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THE SMAE INSTITUTE™

Podiatric Medicine

For the Private Practitioner

Understanding medication and pharmacotherapy

Part 4: Antibiotics, Antifungals and Antivirals

PAGE 18

Toenail Surgery

PAGE 24

Aging – Theories and Fall-Out

Part 1: A Review of Aging and Associated Theories

PAGE 34

What's inside...

Annual Convention 2021

PAGE 4

COVID-19: Update on guidance

PAGE 8

Practitioner of the Year: call for nominations

PAGE 32

CPD

PAGE 41

PLUS

All Regular Features!



PROUD PAST,
EXCITING FUTURE

Contents



03 Editorial
By Michael J. Batt

04 Annual Convention
1st-2nd October 2021

08 COVID-19
Update on Guidance

10 BSc (Hons) Podiatry
Course Overview

**18 Understanding Medication
and Pharmacotherapy, Part 4**
By Andrew Hill

23 HCPC
Update and latest news

**24 An update for UK podiatrists performing
toenail surgery on patients who are
taking antithrombotic medications:
it's about bleeding time**
By Ian N Reilly

**31 SMAE Member's Shield
Medical Emergencies Procedures Courses**

32 Practitioner of the Year 2021
Call for nominations

**34 Aging - Theories and Fall-Out,
Part 1**
By Tracey O'Keeffe

39 Classified Advertising

41 CPD Course Listings
Workshops and online courses

50 Obituary
Bruce McLaggan

**52 Member's Zone
Forgotten Feet**
Belinda Lonhurst

54 BCPA / BAFHP
Regional branches and contact details



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Editorial



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The Annual Convention is rapidly approaching and we can certainly look forward to returning to the Oxford Belfry which we missed last year, due to the pandemic. It will be good to meet up with all our members and it is always enjoyable to chat and discuss their practices and all that they have achieved in this time. It is good that we have progressed so well but we are not complacent. We must always look to the future as to what we want to achieve.

As we approach the final quarter of 2021, we look back at the year that we had and I am pleased to say that we have expanded significantly within the Smae Institute with all our courses. The degree programme has proven extremely popular and we wish all students undertaking the programme, which starts this month, the very best of luck.

The pandemic certainly took its toll on everyone and impacted so many financially. It is extremely sad to see so many people lose their lives as a

result of the Covid infection. For anyone currently suffering from Covid, or long Covid, we wish you well and a speedy recovery.

It is wonderful to see so many people booking to attend the Annual Convention, which is being held on Friday 1st and Saturday 2nd October. It is a very popular venue and it is always a joy to go there; we hope you all enjoy the event. I look forward to seeing you there.



By Mike Batt

THE DEGREE
PROGRAMME HAS
PROVEN EXTREMELY
POPULAR AND WE
WISH ALL STUDENTS
UNDERTAKING THE
PROGRAMME, WHICH
STARTS THIS MONTH,
THE VERY BEST
OF LUCK.

Submission of articles

Content of submitted articles should be Podiatry or Foot Health related.
Please ensure that you add your name and post nominals and also a photo.

Please add references to any books or papers mentioned in your article.

Hurry!

**Bookings close on
22nd September 2021**

*“Unless you try to do
something beyond
what you have
already mastered,
you will never grow”*

Ralph Waldo Emerson



THE SMAE INSTITUTE™

ANNUAL CONVENTION

1st & 2nd October 2021

DoubleTree by Hilton Oxford Belfry
Thame, Oxfordshire

Enjoy access to an extensive trade exhibition, listen to eminent lecturers, a hot/cold buffet lunch (and unlimited refreshments), as well as luxury accommodation and full English breakfast in a beautiful 4* hotel.

Call the **Convention Hotline** on **01628 560654**
or visit **www.smae.co.uk** for more information and to book!

**Day Delegate
Option Now
Available!**



*Incorporating The British Chiropractic Association
and The British Association of Foot Health Professionals
in conjunction with The SMAE Institute*

The Annual Convention Agenda

Friday 1st October 2021

8.45am – 9.50am Registration, Trade Exhibition & Arrival Refreshments

9.50am – 10.00am Welcome by Tracey O’Keeffe MA, BSc, RN, PGCE, MCFHP MAFHP, Part-time Tutor/Lecturer at The SMAE Institute

10.00am – 11.00am ~ Ian B Griffiths BSc (Hons) MSc (Sports Injury) FCPM FFPM RCPS (Glasg)

Understanding Foot Orthoses

Understanding how foot orthoses work is fundamental in aiding clinical decisions regarding their appropriate prescription and/or issue. This talk will bring together the beliefs and the evidence regarding how foot orthoses ‘work’, and how this has changed from past to present (and may need to change again in the future).

11.00am – 11.45am Refreshment Break & Trade Exhibition

11.45am – 12.45pm ~ Dr J Gordon Burrow BA, AdvDipEd, MSc, MPhil, FChS, FHEA, FCPM, MCSFS, CMIOASH, AcFP, Csci

Forensic and Legal Medicine

This lecture will outline the role Foot Health Practitioners and Podiatrists can play within the Judicial Systems such as Criminal cases, medico-legal, family Courts as well as Tribunals such as Employment or Equality tribunals and as Experts for statutory/regulatory bodies. It will also outline the role of an ‘expert’ and that of an ‘expert witness’ and the qualities that may be desired to be regarded as an Expert Witness, including background and training incorporating the recent Guidance issues by the Academy of Medical royal Colleges. Case studies and evidence-based literature will demonstrate some aspects that may be used to assist Courts and Tribunals in determining case results. Video evidence used in recent criminal cases will demonstrate the limitations as well as the use of some of the areas of this section of practice.

12.45pm – 2.15pm Hot/Cold Buffet Lunch & Trade Exhibition

1.15pm – 2.00pm Break Out Session (Optional) (£15 per person)

Chairside Devices with Andrew Hill

Chairside devices are a very useful clinical tool. They can allow us to offload and redistribute pressure away from painful and/or high pressure sites to other parts of the foot. They are inexpensive and quick to make and can help relieve a significant amount of patient discomfort. This breakout session will explore some common chairside devices that can be made in clinical practice and demonstrate their manufacture and placement.

2.15pm – 3.15pm ~ Tracey O’Keeffe MA, BSc, RN, PGCE, MCFHP MAFHP, Part-time Tutor/Lecturer at The SMAE Institute

Mental Health – “Hidden Secrets” that sit behind the face

Physical ill-health is usually something visible and understandable, but this is often not so for mental health problems. It is not uncommon to find that people have “hidden secrets” that sit behind a face that may project happiness, contentment and an ability to cope with life. For them it brings challenges, but it also raises problems for people surrounding them. As clinicians, we come into contact with many, many different individuals and the package of well-being they carry with them varies hugely. This lecture will consider how mental health issues may impact us as we treat and care for our clients and their needs.

3.15pm – 3.45pm Refreshment Break & Trade Exhibition

3.45pm – 4.45pm ~ Andrew Hill MSc Podiatry, BSc (Hons), PGCert L&T, MSSCh, MBChA, FHEA, HCPC Registered, Clinical Services Manager of The SMAE Institute

“Oh, sugar! Now what? An update on diabetes for 2021.”

Diabetes continues to be an exploding health problem affecting the lives of a growing number of people. This talk will give the latest updates on understanding of disease pathology, evolving classification systems and how all of this impacts on us as clinicians and how we can impact upon our patients with diabetes.

4.45pm – 5.15pm Trade Exhibition

Depending on traders open and number of delegates viewing, we reserve the right to close the exhibition room earlier.

7.15pm – Late Gala dinner with a Celebration of Achievement Presentation and fun quiz with prizes to be won (for those booked).

Saturday 2nd October 2021

8.30am – 9.15am Registration, Trade Exhibition & Arrival Refreshments

9.15am – 10.15am ~ Michael Ratcliffe FFPM RCPS (Glasg), FCPM, D.Pod.M., B.Sc. (Podiatry), M.Sc. (Health Research), Cert. Ed.

Managing the chronic lateral ankle sprain

In this presentation we will examine the lower limb components that are affected by the chronic lateral ankle sprain and how to approach their rehabilitation in a structured treatment plan to offer your patient the best possible outcome of future ankle joint stability, using taping, orthoses, exercise, stretching and measurement of progress.

10.15am – 11.00am Refreshment Break & Trade Exhibition

10.30am – 10.50am BSc (Hons) Podiatry Degree Information Session (Pre-Booked Delegates Only)

11.00am – 12.00pm ~ Professor Steve West BE, DL, FChS, FCPM, FRSM, FRSA, Vice-Chancellor and President, UWE Bristol, Chair of the West of England LEP, Chair of the West of England Academic Health Science Network

AI, Robotics and Digital Technologies in a Covid-19 adapted world

As the world around has changed dramatically we are seeing an acceleration of innovation in our health and social care settings. As we think about the future as we adapt to live with Covid-19 in our communities what does the ‘new normal’ look like? This lecture will explore the potential role of AI, Robotics and Digital Technologies in healthcare of the future. Suspend your belief and come on a journey on the Starship Enterprise.

12.00pm – 1.30pm Hot/Cold Buffet Lunch & Trade Exhibition

12.30pm – 1.15pm Break Out Session (Optional) (£15 per person)

Infection Control Practices: Covid-19 update with Andrew Hill, Belinda Longhurst & Robert Isaacs

This panel will discuss the impacts of Covid-19 on clinical practice and how this will come to shape the way that we safely and effectively carry out our patient treatments. Of particular focus in this conversation will be infection control practices, patient screening and personal protective equipment (PPE).

