

University Dental Hospital of Manchester

Dental Research Newsletter

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Aims

- ▲ To highlight important news, events and studies occurring in dental research at/or in partnership with the University Dental Hospital of Manchester (UDHM).
- ▲ To facilitate research collaboration between academic and clinical staff at UDHM and the Division of Dentistry at the University of Manchester (UoM).
- ▲ To promote the research capabilities of UDHM and Manchester University NHS Foundation Trust (MFT) as a whole, and foster increased participation (including community GPs) in dental & oral health research.

A Word from the Medical Director, University Dental Hospital, MFT



Professor Mike Pemberton, Consultant in Oral Medicine, Medical Director, University Dental Hospital of Manchester (UDHM), MFT:

Michael.Pemberton@mft.nhs.uk

The Dental Hospital has several important and interconnecting functions. We are foremost a hospital for treating patients, but we also have an important role in helping to train the next generation of dentists and dental care professionals, and hosting and undertaking research. All of these functions are inter-related. By hosting educational activity and undertaking research, the quality of care for our patients, both now and in the future, will be improved.

There are many opportunities for research in the hospital, both small and large in scale. To help dental staff who are interested in undertaking research, the Trust has put in place a support structure including Claire Cole as our Hospital Research and Innovation Manager and David Ajao, recently appointed as Research Assistant. I want to take this opportunity to welcome David to the hospital in this role. David arrives with a wealth of experience in basic biomedical research and health services research and I'm sure will be a great asset. The hospital wishes to encourage engagement with research, and Claire and David are both there to help us do that. Please contact them directly to explore research ideas you are looking to take forward.

A Word from the Director of Research, Division of Dentistry, UoM



Professor Tanya Walsh, Professor of Healthcare Evaluation and Director of Research, Division of Dentistry, Scholl of Medical Sciences, University of Manchester: Tanya.Walsh@mancehster.ac.uk

As the Director of Research in the Division of Dentistry, my overarching role is to develop and maintain a research strategy within the Division, to develop a research planning strategy and to provide oversight of research assessment processes within the Division. Long-standing collaborations between academic and clinical research staff at the University and the University Dental Hospital of Manchester have led to a successful track record of funded research, across a wide range of clinical and clinically-related disciplines.

We undertake world-leading research that has significant impact on improving the delivery and quality of dental services and clinical care, and reducing oral health inequalities. Our two highly successful and innovative research themes; Basic Dental Science and Health Science Research, are internationally renowned, and our research work is funded from Research Councils, the NHS, the EU, charity and industry.

Our research can broadly be categorised as follows:

- ▲ Craniofacial genetics & development
- ▲ Stem cell biology
- ▲ Adhesive biomaterials and biomechanics/biomaterials science
- ▲ Clinical craniofacial research
- ▲ Caries and diagnostic research
- ▲ Oral radiology and imaging
- ▲ Oral and maxillofacial surgery
- ▲ Dental public health and primary care
- ▲ Evidence synthesis

Our research portfolio is extensive and diverse, covering a range of important research questions. Recent research successes include:

- ▲ A Randomised Controlled Trial to Evaluate the Clinical and Cost Effectiveness of Prescribing High Concentration Fluoride Toothpaste in Preventing and Treating Dental Caries in High-Risk Older Adults (REFleCt Trial).
- ▲ Dentistry Responding in Domestic violence and Abuse (DRIDVA)
- ▲ Dental Pulp Stem Cells - Investigations into Methods of Bone Regeneration Using 3D Printed Scaffold.

Projects range from smaller, pump-priming or proof of concept studies to multi-million-pound health technology assessments. We look forward to expanding our portfolio with research-minded staff at all levels - there really is a research opportunity out there for everyone!

DENTAL RESEARCH STUDY SHOWCASE



Professor Martin Tickle, Professor of Dental Public Health & Primary Care; Honorary Consultant, Public Health England

A Randomised controlled trial to Evaluate the effectiveness and cost benefit of prescribing high dose FLuoride toothpaste in preventing and treating dEntal Caries in high risk older aduLTs (REFLECT Trial)

The REFLECT Clinical Trial – funded by NIHR’s HTA Programme (16/23/01) – aims to evaluate whether prescribing high dose fluoride toothpaste can improve the dental health of older adults who have a high-risk of tooth decay and, by extension, reduce costs for both patients and the NHS. Recruitment started in earnest in February/March, 2018. The study will run for 3 years and aims to recruit approximately 1200 people aged 50 years and over from NHS dental practices in Northern Ireland, Scotland and North-West England.

The clinical/study team (based at The University of Aberdeen) is excited to have produced and disseminated the first REFLECT trial newsletter in October 2018. Below are excerpts from it.

It's a busy time for REFLECT and the number of participants is growing!
To date, over **400** participants have been recruited across Scotland and Northern Ireland.
(See graph below).



