



Research and the general dental practice team

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In 2017 Bhupinder Dawett published the article *DCPs and research in general dental practice in the British Dental Journal* (Volume 222 pages 307-309). In 2021 he has updated the article for *BDJ Team's* special issue on DCP research.

Working in a dental practice can be very busy, especially if your day encompasses treating numerous patients under a publicly funded system such as the National Health Service (NHS). More than this, work might even begin to feel stressful and monotonous with the inevitable procession of patients and the nine-to-five day can pass with the dental team providing the same sorts of treatments to patients without thought for variety in either challenge or opportunity.

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As young children, growing up in the world was something of an adventure where our parents gave us a sense of what was right and what was wrong, but also we learned from our own experiences and from the things that happened around ourselves (and to our friends). This was us learning an evidence-based life - the conjunction of best available research (what science and our parents tell us), our clinical expertise (what am I able to do), and in collaboration with our patients (in living with others). With this as our map and guidebook, life can be exciting as a learning experience.

Importance of inquisition

Our usual clinical practices are most likely generated from our teaching and experiences at dental school, or perhaps from those continuing professional development and postgraduate courses that we all take. However, there is a real requirement that we check what we do is justified and supported by the current evidence-base, and importantly, to what evidence level. This is because our patients need to be offered options that are clinically effective but also relevant to them as individuals. More succinctly, can we as clinicians working in primary care add anything to this evidence base?

In the relentless quest to hit performance goals, possibly driven by an operative target-based system, many of us probably do not get

the chance to pause and question in depth what we do and what care we provide to our patients.

Albert Einstein commented on the need for inquisition when he said, 'The important thing is not to stop questioning'.¹

General dental practice, where the vast majority of oral care is delivered, is a fertile ground for the development and generation of research questions. A dentist or dental care professional (DCP) working in this environment is suitably placed to aid research in many ways.

Publicly funded healthcare systems should ideally strive to deliver care that is efficient to justify resources being utilised to the best effect for the population. This healthcare provision would, in an ideal world, be verified by good quality research in both science and clinical practice; it should be evidence-based and supported by clinical research. However, this last statement raises an issue; whilst there are now an increasing number of studies, clinical (or applied health) research in primary care dentistry is still comparatively rare. Most studies which inform our clinical practice have been undertaken in environments not always generalisable to primary care. Translation of research findings from one sector to another and the implementation of recommendations to primary care can consequently be staggered

and difficult at best, and at worst, totally inappropriate. As such research driven guidelines or policies including healthcare interventions either may not see the light of day or have to be dramatically tweaked and compressed to make them fit the real-world environment, so much so that the clinical benefit hoped for is compromised.

Dr Mike Schmoker, a best selling author on educational change says of research: 'The research we do at the local level - collaboratively - is what makes formal, outside research work. Outside research cannot be installed like a car part - it has to be fitted, adjusted, and refined for the school contexts we worked in.'²

Although a dental practice might seem a million miles from a school or classroom, there would seem some sense in this opinion that research findings cannot simply be dropped in from a distance. The value of primary care Practice-Based Research (PBR) is being increasingly acknowledged and with it the need for dental practices and their dental staff to engage with the research process, and this need not be limited to just dentists but the broader dental team. Dental care professionals play a vital part in any dental team and involvement in research projects is not outside their domain.

Getting started in research

When trying to carry out research in your practice certain barriers can become evident. General dental practice is a busy environment with numerous patients to see and as such research activities may compete with your day-to-day operations; allocating time for research activities needs to be addressed. There are also certain regulatory processes and governance that need to be complied with, many of which the average general dental professional may not even be aware of. There's also the issue of the logistics of setting up the practice, training of staff, and the thorny, but very relevant, issue of financing research activity.

Good ideas for projects are important and there are several ways in which research priorities can be identified at practice level. Open discussion at practice meetings and staff get-togethers can be very fruitful in generating research ideas. Open and frank discussion can help clarify and acknowledge that a 'problem' exists which needs solving. This could be a specific oral health pathology that is having impact, or a way of working which is causing a barrier to more efficient ways of working. Here brainstorming as such can help lead to novel ways at coming up with ideas to solve these problems. Initially in the first part of these sessions the team avoids criticising or ridiculing



Fig. 1 Hall crown

others' ideas. This is a time to just come with possibilities and try to make the problem not seem too daunting. Here DCPs can be valuable and offer perspectives that differ from those of dentists. Such diversity in the team make up can help with an abundance of ideas to explore.

This fertile base of ideas then leads to the next stages of developing a research question, looking at the current evidence base for solutions, then starting on a process of developing a project to help start researching your idea. This is when collaboration and knowing where to go for support is vital.

The Research Design Service (RDS) is a service that primary care DCPs can approach and together with academic collaboration can be vital to help with the next stages. The National Institute for Health Research (NIHR) funds the RDS which can provide design and methodological support to health and social care researchers, and support funding applications. More information and where to find your local RDS is available on the website <https://www.nihr.ac.uk/explore-nihr/support/research-design-service.htm>.

Joining existing trials

You can also get involved with trials that have already been designed and approved. An example of a trial that our practice was involved with was FICTIION which was a multicentre NIHR Health Technology Assessment (HTA) trial.³ This study investigated the clinical and cost effectiveness of several approaches in managing caries in primary teeth including using the Hall Technique (Fig. 1).