1.30pm – 2.30pm ~ Robert Isaacs Bsc.pod.M. M.Ch.S, HCPC Registered Podiatrist

Patient centred assessment

Traditional assessment follows a fairly predictable pattern of clinicians finding out what we need to know. However in our enthusiasm to study their neurovascular, medical and musculoskeletal status, its all too easy to lose focus on the important people in the interaction, the patients to whom the feet are attached. This shifting of focus is one reason so many people are growing to mistrust “Western Medicine” (sic) and being drawn to often dubious treatment paradigms which claim to be more “holistic” (and which are often anything but). In this talk we shall examine how to strike the balance between the patients wants and needs and what we often assume those needs to be, and how we can be holistic practitioners without compromising evidence based care.

2.30pm - 2.40pm Ten minute recess

2.40pm - 3.40pm ~ Belinda Longhurst Podiatrist / Lecturer BSc (Hons), HCPC registered podiatrist, MCPod

Treatment & Prevention of Dry Skin & Heel Fissures

This presentation takes a look at the aetiology, treatment and prevention of conditions associated with dry skin of the lower limb.

3.40pm - 3.45pm Closing Talk



Meet The Lecturers

Belinda Longhurst

BSc (Hons) MCPod, HCPC Registered Podiatrist, Member of the British Dermatological Nursing Group

Qualifying as a Chiropodist from the Sheffield Institute of Chiropodists and Podiatrists in 2003, Belinda then studied for a higher degree and graduated from the University of Southampton in 2007, where she was awarded a first-class BSc (Hons) degree in Podiatry, with a distinction in clinical practice.

Belinda worked as a private practitioner and was also employed as an NHS Podiatrist at Andover War Memorial Hospital post-graduation. She acts as peer reviewer for a variety of professional journals and advisor for private medical health insurers patient information pages.

Her area of special interest is podiatric dermatology and has frequently presented her published work at both national and international conferences, in addition to being a trustee for the registered charity Forgotten Feet, which aims to provide free foot-care for the homeless and socially isolated.

Dr J Gordon Burrow

BA, ADvDipEd, MSc, MPhil, FChS, FHEA, FCPM, MCSFS, CMIOSH, AcFP, CSci

Dr Burrow has been an Expert Witness for some 20 years having his name on the National Crime Agency Database of Expert advisors for Police forces throughout the UK as well as being called upon to act in Equality Tribunal, Employment Tribunal, Fitness to Practice Hearings for HCPC and Chartered Institute of Safety and Health Practitioners, and lawyers for civil and criminal cases in various Courts throughout the UK and abroad.

Professor Steve West

CBE, DL, FChS, FCPM, FRSM, FRSA, Vice-Chancellor and President, UWE Bristol, Chair of the West of England LEP, Chair of the West of England Academic Health Science Network

Professor Steve West took up the post of Vice-Chancellor and President of the University of the West of England Bristol in 2008 at the age of 46. Steve is a Fellow of the Royal Society of Medicine and Chiropodists, the College of Podiatric Medicine and the Royal Society of Arts.

Steve trained as a Podiatrist and Podiatric Surgeon in London and developed his research interests in Lower Limb Biomechanics and the Diabetic Foot at King's College London. He worked as a clinician and clinical tutor in the NHS, University Sector and undertook research and consultancy in industry and the retail healthcare sectors. He holds a number of national and international advisory appointments in Higher Education and in his discipline, healthcare policy and practice.

Steve is currently a Non-Executive Director for the Office for Students (OfS) and Chair of the UUK Mental Health in Higher Education Advisory Group. He is also a member of the Education Honours Committee and also serves on the Honours Diversity Committee. He is Chair of the West of England LEP, Chair of the West of England Academic Health Science Network (WEAJSM) and Non-Executive Director for University Hospitals Bristol NHS Foundation Trust. Professor West is a Deputy Lieutenant for the County of Gloucestershire and was made Commander of the Order of the British Empire (CBE) in 2017, for services to Higher Education.

Ian B Griffiths

BSc (Hons) MSc (Sports Injury) FCPM FFPM RCPS (Glasg)

Ian is currently the Director of Sports Podiatry Info Ltd; consulting for Pure Sports Medicine, Bupa UK, PGA European Tour, England Rugby, Surrey County Cricket Club, AFC Bournemouth and Arsenal Womens FC. He maintains an active interest in research, and acts as a peer reviewer for several sports medicine journals. He has spoken on the topic of foot and ankle biomechanics and foot orthoses worldwide and has been awarded Fellowships in Podiatric Medicine by the College of Podiatry and also the Royal College of Physicians and Surgeons of Glasgow.



Andrew Hill

MSc Podiatry, BSc (Hons), PGCert L&T, MSSCh, MBChA, FHEA, HCPC Registered, Clinical Services Manager of The SMAE Institute

Andrew graduated from the University of Brighton in 2006 with a BSc (Hons) in Podiatry. He has worked as a Podiatrist in both the NHS and Private sector – both in the UK and Australia. Since 2008 he has worked at The SMAE Institute as an educator ascending to the role of Clinical Services Manager and Programme lead in 2012. In addition to his post graduate teaching qualification in higher education, Andrew obtained his MSc in Podiatry from QMU in 2015 and is currently undertaking his professional doctorate at the University of Bath looking specifically at the barriers and facilitators to good foot self-care behaviours in people with diabetes. Diabetes is a core area of professional interest for Andrew and he has a publications within peer-reviewed journals on patient education and self-care in diabetes. In 2018 Andrew was made a Fellow of the British Chiropody and Podiatry Association and in 2019 Andrew became a Fellow of the Faculty of Podiatric Medicine within the Royal College of Physicians and Surgeons of Glasgow where he has recently been appointed as a regional advisor for Podiatry within London. Andrew's key professional goal is to help develop and drive high quality of training and education at levels within the foot health & Podiatry sector, which in turn can lead to recognition for all levels of clinician in foot health and ultimately help to best serve the public. Andrew's current roles involve his educational lead on the SMAE's FHP; Diploma in Higher Education (Podiatry Assistant); Local Anaesthesia and Prescription Only Medicines courses. He also maintains private practice work, is a peer-reviewer for Patient Education and Counselling and The Diabetic Foot Journals. Andrew also works as an education visitor for the Health and Care Professions council.

Tracey O'Keeffe

MA, BSc, RN, PGCE, MCFHP MAFHP, Part-time Tutor/Lecturer at The SMAE Institute

Tracey qualified as a nurse in 1992 and her career has taken her through many different specialities including intensive care, neurology and cardiac before working in the community as a Rapid Response Nurse. She has also been a Senior Lecturer teaching nursing in university and currently works as an Education Facilitator for Primary Care. Tracey is Smae trained and has her own private practice. She is a part-time Tutor for the Smae Institute FHP Diploma, Diploma in Higher Education (Podiatry Assistant); Local Anaesthesia and Prescription Only Medicines courses.

Michael Ratcliffe

FFPM RCPS (Glasg), FCPM, D.Pod.M., B.Sc. (Podiatry), M.Sc. (Health Research), Cert. Ed.

Michael qualified as a podiatrist from the University of Brighton in 1989. Michael has clinical experience working in the National Health Service specialising in lower limb gait rehabilitation post trauma. Michael also has commercial and industrial experience, delivering a podiatry offer within a pharmacy setting and working for an orthoses manufacturer, and academic experience, as a Lecturer in Podiatry (Anatomy and Pathomechanics) and as Head of School at the Birmingham School of Podiatry. Michael's academic interests centre on researching the mechanical behaviour of the heel fibro-fatty padding within gait. Currently, Michael has been appointed as Sales Training Manager for Cuxson Gerrard & Co. Ltd and he continues to work, part time in private practise.

Robert Isaacs

Bsc.pod.M. M.Ch.S, HCPC Registered Podiatrist

Robert is a podiatrist in full time clinic practice, both within the NHS and private practice. He has held a specialist post in biomechanics for 15 years and has lectured internationally on biomechanics and MSK podiatry.



THE SMAE INSTITUTE

COVID-19

UPDATE ON GUIDANCE

Across the United Kingdom, for several weeks now COVID restrictions have largely lifted in their entirety and cases appear to be steadily between 25k and 35k per day (as of August 27th 2021), though hospitalisations and deaths appear to be stable at around 10% of what they were at the peak. We continue to move forward cautiously. It is important to note, however, that whilst there is much similarity in aspects of the easing between the nations of the UK, there remain some areas of difference too and so we advise that you take our guidance in combination with your local, national rules and guidelines to help you best plan how the changes to national restrictions reflect in an changes to your practice policy.

