This is particularly useful when one teaches, since one has to prepare learning materials which cover several fields not necessarily only those of one's own interest.

To prepare teaching materials one goes back to one's memory, where things are filed more or less by subject, for the journals one has seen, and then searches specifically also in bibliographies and indices of current literature (Index Medicus or Current Contents, The Microfiche or the Yearly Index of specific journals, or Proceedings of meetings) one knows to have (had) articles that often fit the subject one is after.

If one wants to build up a collection of photocopies about a certain topic for future use in research or teaching, or because one has seen a few cases of special interest, one also scours a number of journals from time to time more systematically. I look out for Review articles. When the time has come to use them one reads them more carefully and it is at this time that I find the reference lists at the end of the articles of particular use. One can not only check some of the statements made by the author(s) but one can also complete the picture for oneself.

This brings me to critical appraisal. Since critical appraisal, well done, takes quite a lot of energy and time in the beginning, it is a good thing to teach subjects, residents in training and research students to do this systematically to start with.

My medical life began as a student in a traditional Anglo-Saxon Medical School, and in the fourth year we were thrown into the wards to learn the clinical subjects. We were expected to make decided case accounts as well as Statistical Medicine, which
appraisal, and which we learnt the hard way, by having our results criticized and having to rewrite and resubmit. (This one later also had to do with articles based on one’s own findings so maybe the training wasn’t so bad as it seemed!)

It taught me at the same time that there can remain differences of opinion due to our subjective ways of looking. Differences of opinion are healthy, provided they can be founded on arguments. We may agree to differ. Progress in science is not possible without such differences of opinion which can lead to further research and sometimes proof, which will change a long held belief. (Long held beliefs are sometimes called theories.) It is important to be aware of the preconceived ideas or hidden concepts in research and articles written about it. This should come out in the critical appraisal.

As a resident in training, we were expected to produce a critical appraisal in Journal sessions. Here the discussion is open between colleagues and can lead to bad arguments, based on the reading of different texts by different people, and different levels of prior knowledge. Staff members also were responsible for Journal sessions. Case presentations were always accompanied by discussions based on (recent) literature. These activities, and the fact that one has a variety of cases in any ward or outpatient or practice, teaches one to scan literature widely, so that one can go back in it in detail when needed.

As soon as one starts to do research, methods assume importance for oneself, and not only to accept or reject the conclusions of someone else. The accumulation of data for analysis imposes its own discipline based on the principles of scientific research laid down in methods. Here again, there is a vast literature on methods, and many applications have shown the advantages and disadvantages in different circumstances. Moreover, advances in data analysis also make demands on the collected data, if they do not fulfill the assumptions of the statistical tests the results cannot lead to conclusions. be they statistical or even based on reasoning only. Statistics alone do not prove the (clinical) usefulness of anything. Only if one does one’s own research now and again, will one take the trouble at least to scan such literature. It is actually not absurd as it looks at first sight. Most of what is written in journals by ordinary doctors like you and me can be understood if one wants to.

One does not have to do huge research all the time to be aware and interested in data analysis. Just reviews of one’s own services, the drug use on ward, the reasons for deaths, the investigations/operations done unnecessary or not done when they should have been done; checking the classification of disease, and where appropriate, numbers of patients, procedures, births, deaths, surveillance of occurrences.

An example:
The occurrence of three cases of melanoma in one year in a particular hospital was considered unusual. It is a very rare disease. It led to the discovery that these people had worked in the same type of mine; from this small beginning the natural history and epidemiology of the complications of...
then dead. Knowledge of the usual occurrence of diseases (epidemiology) also played its part.

This is merely an illustration that record keeping is important and that record use is even more important. Monthly review meetings in wards or between services that work together (like paediatrics and obstetrics for instance; or PoYaAnd and Puseonas observations compared with private practice figures) makes this interesting.

And it makes one read! Books are useful to learn the basics, they are good for stable knowledge, for classical techniques and unchanging subjects. Books usually lack the precise detail one needs in any real puzzle, and are always out of date by a few years. Literature lists in books can be used for historical reviews of a subject or to reexamine old reports in the light of new knowledge.

Perhaps it is curiosity that makes me read. It is such a habit that I can't help scanning literature lists for interesting titles. It is the current literature that is exciting, to see what is likely to be of use, what is likely to be dangerous, if we know more about the origin of diseases or the processes through which they do their damage and might possibly be prevented or attacked.

Reading is a road of discovery, of decision making. We have to exchange views between readers because too much is published to read everything. One dips according to one's nature.

Reviews must, however, also be read critically: the new discipline of Meta-analysis is one way to make reviews more scientific. But even here, selection is a subjective process. Because of this we must test our opinions, sharpen our arguments, reject misconceptions in mutual discussion. The students should acquire these skills as early as possible, and the patients and the services will benefit in the end.