The Local Clinical Research Network will have details of non-commercial and

commercial studies. These usually tend to be large multisite trials run to answer specific research questions. Examples of current trials still recruiting participants or about to start shortly are:

1. The CALM trial - the clinical and cost-effectiveness of a guided self-help cognitive behavioural therapy (CBT) intervention to reduce dental anxiety in children. For more information visit <https://www.sheffield.ac.uk/dentalschool/research/person-centred-population/child-dental-anxiety/calm>
2. The SCRiPT trial - This trial is designed to compare the clinical effectiveness and cost effectiveness of selective caries removal in permanent posterior teeth. For more information visit <https://w3.abdn.ac.uk/hsrc/SCRIPT/Public/Public/index.cshtml>.

Support that may be required

Most dental professionals and practices will require support in putting any research proposal into practice or it becomes almost impossible. Such investment is required to fund things such as:

- Project design
- Knowledge of approvals required
- Training needed
- Methodological support
- Practice administration
- How to incorporate patient and public involvement in the project
- Financing the project.

Where to go for support

As mentioned previously, the RDS is available for dentists and DCPs to access and discuss ideas with. Making links with academics in

the field of your proposed research idea is also invaluable in developing your ideas further. The NIHR LCRNs across the UK will have an Oral & Dental Specialty lead together with one or two primary care dental research champions, who may also be able to help or direct you. Contact your LCRN to find out who the leads and champions in your region are. For more details visit <https://www.nihr.ac.uk/explore-nihr/support/clinical-research-network.htm>.

To gain knowledge about Good Clinical Practice (GCP) in research, there are resources available. The NIHR provides online access to a variety of research training courses including GCP training. For more details visit <https://www.nihr.ac.uk/health-and-care-professionals/learning-and-support/good-clinical-practice.htm>.

Financing the project

Taking part in research activity in dental practice will inevitably entail costs.

Some DCPs may be fortunate that their practice will cover most of the costs but finding additional funds from external sources may be necessary. Taking part in existing studies that have secured funding may make the foray into research easier.

The RDS will also be able to direct you to grant funders and their funding streams where you can apply. They can also help you with funding applications and how to improve the chances of securing a grant.

At our practice we have been helped with support from the Oral and Dental Research Trust (ODRT). The ODRT (with support from Colgate) annually runs a DCP research award programme to encourage dental care professionals to engage in research. In the past six years three DCPs at our practice have been awarded these very important and prestigious grants. It is also pertinent to note that two of the prizes were given to our extended duties dental nurses. For more information about these awards and how to apply visit: <http://odrt.org.uk/colgate-dcp-awards/>.

Join a research network

There are now a few dental research groups that have been started and developed across the UK. These organisations can also be very helpful directing and raising awareness of the research opportunities that exist in your locality. Examples of some networks are:

Scottish Dental Practice Based Research Network: <https://www.sdpbrn.org.uk>

Northern Dental Practice Based Research Network: <https://blogs.ncl.ac.uk/northerndentres/>

East Midlands Dental Practice Based Research Network, hosted by LCRN East Midlands and Derbyshire LDC.

Real term practice benefits from research projects

Having several members of the dental team involved in a research project encourages the team to work together to ensure the study runs smoothly. These staff members who are fully trained, which helps with dealing and completing the relevant paperwork, develop a wider skill set and increased confidence. This experience and any subsequent involvement in externally designed studies helps them understand the reasons as to why and how the research is being carried out in practice. The delegation of duties to several members of staff enables the workload to be eased and not be the sole burden of the clinician.

Reception staff can be involved in administration ensuring appropriate appointments are allocated, paperwork is completed correctly and organised efficiently. Dentists and DCPs can work together in the surgery when completing paperwork and ensure patients are given the correct study information.

In a busy dental practice with little opportunity for direct input into a patient's care plan, dental nurses especially can begin to feel a sense of frustration with their role perceived to be somewhere on the side lines; it is the dentist providing all the care and receiving all the 'thanks'. The ODRT Research awards have been instrumental in promoting our DCPs' sense of value and self-worth. They are presented at a champagne reception during the annual British Dental Association (BDA) conference and emphasise the importance of the DCPs' achievements in gaining such an accolade.

The positives for applying, getting, and doing research for our dental nurses and dental therapist have been numerous and wide ranging. In formulating the application they have been challenged to think about what they see as important in their daily working lives, and it has encouraged them to look again with critique at the current evidence base behind our traditional clinical practices. The awards have provided opportunity for reflection and evaluation of services that they can provide and helped add variety to their working day.

Being involved with such projects can stimulate the spirit of inquisition in DCPs and as a practice, apart from the obvious measurable gains, it brings many intangible benefits as the practice and the team evolve.

Comments include:

'Since moving to a research active dental practice in 2011, I feel that my scope of skills and career possibilities has evolved. Even though I had been a dental nurse for 11 years I wasn't actually aware that research could be carried out in a dental practice setting. I have been encouraged and positively pushed into developing my outlook and daily working practices, and would certainly encourage other dental nurses to approach their teams, especially their employers, to ask about the possibility of getting involved in research, and take advantage of all the support that is available. It really unearths the inquisitive nature in you.' - Mrs Nicole Allen - Extended Duties Dental Nurse, Award Recipient of the 2016 Colgate ODRT DCP Research Award.

Our practice has also seen the positive effects of staff retention and reduced recruitment costs with very low staff turnover. Large-scale research submissions have been made to upstream research bodies based on the work carried out by our DCPs, and we have also been part of national research projects.

Conclusion

Research participation for our DCPs has been a great experience and has fostered better understanding of the research logistics and evidence-based dentistry.

From humble research novices to presenting at conferences and giving talks to their fellow colleagues, and constantly coming up with new ideas, we have seen our dental professionals develop. As such, their inquisitive and creative spirit has been nurtured. I think that one comment from my DCP encompassed and summed up what it has meant for her and our team: 'I feel like I'm not just an assistant anymore but more involved in patient care and its development at the practice'.

References

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