For many months now you have been able to tend to all patients in your caseload without having to limit it to emergency care only. Remaining guidance from us involved pre-screening cases and minimising patient contact time. With the easing of the final restrictions in England, we are advising that you will be able to return, largely, to the way your practice operated pre-Coronavirus pandemic, but please note the following advisories:



In relation to PPE and safety precautions – please note the following guidance:

- *If you have a case of confirmed COVID-19, you must isolate and not carry out your appointments until your period of isolation is over*
- *If your patient has a case of confirmed COVID-19, you cannot provide your treatment to this patient until their period of isolation is over*
- *Both of the above apply regardless of whether you and your patient have received both doses of the vaccine*
- *If you are double-vaccinated and a member of your household / close contact tests positive, you do not have to isolate unless you also test positive. In this scenario, whilst you are not legally required to cease your work activities, you are strongly encouraged to inform your patients of this situation and allow them to make an informed decision on whether to keep their appointment. Of course, you may wish to act cautiously and stop practice until your contact is recovered and you have not tested positive / developed symptoms within 7 days.*

- *Mask wearing no longer carries a legal requirement but we advise practitioners to maintain mask-wearing during their patient treatments as they provide a range of benefits in the context of providing foot care services (i.e. reduce likelihood of breathing in nail dust etc) and have formed part of PPE guidance for a long time*
- *Visors are not required to be worn, but may be worn if you wish*
- *Gloves and disposable aprons remain strongly advised throughout treatment*
- *Hand-washing, as always, remains a fundamental element of our infection control advice*
- *Patients should not be required or coerced into wearing masks as a condition of treatment – however, you may politely ask them if they would wear a mask if you wish**
- *Try to work in an environment with good ventilation where possible – this may include working by an open window or having an air filtration system*

*Please check the rules on face coverings of your local, national authority

We will continue to keep a close eye on Government announcements regarding rules and restrictions and will update you accordingly when there is material change. Please do not hesitate to contact us at info@smaeinstitute.co.uk if you have any uncertainty or queries regarding this guidance.

SHUROPODY

UK's Largest Provider of Podiatry Services



Make Shuropody the next step in your footcare career

As the UK's largest provider of private footcare and podiatry, Shuropody know a thing or two about delivering great service and happy customers. Our aim is to deliver the best care and service to our customers and our 44 clinics nationwide see over 300,000 return patients every year - so good foot health and great quality footwear really are key to what we do. What we're also passionate about however is training, developing and supporting the next generation of clinicians with

FHPs and podiatrists working side by side to help grow our business.

Our clinics are a great place to develop your skills, learn new techniques, and work alongside our knowledgeable and supportive salesfloor teams. As part of this commitment to our people we will be launching a fully funded FHP-to-Podiatry program with SMAE's exciting new degree in partnership with Queen Margaret University - this

is an amazing opportunity to learn in a working clinic environment with tons of hands-on experience and expert clinicians at your fingertips to support you every step of the way. We offer full induction and ongoing training and support, plus discounts and great bonus schemes. Coupled with flexible working patterns and competitive salaries, we're confident that Shuropody is the perfect next step in your footcare career.

Join us

- Nationwide Locations
- Flexible working patterns
- Full induction and ongoing training and support
- Excellent clinic experience
- Competitive salary and bonuses

If you'd like to know more or would like a list of current vacancies our recruitment team will be happy to help and answer any questions you may have:

recruitment@shuropody.com





THE SMAE INSTITUTE™

BSc (Hons) **PODIATRY**

About the course

The SMAE Institute, in collaboration with Queen Margaret University (QMU), is proud to introduce this four-year distance based, blended elearning BSc (Hons) Podiatry course. On this course you'll gain the knowledge, practical skills and confidence that you'll need to practise as a registered podiatrist in the private sector or NHS.

This is a four-year, distance learning honours degree, at levels 7-10 on the Scottish Credit Qualification Framework (SCQF), that is designed to enable those who have successfully completed the SMAE Institute Diploma in Foot Health, which is credit rated by QMU, to progress to eligibility to apply for HCPC Registration.

Course Overview

Duration: 4 years
distance learning

Start Date: September 2022

Format: Distance based,
blended elearning

Fees: £3,999 per year
(payment options available)

Awarding Body: QMU



Queen Margaret University
EDINBURGH
Collaborative Partner

This course will not only develop you to the standard required for eligibility to apply for HCPC registration, but will also give you the skills, attributes, clinical experience, plus personal and professional confidence to be at the forefront of the profession and to become the future influencers, managers and leaders of the profession. This course aims to develop a podiatrist who is a patient focused practitioner, reflective in all aspects of practice, and proactively engaged with learning and professional development to enhance and advance both their individual practice and their profession.

Course Structure

This course is delivered via blended e-learning, which means as a student you would be working at a distance via the internet (utilising a Virtual Learning Environment (VLE)) as well as attending lectures, practical and clinical sessions at The SMAE Institute. In addition to this, students will also attend placements in the private and third sector. Whilst most content is delivered online, lecturers will guide you through your learning and provide one-on-one and small group support throughout. Each year students will be required to attend clinical training and/or placements, and schedules.

Teaching, learning and assessment

This is a distance-based, blended e-learning course that requires dedicated hours of study commensurate with full-time learning. Each module has dedicated weekly live tutor chat sessions with the designated module leader (tutor), who is also available via personal email and telephone at scheduled times. There is also administrative support staff available online and via telephone daily. The module forums are accessible for each module to provide a virtual classroom environment and will be accessed and supported by staff and tutors alike. The assessment method varies from module to module and the majority of the course will be distance learning with some compulsory attendance. The dates of attendance required are given to students at the beginning of the course so that they can plan ahead.

Whilst The SMAE Institute is the organisation delivering your study, on this course you will also be a student of Queen Margaret University (QMU). As such you'll be given access to their learning resources and have a QMU VLE (virtual learning environment) username and password.

Course Modules

YEAR ONE

Module Name	Module Description
Manual Handling	This module is designed to provide the student with the knowledge and skills required to develop an analytical, reflective and professional approach to implementing safe manual handling.
Clinical Studies 1	This module is designed to enable the student to acquire the knowledge and skills necessary to investigate, diagnose and manage a range of common lower limb pathologies seen in low risk patients.
Locomotory Science and Anatomy – The Foot and Ankle	This module introduces the student to the mechanical principles that underpin gait analysis and explores in detail the structural anatomy of the lower limb, with particular emphasis on the ankle and foot.
Locomotory Science and Anatomy 2 – Normal Gait	This module explores in detail the structural anatomy of the lower limb, with particular emphasis on the leg, knee and thigh as well as the gait cycle and normal developmental variants.





YEAR ONE

Module Name	Module Description
Cell Biology, Physiology and Microbiology	This module enables students to develop an understanding of the role of Podiatry and other health disciplines in the context of cell biology, physiology and microbiology. There is a focus on the structure, function and neuro-humoral regulation of the endocrine system, and its relationship to other major physiological systems as well as developing knowledge and understanding of microbial growth and survival emphasising features relevant to interactions with humans and human health.

YEAR TWO

Module Name	Module Description
Evidence Based Healthcare - Sourcing and selecting literature to understand and inform research	This module develops student understanding of the use of research in evidence-based health care delivery; through guided exploration of the ways in which research informs development and implementation of guidelines for clinical practice.
Clinical Studies 2a	This module enables a student to develop an understanding of the underlying principles of pharmacological therapy and the rationale for treatment relating to the cardiovascular, autonomic and inflammatory response. It also develops a student's theoretical knowledge and practical skills required to administer digital local analgesia (POM-A as per HCPC annotation).
Clinical Studies 2b	This module enables the student to investigate and diagnose a range of pathologies related to soft tissue and structural anomalies, and consider and demonstrate appropriate therapeutic regimes including the use of functional foot orthoses.
Pathophysiology	This module provides knowledge and understanding of the pathological processes relating to the systems covered in human physiology. It will introduce students to the concept of problem-based medicine and provide deeper understanding of physiological processes and the application to the clinical context. This module will also focus on the role of Podiatry within the broader context of multi-disciplinary care in managing patients with chronic and / or complex pathology.
Disorders and Management – Musculoskeletal conditions	The module provides the student with the necessary skills and knowledge base to diagnose and carry out effective management strategies for musculoskeletal conditions affecting the lower limb.

YEAR THREE

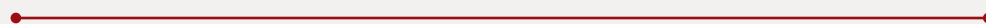
Module Name	Module Description
Professional Issues – Part 1 - Professionalism	This module prepares the student for registered practice as a Podiatrist by enabling them to critically examine and interpret the elements of professionalism within the contexts of delivering healthcare and podiatric practice. This will be considered against the backdrop of Interprofessional working,
Clinical Studies 3	This module develops students skills in examination, evaluation and management of the 'high risk' lower limb by developing high level psychomotor skills and by developing skills to undertake evidence based podiatric practice (in particular developing familiarity with NICE and SIGN guidelines). This module also enables students to gain experience of utilising POM-A in using digital block analgesia, and undertaking nail surgery procedures.
Locomotory Science and Anatomy 3 – The hip, pelvis, nerve supply and pathological gait	This module explores the structural anatomy of the lower limb with particular emphasis on the hip, pelvis and the motor & cutaneous nerve supply to the lower limb and helps students to develop a knowledge base and the skills required to distinguish between normal gait changes across the life cycle and pathological gait.
Disorders and Management 3	This module helps the student to develop a deep knowledge and understanding of the physical and psychosocial manifestation of systemic diseases related to Podiatric practice in association with relevant podiatric, pharmacological and surgical management through a problem based and shared learning approach. It further enables the student to critically analyse their own and other health professionals' roles, expertise and perspectives in healthcare practice in the context of lower limb pathology as well as service users' perspectives on self-care
Disorders and Management 3 – Dermatology of the lower limb	This module provides consideration of the differential diagnosis, potential impact and management of cutaneous and systemic disorders and diseases on the skin of the lower limb. It further enables the student to critically analyse their own and others' roles, expertise and perspectives in healthcare practice in the context of lower limb dermatology
Evidence-based Healthcare – Appraising the Evidence	This module enables students to develop their understanding of the importance of appraising evidence and helps them to develop their ability to constructively appraise evidence and to construct a focussed literature review.