The first participant was recruited in Northern Ireland at the end of April 2018. The first participant in Scotland was recruited at the beginning of July 2018. So far, 132 participants have been recruited in Northern Ireland and 110 in Scotland. Given that we are looking to recruit **1200**, there is still a way to climb. In England, we have now 'green-lighted' our first six dental practices who will start to recruit participants in the coming weeks.

Nineteen dental practices have been working hard to recruit participants. Some of the practices have already reached their target!

Also featured in the newsletter is:

- an interview with Hari Shankar Lal [BDS MFDS RCPS (Glas)], owner of the first dental practice to recruit a participant in Scotland – The Main Street Dental Care, Thornliebank, Glasgow – about his experience with recruiting to the trial, and
- an interview with Andrew Bell and Sarah Crockett of Bell and Thom Dental Surgeons, (Portglenone, Co Antrim) – the first dental practice in Northern Ireland to have reached their maximum recruitment number.

For further enquiries about this trial, please contact martin.tickle@manchester.ac.uk or visit the trial website at <https://w3.abdn.ac.uk/hsru/REFLECT/Public/Public/index.cshtml>



Professor Paul Coulthard

(BDS, MFGDP (UK),
MDS FDSRCS,
FDS(OS)RCS, PhD)
Professor of Oral &
Maxillofacial Surgery

Dentistry Responding in Domestic Violence and Abuse: Feasibility Study of a Practice-Based Intervention (DRIDVA)

Domestic abuse is a global public health problem affecting both men and women, and healthcare professionals have been identified as playing a significant role in identifying, supporting and referring patients to specialist services for additional help and support. In order to improve the engagement of dental teams in supporting all adult patients presenting at the dental practice who may be experiencing domestic violence and abuse, a team lead by Prof. Paul Coulthard was awarded RfPB grant to conduct a feasibility study using the successful IRIS (Identification and Referral to Improve Support) intervention currently adopted within general medical practice.

This study is a collaborative project between colleagues from Bristol, London, and Manchester, and is supported by staff from the IRIS project based at Manchester Women's Aid. The recruitment to the feasibility study has been completed, and so far, 36 clinical staff and nine reception and administrative staff have been trained, using the adapted IRIS intervention. The training has also been well received by the dental practices, and in the coming months, we are looking forward to positive improvement in practices of dental teams.

For more information about the study, please contact Prof. Coulthard or Dr. Omolade Femi-Ajao Omolade.femi-ajao@manchester.ac.uk

Meet MFT's Dental Research Support Team

Claire Cole – Hospital Research & Innovation Manager (HRIM)



Claire is MFT's HRIM for the University Dental Hospital of Manchester (UDHM), Manchester Royal Eye Hospital (MREH), and CSS & MRI (Division of Surgery and Specialist Medicine). She oversees research delivery within these aforementioned hospitals. Her role includes (but are not limited to): supporting grant applications; facilitating rapid study setup through problem-solving; risk assessments and performance management of studies; budgetary duties which include ensuring accurate research costing; timely contracting and reporting; and liaison with external partners on innovative projects, etc.

Claire is highly experienced in various aspects of research and holds a PhD. You may reach her via claire.cole@mft.nhs.uk

David Ajao – Research Assistant (RA) & MFT's Liaison at Dentistry Division, UoM



David (recently appointed) is MFT's RA for UDHM and the Division of Dentistry at UoM. Working alongside Dr. Claire Cole and Prof. Tanya Walsh, his role includes: promoting the development of research ideas at both UDHM and Division of Dentistry, supporting grant applications (through critical review, costing, ethics applications [IRAS], etc.), facilitating study set-up (e.g. sponsorship and contract reviews at MFT's R&I, etc.), providing advice on pump-priming and mainstream funding opportunities, and liaison with external partners.

With a PhD in Physiology and solid grounding in quantitative and mixed methods, David comes with experience in basic biomedical research and hospital- and community-based clinical trials. He has been involved in studies ranging from paediatric TBI to exergames development in sheltered homes and rheumatology clinical trials. He is well-versed in all facets of research lifecycle – from conception of research idea and grant-writing to study set-up, delivery and closure. David has successfully contributed to both NIHR-sponsored as well as international studies, and has authored and co-authored papers in peer-reviewed journals. He can be contacted via david.ajao@manchester.ac.uk and david.ajao@mft.nhs.uk

The dental research support team is able to provide assistance including but not limited to:

- ✦ development of research idea through: a) critical review of research proposal; b) rapid review of literature; c) feedback on the quality and strength of grant application; etc.
- ✦ suggestion of & liaising with potential internal and external collaborators;
- ✦ practical assistance with identifying appropriate funding bodies;
- ✦ study costing, grant-writing, ethical approvals, contracts, study set-up, coordination and closure; and
- ✦ setting up Trust-sponsored and Trust-hosted studies of academic or commercial nature.

Kindly get in touch for any enquiries you may have.

Trust-wide Research/Clinical Trials Set-Up Performance (2017/2018)

Initiation of studies



94%

Q4 2017/18

94% of our studies are consistently achieving the NHS benchmark of 70 days from a valid application to first patient recruited.