YEAR FOUR

Module Name	Module Description
Clinical Studies 4	This module enables the student to fulfil the requirements for eligibility for HCPC registration by consolidating skills in examination, evaluation and management of the 'high risk' lower limb, to enable evidence-based practice. This module further helps the student to develop experience of new patient triage and referral, utilising POMS-S, psychomotor skills such as needling techniques, and anaesthetic techniques such as tibial block.
Disorders and Management 4 – Tissue Viability	This module enables the students to critically investigate/ study the evidence base for factors contributing to cutaneous ulceration, and the effectiveness of current management practices. It further enables the students to critically analyse their own and other health professionals' roles, expertise and perspectives in healthcare practice in the context of cutaneous ulceration.
Evidence-based healthcare – Clinical Audit	This module engages students in decision-making in the context of quality assurance, user perspectives, priorities of service delivery and practice development.
Developing Electronic Resources for Patient Education	This module enables the students to explore a topic of interest relating to patient education in Podiatry presented through electronic media for public broadcast.
Podiatric Mechanics (Elective)	This module enables the student to evaluate and apply current concepts in podiatric mechanics in the management of foot and lower limb pathology with particular reference to podiatric surgical intervention.
Medicine and Pathology (Elective)	This module enables the student to critically appreciate the clinical principles, philosophy and concepts which underpin critically relevant medical conditions and associated pathological changes in the foot.
Professional Issues – Preparation for Registration and Practice	This module provides an opportunity for students to critically consider the skills and attributes required to become an autonomous, HCPC registered private practitioner in the context of inter-professional collaborative working





Facilities / Placements

You'll consolidate your theoretical learning by working directly with patients during clinical sessions undertaken mainly at the SMAE Institute's purpose built clinic in Maidenhead, Berkshire. Some observational placements will be undertaken within specialist private practices and observational and practical placements will be undertaken in a third sector charity organisation. Academic staff will arrange and co-ordinate your placements, with the aim to be as local to the individual as possible. Where attendance is required, you will be informed of the dates at the beginning of the academic year to enable you to plan ahead.

A summary of clinical/placement attendance is detailed below, however please note that these time-frames are not specifically week blocks of time, but will be spread out across the academic year at a range of placement providers. Full details and dates are given to students at the start of the academic year.

Year One: Two weeks clinical/practical attendance

Year Two: Two weeks clinical/practical attendance

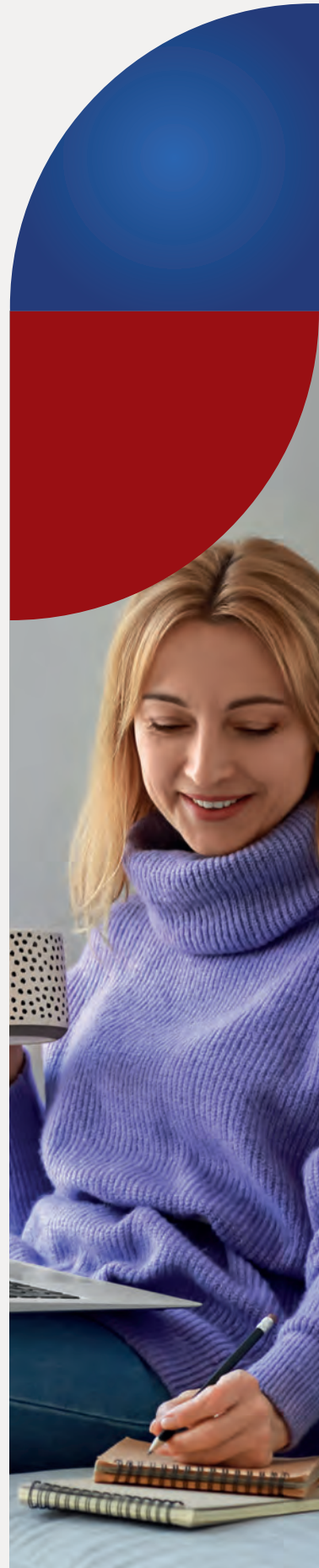
Year Three: Five weeks clinical/practical attendance

Year Four: Six weeks clinical/practical attendance

Qualification / Exit points

Successful completion of all four years will give you the award of BSc (Hons) Podiatry and eligibility to apply for HCPC registration.

In certain circumstances, a student may exit the course after completion of Year One with the award of Certificate in Higher Education (120 credits), Year Two with a Diploma in Higher Education (Assistant Practitioner – Podiatry) (240 credits) or Year Three with the award of BSc Health Studies (480 credits). Please note that by exiting the course in Year One, Two or Three, one is not eligible to register with the HCPC, only upon successful completion of Year Four and award of BSc (Hons) Podiatry entitles one to register.





Entry requirements

- The applicant has normally, within the last 5 years, completed one of the following:
 - successfully completed the SMAE Institute 60 credit diploma in foot health,
 - successfully completed the Diploma in Higher Education (Assistant Practitioner – Podiatry),
 - successfully completed the first year of a BSc (Hons) Podiatry at another University,
 - successfully completed a Foot Health course that can be mapped to the SMAE Institute's Diploma in Foot Health.
- The applicant has a current DBS certificate.
- The applicant has an up to date CPD portfolio (has attended at least one CPD event in the last 12 months and in addition can demonstrate ongoing professional development, for example, reading journal articles and applying them to practice)
- The applicant has up to date vaccination against Hep B, has had a recent eye sight test, and are encouraged to declare any disabilities (physical, mental or learning).
- The applicant has provided a suitable character reference (where the applicant is previously unknown to The SMAE Institute)
- If English is a second language the applicant has achieved an IELTS English equivalency level 6 or above (scoring above 5.5 in each section) (successful completion of the access courses outlined above would satisfy this).

Fees and funding

The course fees for this programme will be £3,999 per academic year.

Payment options (per academic year)

- A deposit of £424.00 followed by 11 monthly payments of £325.00 (0% Interest)
- A deposit of £710.00 followed by 11 monthly payments of £299.00 (0% Interest)
- One off payment (£3,999.00 per academic year)
- Sponsor (details of your sponsor would be requested)

What's included?

You may have to pay additional costs during your studies. A summary of the costs that you may be expected to pay, and what is included in your fees, while studying this course are listed here:

- DBS checks, where required, are included in the course fees.
- Access to learning resources through the virtual learning environment and the QMU library is included.
- Instruments used in clinical placements are provided by the establishment.
- Where your course includes a placement, travel costs are not included in the course fees.
- Insurance for your clinical practical placements is included.
- Clinical clothing, where required, is not included in the course fees. However, any relevant PPE will be provided to the student at placement sites.

Professional registration

This course is approved by the Health and Care Professions Council (HCPC). Successful completion enables application for registration with the Health and Care Professions Council as a Podiatrist.

Awarding body



Queen Margaret University

EDINBURGH

Collaborative Partner

Open day and admissions



If you are interested in studying this course, please contact Janet McKane at The SMAE Institute (degree@smaeinstitute.co.uk) who will initially send you an application form to complete to ensure eligibility. This application form will provide pre-screening questions outlining the admission criteria (set out above). If you meet the entry criteria, The SMAE Institute shall then invite you to an open day followed by an informal interview. The interview panel will consist of one of the programme co-leads, the quality assurance manager and a service user (patient). All members of the interview panel pre-agree the questions that will be asked before the interview takes place. The interview process shall consist of cross-checking the pre-screened applications to see that prospective students do indeed meet the correct entry criteria.

Following the interview the SMAE Institute shall select appropriately qualified students for offer of admission as students of the Institute/University and formally offer them a place. Should you be unable to travel to the SMAE Institute for an interview then you may be offered an online virtual interview via Zoom.

The open day for the 2022 cohort will be held virtually on 21st May 2022.
To register your interest in the 2022 cohort open day please email
Janet McKane at degree@smaeinstitute.co.uk



Understanding medication and pharmacotherapy:

Part IV – Antibiotics, Antifungals and Antivirals



By Andrew Hill
Clinical Service Manager &
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Podiatry), The SMAE Institute

MSc Podiatry; BSc (Hons);
PG Cert L&T; FFPM RCPS(Glasg);
FHEA; FSSCh

Medical pharmacology is the study of chemicals (drugs) that interact with the human body. It is a core aspect of medical interventions and all health professionals should take account of the medications that patients are taking. This can be a daunting and challenging area to understand well but it is crucial to develop a strong working knowledge of pharmacotherapy in the interests of patient safety and well-being. In the previous article in this series, the pharmacological management of neurological conditions was explored. This final article in the series looks at the drugs used to fight infection – antibiotics, antifungals and antivirals.

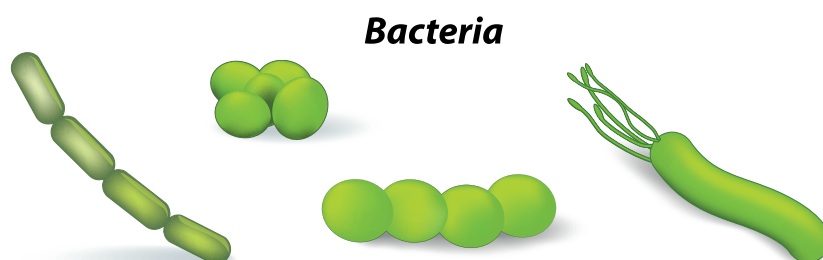
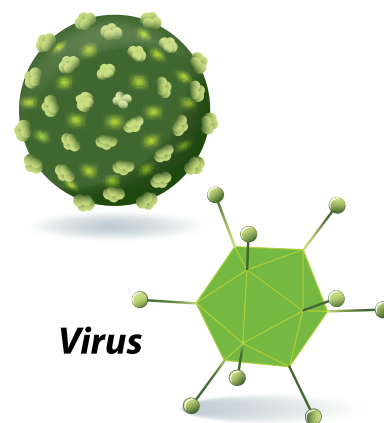
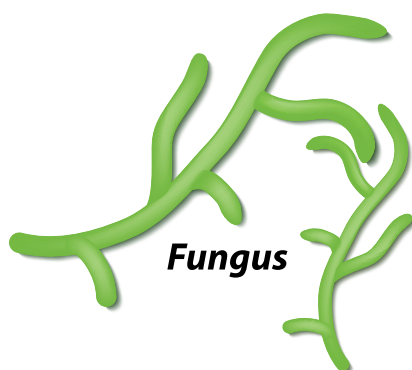
Antimicrobial drugs are natural or synthetic chemical substances that suppress the growth of, or destroy, microorganisms including bacteria, fungi and viruses (Waller and Sampson, 2017). Effective antimicrobial drugs have certain key attributes. They include:

- Acting on processes that are unique to the target pathogen
- Ability to penetrate human tissues to reach the site of infection

Micro-organisms can acquire resistance to various antimicrobial drugs and will then be far less sensitive to the effects of these drugs. This necessitates a need to keep finding and developing new antimicrobial drugs as well as find ways to overcome the resistance mechanisms that these micro-organisms employ to gain resistance.

The microorganisms that will be considered in this article in the context of antimicrobial pharmacology will be bacteria, fungi and viruses.

THIS FINAL ARTICLE
IN THE SERIES LOOKS
AT THE DRUGS USED
TO FIGHT INFECTION
– ANTIBIOTICS,
ANTIFUNGALS AND
ANTIVIRALS.



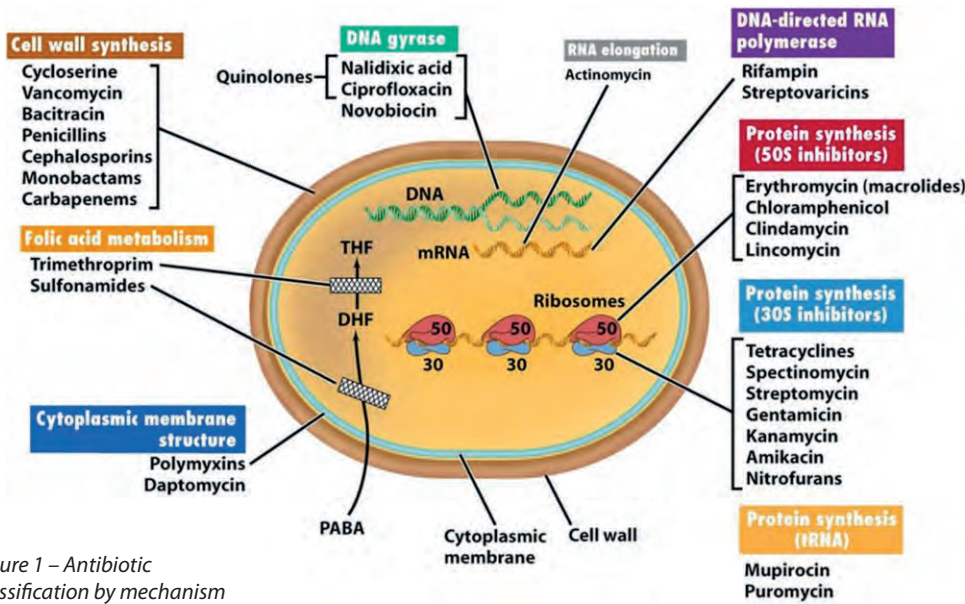


Figure 1 – Antibiotic classification by mechanism of action

Notes:

Antibiotics

These drugs can be classified as bacteriostatic or bactericidal and this categorisation depends largely on the concentration of the drug that can be administered to produce a beneficial effect without causing significant toxicity in the host. Bacteriostatic drugs inhibit bacterial growth but do not directly kill the bacteria allowing the immune system to eradicate the bacteria. Bactericidal drugs, by contrast, directly kill the bacteria though immune mechanisms still play a role in the final elimination of the bacteria (Waller and Sampson, 2017).

Antimicrobials may also be grouped together by their mechanism of action (see figure 1)

The **sulphonamides** (i.e. sulfadiazine) were the first drugs found to be effective in the treatment of systemic infections but are rarely used today following the development of more effective and less toxic alternatives (Neal, 2015). These drugs are classified as bacteriostatic and they work by preventing the production of folate required for synthesis of DNA for bacteria.

The **quinolones** (i.e. ciprofloxacin) inhibit DNA gyrase (an enzyme that compresses bacterial DNA into supercoils) and this makes them bactericidal because they inhibit resealing of the DNA strands that are opened in the supercoiling process (Neal, 2015). These are not toxic to host cells and eukaryotic cells do not contain DNA gyrase. Ciprofloxacin is a broad-spectrum antibacterial agent (meaning it is effective against Gram-positive and Gram-negative bacteria) and they penetrate well into tissues and cells and they are effective when given orally and have low toxicity (Waller and Sampson, 2017).

The **5-nitroimidazoles** (i.e. metronidazole) have a very wide spectrum and are active against anaerobic bacteria and some protozoa (Joint Formulary Committee, 2019). These drugs ultimately inhibit DNA synthesis and/or damage the DNA of bacteria, impairing its function and allowing the immune system to more readily clear it away.

Rifampicin prevents RNA transcription in many bacteria by inhibiting DNA-dependent RNA polymerase. Resistance to this drug develops quickly but can remain effective in combination with other drugs (Waller and Sampson, 2017).

The structures of **penicillins** and **cephalosporins** share the common feature of the β -lactam ring – the integrity of which is essential for their antimicrobial activity (Neal, 2015). These β -lactam antibiotics are bactericidal and work by preventing the cross-linkage between the linear peptidoglycan polymer chains that make up the bacterial cell wall (Waller and Sampson, 2017). Some of the penicillins (e.g. Flucloxacillin) are active against β -lactamase producing staphylococci whilst others are more broad-spectrum (amoxicillin and ampicillin). Penicillins have very low toxicity but in high concentrations it may produce encephalopathy (Joint Formulary Committee, 2019). The most common side-effect is hypersensitivity.

Vancomycin is a bactericidal antibiotic that is not absorbed orally. It works by inhibiting the peptidoglycan formation and is active against Gram-positive organisms. This drug is important for its use in the treatment of septicaemia and endocarditis caused by methicillin-resistant strains of staphylococcus aureus (Neal, 2015).

Understanding medication and pharmacotherapy

Another group of antibiotics are those which inhibit bacterial protein synthesis. These drugs are selectively toxic because bacterial ribosomes consist of a 50S and a 30S subunit whilst mammalian ribosomes have a 60S and 40S subunit (Neal, 2015). **Tetracyclines** and **aminoglycosides** bind to the 30S subunit and inhibit the binding of aminoacyl-tRNA (Waller and Sampson, 2017). **Chloramphenicol** inhibits peptidyl transferase activity of the 50S ribosomal subunit, whilst the macrolides bind to the 50S subunit and inhibit translocation (Waller and Sampson, 2017).

essential fungal cell constituents are lost (Neal, 2015). This drug has a relatively selective action on fungi because in human cells, the major sterol is cholesterol, rather than ergosterol.

Nyastin has a similar structure to amphotericin but it is not absorbed from the mucous membranes and its use is limited to candida albicans infections of the sin and mucous membranes (Waller and Sampson, 2017).

Flucytosine is much less toxic than amphotericin but its use is limited because it is narrow spectrum and resistance has been seen to develop rapidly during treatment (Joint Formulary Committee, 2019). Flucytosine is converted in fungal cells (but not human cells) into flouracil which inhibits fungal DNA synthesis. It can be used with amphotericin to produce a synergistic effect (Neal, 2015).

Antifungal Drugs

Fungal infections (mycoses) result in a wide-range of diseases ranging from the common and superficial (tinea pedis) to the rarer, invasive systemic infections that are most often seen amongst immunocompromised people. These systemic mycoses can often be life-threatening and require intensive therapy (Neal, 2015). For many years, the first-line drug in severe and potentially fatal systemic mycoses has been **amphotericin** which is highly effective but also highly toxic (Joint Formulary Committee, 2019).