17,000

Patients recruited to participate in clinical studies

484

Research studies open to recruitment or in follow-up phase

400

Dedicated Research and Innovation Division staff

£50m

Annual Research and Innovation turnover

1st

Highest recruiting Trust in CRN: Greater Manchester

15

First patient recruits (UK, European and Global)

*Greater Manchester, including East Cheshire and East Lancashire NIHR data 2017/18

Community Dental Research

A huge 'thank you' to all community general dental practices (GDPs) who have taken part in one or more community dental research studies recently.

A series of training workshops on dental research engagement that will bring together GDPs, dental clinicians, academics and research facilitators across Greater Manchester is being planned. We are exploring the possibility of Continuing Professional Development (CPD) units for these workshops. Potential date: February/March 2019.

For more information on these workshops, please contact Dr. David Ajao (david.ajao@manchester.ac.uk) or phone: 0161 275 6480

Research Funding & Training Opportunities

[Research Partner Development and Pump Priming \(Global Challenges Research Fund, GCRF\)](#)

(Accessible to only UoM-affiliated staff). Funding will support networks creation and collaborative research with potential for future bigger grants. Dental and oral health research falls within the remit. Applications to all schemes should be submitted to james.evans@manchester.ac.uk. Anticipated call will be issued **early 2019**.

[Joint Global Health Trials scheme – call 9 Development Grants](#)

Open date: 14 Nov 2018; Closing date: 5 Feb 2019 16:00 GMT

Type: Grants, MRC strategic (a collaboration between MRC, DFID, NIHR and Wellcome)

[Thinking of applying for a clinical fellowship? Clinical Fellowships Workshop: Professor Neil Hanley, register now for 14th March 2019](#)

[Joint FDS RCSEng - British Society of Paediatric Dentistry](#): A 1-year fellowship intended to support a clinical trainee in Paediatric Dentistry who is pursuing an academic career and research training.

[FDSRCSEng - Association of British Academic Oral and Maxillofacial Surgeons](#)

Pump-priming grants up to £10,000 to support research in Oral Surgery and OMFS for early career researchers and clinicians who have not completed either a PhD and/or clinical training.

[FDS Pump-Priming Grants & FDS Research Fellowship](#) Pump-priming up to £10000 for research consumables costs for new or existing projects; one year fellowship to support clinical trainees to obtain research training (covers salary & research costs).

[Colgate Robin Davies DCP Awards](http://odrt.org.uk/colgate-dcp-awards/) (<http://odrt.org.uk/colgate-dcp-awards/>): For investigations of clinical relevance, particularly in the field of preventive care conducted by Dental Care Professionals (DCP).

[OHI \(PreViser\) Awards](#): Provides small grants to support research programmes into the prevention of oral diseases with a specific emphasis on chronic diseases of ageing and patient-orientated research.

[NIHR](#) and [MRC](#)– varied funding opportunities with deadlines.

[EME Commissioned Call on Dental Health – Disorders of the teeth and gums](#) (18/171) Evaluation of novel interventions to diagnose or treat conditions affecting the teeth or gums. Closing Date: March 19, 2019.

Recent Publications (Accessible via PubMed)

Selected Published Papers by UDHM & Division of Dentistry Affiliates (April – September 2018)

Credit: Compiled by Michelle Dutton – Librarian, Trust Library Services [michelle.dutton@mft.nhs.uk]

Publications

1. Mandall NA, Hickman J, Macfarlane TV, Mattick RCR, Millett DT, Worthington HV. Adhesives for fixed orthodontic brackets. *Cochrane Database Syst Rev.* 2018(4):22.
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9. Aljdaimi A, Devlin H, Dickinson M, Alfutimie A. Effect of 2.94 microm Er: YAG laser on the chemical composition of hard tissues. *Microscopy research and technique.* 2018.
10. Mustafa R, Alshali RZ, Silikas N. The effect of desiccation on water sorption, solubility and hygroscopic volumetric expansion of dentine replacement materials. *Dental materials : official publication of the Academy of Dental Materials.* 2018;34(8):e205-e13.
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17. Walsh T. Fuzzy gold standards: Approaches to handling an imperfect reference standard. *Journal of dentistry.* 2018;74 Suppl 1:S47-s9.
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Publications

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33. Batista K, Thiruvengkatachari B, Harrison JE, O'Brien KD. Orthodontic treatment for prominent upper front teeth (Class II malocclusion) in children and adolescents. *Cochrane Database Syst Rev.* 2018(3):115.
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Editorial Team: Dr. David Ajao, Dr. Claire Cole, Prof. Tanya Walsh, Prof. Mike Pemberton

Corresponding Editors: David O. Ajao & Claire Cole.

Mailing Address: Coupland Building 3, University of Manchester, Oxford Road, Manchester M13 9PL

Email Addresses: david.ajao@mft.nhs.uk; claire.cole@mft.nhs.uk