The **imidazoles** (i.e. Miconazole, Clotrimazole, Ketoconazole) are broad-spectrum antifungal drugs that are widely used topically. They inhibit cytochrome lanosterol- α -demethylase – an enzyme that converts lanosterol to ergosterol (Waller and Sampson, 2017). This causes lanosterol to accumulate and leads

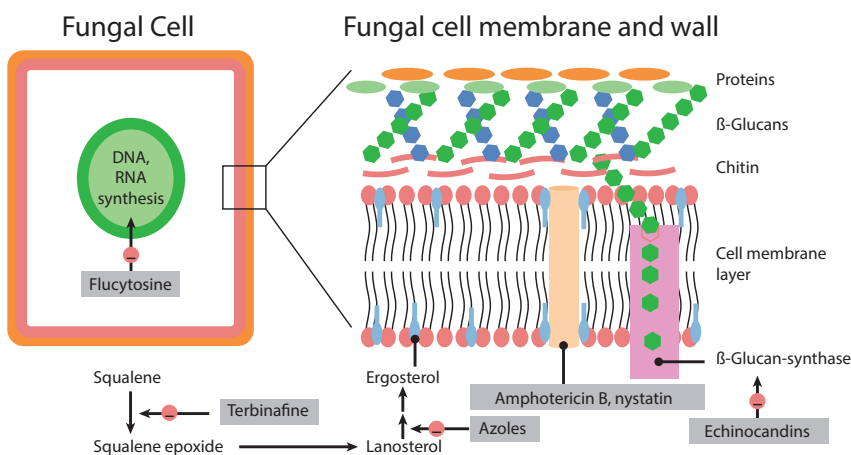
FUNGAL INFECTIONS
(MYCOSES) RESULT
IN A WIDE-RANGE
OF DISEASES

Antifungal Drugs					
Polyenes	Imidiazoles	Triazoles	Allylamines	Echinocandins	Others
Nystatin	Miconazole	Fluconazole	Naftifine	Caspofungin	Griseofulvin
Amphotericin-B	Clotrimazole	Itraconazole	Terbinafine	Micafungin	Fluycytosine
	Ketoconazole	Voriconazole	Butenafine	Anidulafungin	Tolnaftate
		Posaconazole			

Figure 2 – Antifungal Drug Classification

Amphotericin is a polyene antibiotic that binds to ergosterol in the fungal cell membrane (see figure 3) and forms channels through which

to perturbation of the fungal cell membrane and fungistasis. The **triazoles** (i.e. Fluconazole, Itraconazole) are structurally similar to the imidazoles but with an even wider range of antifungal activity. They have a lower incidence of adverse effects because they are much more specific inhibitors of lanosterol- α -demethylase (Joint Formulary Committee, 2019).



Confirmed dermatophyte infections of the nails and/or skin are treated with **terbinafine** – a drug that inhibits squalene epoxide (see figure 3) and leads to toxic levels of squalene accumulating in the fungal cells – making this drug directly fungicidal. **Griseofulvin** has been used for the management of some dermatophyte infections but has been more commonly replaced by many of the drugs already outlined.

Figure 3 - Fungal cell structure and key targets for pharmacotherapy

Antiviral Drugs

Viruses are intracellular parasites that lack independent metabolism and can replicate only within living host cells (Elliott et al, 2011). Because viral replication is so closely connected with the metabolic processes of the host cell, it has been very difficult to find drugs that can affect viral replication without being harmful to the host (Neal, 2015). For this reason, vaccines have been the main method for minimising the risks and harms of viral infections. However, the HIV pandemic has stimulated a search for new and effective antiviral drugs and over the past couple of decades antiviral drugs have transformed the treatment of several diseases, most notably HIV and herpes (Waller and Sampson, 2017).

Viral replication involves several steps and antiviral drugs work by interfering with one or more of these steps (see figure 4). The first stage involves fusion of the virus with the host cell, followed by entry and uncoating of the virus (Neal, 2015). **Enfuvirtide** (used in AIDS) and **immunoglobulins** inhibit penetration of the cell by the virus. **Amantadine** works by inhibiting the uncoating of influenza-A virus once it has entered the cell (Waller and Sampson, 2017). **Neuraminidase inhibitors** (i.e. oseltamivir), meanwhile, prevent the exit of new virions from the host cell.

Many antiviral drugs interfere with viral (and often human) nucleic acid synthesis. **DNA polymerase inhibitors** (i.e. aciclovir) are more selectively antiviral because they are inactive until phosphorylated by enzymes that are preferentially synthesised by the virus. Aciclovir is used in the treatment of herpes virus infection (Joint Formulary Committee, 2019).

Antiretroviral drugs are used to suppress the replication of human immunodeficiency virus (HIV) in patients with AIDS. These antiretroviral drugs do not eliminate HIV infection but has led to a dramatic reduction in AIDS-associated morbidity and mortality and has raised hopes that HIV infection can be evermore transformed into a treatable, chronic disease (Neal, 2015).

The **interferons** are drugs that modulate the host immune system. Recombinant interferon alfa is given by injection in the treatment of chronic persistent hepatitis B and in combination with ribavirin in chronic hepatitis C.

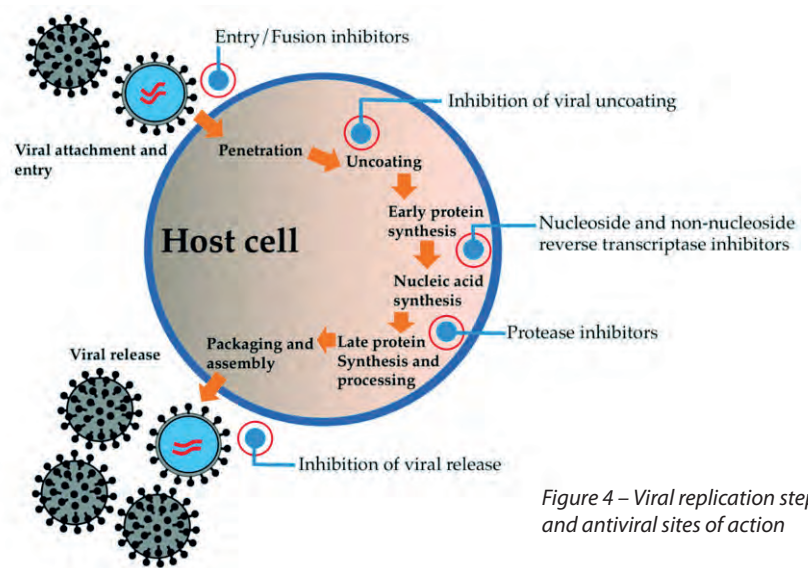


Figure 4 – Viral replication steps and antiviral sites of action

Conclusion

Across this series of articles the subject of pharmacotherapy has been explored from the underpinnings of drug therapy through to common medications used on the cardiovascular and neurological systems, and culminating in this paper looking at antimicrobial therapy. There are, of course, many other classifications of drugs that work on different body systems and/or in the management of many other health conditions. It is recommended that all health professionals continue to read around and learn about drug therapy used in all aspects of human health. Podiatry has a growing professional role in the provision and monitoring of pharmacotherapy in patients but all professionals who provide ongoing care to patients benefit enormously from greater knowledge of drugs and drug therapy. In this continuously evolving area of medicine, CPD in pharmacotherapy is considered to be a lifelong process. It is hoped that these articles have provided a useful introduction into this subject area and that it may prompt further CPD interest for many!

References

1. Elliott, T., Casey, A., Lambert, P. and Sandoe, J. 2011. *Medical Microbiology and Infection*. 5th Edition. Chichester. Wiley-Blackwell.
2. Joint Formulary Committee, 2019. BNF 77 (*British National Formulary*) March 2019. Pharmaceutical Press.
3. Neal, M.J., 2015. *Medical pharmacology at a glance*. John Wiley & Sons.
4. Waller, D.G. and Sampson, T., 2017. *Medical pharmacology and therapeutics E-Book*. Elsevier Health Sciences.

Diploma in Local Anaesthesia



COST
£1,600*

www.smae-la.co.uk

The timetable for the 2021 Diploma is as follows:

Open / Registration Day (Location: The SMAE Institute)
Saturday 27th March 2021
This was a pre-requisite for those who wish to enrol

Introductory Lectures (Location: The SMAE Institute)
Friday 21st May 2021

Module 1 (Location: e-Learning)
Begins: Monday 24th May 2021

Module 1 Assessment Submission
Friday 20th August 2021

Module 2 (Location: e-Learning)
Begins: Monday 27th September 2021

Module 2 Assessment Submission
Friday 10th December 2021

Clinical Practice
Early 2022

The **Open Day for the 2022 Cohort** will be held in March 2022. If you are interested and would like to attend please contact Gill Hawkins at ghawkins@smaeinstitute.co.uk. More information about this Diploma can be found at www.smae-la.co.uk

Please note: Those wishing to enrol onto this course must provide evidence of registration with the HCPC.

* **Installment Option Available**

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£825*

www.smae-poms.co.uk

Our next cohort begins December 2021.
More information about the 2021 cohort can be found at www.smae-poms.co.uk

Open / Registration Day (Location: The SMAE Institute)
Saturday 6th November 2021
This is a pre-requisite for those who wish to enrol

Introductory Lectures (Location: The SMAE Institute)
Friday 26th November 2021

Module 1 (Location: e-Learning)
Begins: Monday 29th November 2021

Module 1 Assessment Submission
Monday 4th April 2022

Examination (Location: The SMAE Institute)
TBC (2022)

If you are interested in the 2021 POMs Cohort, please contact Gill Hawkins at ghawkins@smaeinstitute.co.uk for more information and to book yourself a place on the upcoming Open/Registration Day.

Please note: Those wishing to enrol onto this course must provide evidence of registration with the HCPC and demonstrate annotation in LA on the HCPC Register.

* **Installment Option Available**

Become a HCPC Council member

The HCPC is seeking to appoint three new members of its Council. The roles include two registrant members, who must belong to one of the fifteen professions which HCPC regulates, and one lay member, who must not be or have been a registrant with the HCPC.

The three new members will be joining HCPC at a critical moment for health and care professionals. The roles will provide the successful applicants with an opportunity to play a pivotal role in the current and future regulation of the sector, in the wake of the COVID-19 pandemic.

Christine Elliott, Chair of HCPC, comments:

“Being a Council member is a truly rewarding and fascinating role. The successful applicants will gain a unique opportunity to share their opinions and perspectives on the future of health and care regulation and help to shape our progress on key issues such as equality, diversity and inclusion, and the education of health and care professionals.”

Council members Sonya Lam and Stephen Wordsworth, who are both registrant members, will leave Council in December, having both served the full 8-year maximum appointment term.

Christine Elliott adds:

“Sonya and Stephen have made vital contributions to the running of HCPC over the last eight years, including in the development and delivery of our new Corporate Strategy. We are sad that their time with us has come to an end, and we wish them the very best.”

The roles are now open for application, and you can read the full details of what the roles involves on the HCPC website

HCPC Employer Virtual Events 2021

Do you employ or manage HCPC registered professionals? Register now for employer events taking place virtually in Autumn 2021!

These events are an opportunity to explore the HCPC’s regulatory role and standards. You will also learn more about how you can support HCPC health and care professionals to meet their standards and regulatory requirements, and manage concerns about their conduct, performance, and health.

These events will be of interest to you if you employ or manage our registrants, or if you are a HR professional working with HCPC registrants.

The virtual events will take place on:

About the HCPC Wednesday 15 September 12:30-13:30
Supporting health professionals Tuesday 19 October 16:00-17:00pm
Managing concerns Wednesday 17 November 12:30-13:30

Why should you attend:

As an employer or manager of a HCPC health and care professional, you:

- will want to support them to achieve their standards and meet their regulatory requirements, including registration and continuing professional development. We will explore how you can achieve this.

Connect with us

To keep in touch and up-to-date on our latest developments, follow us on social media. You can:

Tweet us @The_HCPC

Follow us on www.linkedin.com

Find us on www.facebook.com/hcpcuk

Watch us on www.youtube.com/user/HCPCuk

Visit our website on www.hcpc-uk.org

- may need to manage concerns about a HCPC health and care professional's conduct, performance or health. Understanding fitness to practise and knowing what and when to refer a concern to us will help you achieve this.

Register now for these free events

Recognise, reflect, resolve: the benefits of reflecting on your practice

Creating the space to reflect on your practice - by yourself, with a colleague or as part of a group - can help you deal with high levels of pressure and share lessons learned to strengthen the important bonds within and across teams.

As part of the Meeting our standards section of the HCPC website, we focus on reflective practice, outlining the benefits of regular reflection and providing examples of some of the ways you can achieve this. Read the blog on our website and find some key features such as why reflection matters, case study examples, templates to help you, and frequently asked questions such as how to document and record your reflections, how to inform the HCPC and how we might use your notes.

Revised HCPC Registration Fees

The HCPC has provided an update on the revised registration fees for HCPC registrants and which professions will be affected as of 1 July 2021 onwards. Currently this does not impact podiatrists and chiropodists, the change will impact on this profession when they renew their registration during 1 May 2022 - 31 July 2022. The increase, the first since 2015, will affect applicants to the Register and all our registrants. We would encourage professionals to check when to renew.

Read the recent update HCPC fee rise: Fee increase approved for more information.

If you would like to know more about the reasons behind the fee increase, take a look at this blog from Christine Elliott, Chair of the HCPC: <https://www.hcpc-uk.org/news-and-events/blog/2021/fee-change-to-help-hcpc-become-a-more-effective-and-compassionate-regulator/>

Latest updates from HCPC Chair Christine Elliott

Read the latest blogs from our Chair for updates of how HCPC are working to reach the key decisions and initiatives.

Find out about the latest updates about the revised health and character guidance, our fitness to practise improvement programme, regulatory reform, the HCPC professional liaison service and much more on the HCPC website.

An update for UK podiatrists performing toenail surgery on patients who are taking antithrombotic medications: *it's about bleeding time*



Ian N Reilly
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RCPS(Glasg).
Consultant Podiatric Surgeon



Toby Blandford
BSc(Hons). Private Practitioner

Abstract

Nail surgery for the permanent removal of all or part of the nail unit can be performed via incisional or physically ablative techniques for conditions such as ingrown, mycotic, or dystrophic toenails. In the United Kingdom podiatric community, where phenol techniques are the standard of care for ablation of the nail matrix, there is confusion about the management of patients undergoing nail surgery who are concurrently taking antithrombotic medication(s). The aim of this paper is to review the literature describing treatment strategies for antithromboted patients undergoing nail surgery. However, having found limited evidence, the authors considered relevant and associated literature in the field of cutaneous/dermatological surgery and extrapolated those findings to patients undergoing nail avulsion surgery. A case-by-case risk assessment is warranted in all patients but as a general rule, podiatrists can perform nail surgery without the patient ceasing their antithrombotic medication.

Introduction

Nail pathology

There are many disorders of the nail unit that may benefit from a surgical solution, most notably the ingrown toenail (IGTN), one of the most commonly seen and disabling foot problems encountered in the general population¹. The condition occurs when the nail plate punctures the sulcus, giving rise to pain and inflammation². The presentation of an IGTN was divided into three stages by Heifetz in 1937³ and can be summarised as:

- stage one: some inflammation, swelling, and pain,
- stage two: more inflammation, pain and granulation tissue,
- stage three: abscess formation and chronic induration of the nail fold.

Stage two and three presentations typically require a surgery. Eekhof et al² state that surgical interventions are more effective than non-surgical interventions in preventing the recurrence of an ingrowing toenail if conservative care fails or is not appropriate. Mycotic, involuted

and dystrophic toenails may also benefit from permanent ablation^{4,5}.

Laco⁶ classifies nail surgery techniques into two divisions:

- Excision of the pathological nail and/or soft tissue using sharp instrumentation, e.g., the Fowler procedure⁷,
- Destruction of the pathological tissue by physical means such as topical chemotherapy, e.g., use of phenol.

Nail surgery procedures are carried out by podiatrists, podiatric surgeons, general practitioners (GPs), extended scope nurse practitioners, dermatologists, general surgeons, and orthopaedic surgeons, though techniques and outcomes may vary^{8,9}. The most regularly performed technique is the phenol-alcohol procedure^{2,10,11} (see Fig. 1). There are numerous incisional surgical techniques for ablation of the peri-ungual tissue and nail plate (partial or total resection). The index procedures are the (modified) Winograd procedure¹² and the Zadik procedure¹³ for partial and total avulsion techniques respectively. In skilled hands these may be the best option for a small cohort of patients (see Fig. 2).

In the United Kingdom (UK) podiatric community there is confusion concerning the management of patients undergoing nail surgery who are concurrently taking antithrombotic medication, evidenced by those at the forefront of teaching nail surgery to under- and post-graduate podiatrists¹⁴. Considering that a cohort of the profession believes that podiatry is a branch of 'medicine' rather than 'healthcare', and that podiatrists should be the go-to profession for most foot pathology, any hesitancy in taking full responsibility for the management of this subset of patients seems contrary to that ambition. The paucity of available published literature in this field often lacks an evidenced-based argument. For example, the (generally excellent) Northern Care Alliance NHS Group nail surgery guidance document considers that nail surgery patients taking anticoagulants are at 'increased risk' and, following communication with the appropriate consultant/anticoagulation nurse, should come under the care of Band 6/7 (rather than Band 5) clinician¹⁵. The aim of this article is therefore to review the available evidence for patients

*This article appeared on
Preprints.org on 21st May 2021*



Figure 1: phenolic partial nail avulsion

Figure 2: incisional total nail avulsion

undergoing nail surgery that are on concurrent antithrombotic therapy, and to suggest treatment strategies for podiatrists in the UK to best manage their patients.

Antithrombotics

Disruption of atherosclerotic plaques in arteries triggers platelet aggregation and activation of coagulation pathways, which culminates in the formation of platelet-rich atherothrombosis. This process is the underlying cause of myocardial infarction (MI), ischaemic stroke, and acute limb ischaemia. The blood flow in veins is slower than that in arteries and therefore venous

thrombi contain fewer platelets (and more fibrin) than arterial thrombi. Thrombosis in veins leads to deep vein thrombosis and pulmonary embolism (DVT/PE), collectively known as venous thromboembolism (VTE). With the preponderance of platelets in arterial thrombi, antiplatelet therapy is the cornerstone for prevention and treatment of atherothrombosis; anticoagulant therapy is the mainstay for the prevention and treatment of VTE¹⁶. The main antithrombotics (with a brief drug overview) are listed at table 1. It is assumed that the reader is familiar with coagulation physiology and therefore a precis of the pathways is outside the scope of this document.

Drug	Indication	Mode of action	Monitoring
Antiplatelet			
Aspirin	Secondary prevention after ACS/CVA. Pain relief.	Irreversible COX-1 inhibitor	Platelet function assay; serum drug levels
Clopidogrel	ACS (reduce risk of death); secondary prevention of CVA, MI, and vascular death in patients with recent MI, CVA or PAD.	P2Y12 ADP receptor antagonist	Platelet function assay
Ticagrelor	Reduce thrombotic cardiovascular events in patients with ACS, including stent thrombosis.	P2Y12 receptor inhibitor	Platelet function assay
Prasugrel	Reduce thrombotic cardiovascular events in patients with ACS including stent thrombosis.	P2Y12 ADP receptor inhibitor	Platelet function assay
Dipyridamole	Reduce risk of stroke in patients with TIA/CVA.	PDE 3/5 inhibitor	None
Anticoagulant			
Warfarin	Prophylaxis and treatment of DVT and PE, and of VTE complications with AF and cardiac valve replacement; risk reduction for embolic events after MI.	Vitamin K epoxide reductase inhibitor. May induce hypercoagulable state.	INR
Heparin (Unfractionated)	Prophylaxis and treatment of DVT and PE, and of VTE complications with AF	Antithrombin III	activated partial thromboplastin time
Heparin (fractionated)	Prophylaxis and treatment of DVT and PE	Antithrombin III	Anti-factor Xa
Dabigatran	Reduce the risk of CVA and VTE in patients with nonvalvular AF.	Direct thrombin inhibitor	Thrombin or ecarin clotting time.
Apixaban	Reduce the risk of CVA and VTE in patients with nonvalvular AF.	Factor Xa inhibitor	Prothrombin time
Edoxorban	Reduce the risk of CVA and VTE in patients with nonvalvular AF.	Factor Xa inhibitor	Prothrombin time
Rivaroxaban	Reduce the risk of CVA and VTE in patients with nonvalvular AF; treatment of DVT/PE; prophylaxis of DVT after hip or knee replacement.	Factor Xa inhibitor	Prothrombin time

Table 1: main antithrombotic drugs, adapted from Brown et al¹⁷

(abbr: ACS - acute coronary syndrome; ADP - adenosine diphosphate; AF - atrial fibrillation; COX - cyclo-oxygenase; CVA - cerebrovascular accident; INR - international normalized ratio; PAD - peripheral arterial disease; PDE - phosphodiesterase)

Risk versus benefit

For the patient on antithrombotic medication requiring nail surgery, the risk comes down to the following dichotomy: cease the medication and risk the formation of a thrombosis; or continue the medication and run the risk of a complication from bleeding^{18,19}. Should continuation of pharmacotherapy be the strategy, the practitioner must minimise and manage the haemorrhagic risk²⁰ (see Fig. 3, modest post-procedure bleed through in an uncomplicated procedure on a patient with no medical co-morbidities). Fig 4 shows the bleeding seen seven days post a left 1st medial phenolic partial nail avulsion for a patient on direct oral anticoagulant (DOAC) monotherapy for atrial fibrillation. Once healed, that patient suffered no sequelae. Use of a thicker, more absorbent, alginate-based, or compressive dressing may help with excessive bleeding^{21,22}, always being aware of the dangers of compression in a digit (see Fig. 5). Fig. 6 demonstrates a haematoma that developed in the apex of the hallux after an incisional nail technique performed by the senior author (with no long term sequelae seen).

Figure 3: minor post-procedure bleed

Figure 4: bleeding seven days post surgery

Figure 5: thick(er) dressing

Figure 6: Zadic haematoma



Figure 3



Figure 4



Figure 5



Figure 6

Method

An initial Google Scholar literature search suggested that little had been written regarding nail surgery on the antithrombosed patient. Nonetheless, the authors performed a literature search that involved identifying research evidence from the following sources:

- Electronic databases
- Reference lists

Search strategy

- Step 1: The following databases were searched via the NHS Healthcare Advanced Database Search (HDAS) search engines AMED, CINAHL, EMBASE, and Medline,
- Step 2: examining the reference lists of all identified sources.

The following Boolean and free text keywords were used:

"((nail).ti,ab OR (onychocryptosis).ti,ab) AND ((anticoag*).ti,ab OR (antithrombo*).ti,ab OR (antiplatelet).ti,ab)".

Evidence was sought on cutaneous/ dermatological surgery for the antithrombosed patient: this was searched using Google Scholar free text keywords and via reference lists.

Results

0, 11, 12 and 20 papers were found from the four database searches respectively, as per the search strategy, none of which were relevant to the aim of this paper. Two specifically relevant papers were found via the initial Google Scholar search on nail surgery (see summary at table 2). One of these²³ is 12 years old and primarily concerns the use of warfarin and can therefore be considered at least partially out of date as warfarin has largely been replaced by newer drugs. It is, however, the most useful document in this field the authors could find. The second is from the (now Royal) College of Podiatry Nail Surgery guideline²⁴.

Table 2: summaries UK podiatric references^{23,24}

<p>Highland Podiatry Dept., 2009</p>	<p>These recommendations are not applicable to those patients on anti-platelet medication as there is no lab testing involved, (most commonly, low-dose aspirin (75mg-300mg daily), clopidogrel (Plavix®, dipyridamole (Persantin®, Persantin Retard®), aspirin plus dipyridamole (Asasantin Retard®). The use of anti-platelet agents can be safely ignored unless in combination with oral anticoagulants when the bleeding level will increase a little further.</p> <p>There are other oral anticoagulants (rivaroxaban or dabigatran) in use that are not monitored by INR testing as they are not vitamin K antagonists. Podiatrists will increasingly need to ask about such medicines – especially if a patient has had recent orthopaedic surgery.</p> <p>Summary:</p> <ul style="list-style-type: none"> • Bleeding complications, while inconvenient, do not carry the same risks as thromboembolic complications. • Patients whose INR results are within the acceptable therapeutic range are more at risk of permanent disability or death if they have their warfarin stopped prior to a surgical procedure than if they continue it. • Published reviews of the available literature advise that oral anticoagulants should not be stopped prior to minor surgical procedures.
<p>Gohil, 2019</p>	<p>The use of anticoagulants should not prevent nail surgery, assuming the patient is suitable in all other respects, although the patient should be alerted that post-operative bleeding may be prolonged and their advised aftercare regime modified to reflect this. Recorded INR (International Normalised Ratio - a measure of the clotting time) values vary in accordance with the patient's individual condition and the higher the INR value, the longer the blood will take to form a clot; in many anti-coagulated cases the INR is maintained by warfarin therapy between 2-3, meaning that the clotting process will take approximately 2-3 times as long as normal (i.e., approximately 10-15mins, rather than the normal 5 minutes). Stopping the use of anticoagulant medication or avoiding surgery is not usually justified in these patients.</p> <p>It is advisable to review manufacturers' recommendations prior to undertaking any procedure with the new range of new anticoagulants (NOACs). Patients taking these medications are not monitored by INR recording so clinicians should consider seeking the opinion of their anticoagulant team prior to undertaking a nail surgical procedure. Whereas the effects of warfarin can be reversed quickly with vitamin K injection, reversal of the anticoagulant effects of NOACs is likely to require specialist advice.</p>

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Many papers in the field of cutaneous/dermatological surgery were identified (e.g., see table 3) with further papers from the dental profession considered where relevant.

Table 3: adapted from Isted et al, 2017²⁵: summary of recommendations for minor cutaneous surgery

Agent	Guideline management
Aspirin monotherapy	No increased incidence of bleeding complications. Safe to continue.
Clopidogrel monotherapy	Conflicting evidence. Probable small increase in bleeding complications. Benefits of continuation likely outweigh risks.
Warfarin monotherapy	Conflicting evidence. Probable small increase in bleeding complications. Benefits of continuation likely outweigh risks provided INR is in range (conservative INR cut off <3 suggested, unless higher therapeutic range indicated – e.g., recurrent venous thromboembolism on anticoagulation).
Direct oral anticoagulant (DOAC) monotherapy	Insufficient evidence for recommendation. Further research needed.
Multiple agent regimens	Probable increase in bleeding complications. AC/AP monotherapy preferable, but seek specialist advice before adjusting regimens due to high-risk cohorts

AS NAIL SURGERY IS
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COMPRESSIVE
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LIMB ELEVATED WILL
SUFFICE IN MOST
INSTANCES.

Discussion

Intra-operative bleeding is not a concern (save for effective use of a digital tourniquet as a prerequisite to allow phenol the time to destroy the matrix); author experience and the literature suggest that post-operative bleeding is highly unlikely to cause any long term sequelae in a nail surgery patient.

Richert²² posits: "As nail surgery is mainly performed with a tourniquet, the risk of perioperative bleeding is minimal. Bleeding may occur postoperatively when the tourniquet is removed. Compressive dressing for half an hour with the limb elevated will suffice in most instances. The dressing should be changed afterward and the wound checked. If bleeding persists, it may be dramatically lessened by the injection of a load of fluid (i.e., 0.5 mL of bupivacaine) on the lateral aspect of the digit/toe that will press onto the digital proper artery". Other authors concur with thicker bandaging^{23,26}.

The use of adrenaline-containing local anaesthetic for digital anaesthesia has long been verboten in UK podiatry and always taught as such. Its use for this group of patients is worthy of a separate paper but the complication of digital necrosis has long been refuted as a real concern^{27,28}. While the authors of this paper do not advocate the routine use of adrenaline-containing local anaesthetic for every digital anaesthetic, its use in antithrombosed patients could be considered, if only for the management prolonged of post-procedure bleeding.

Beyond the limited nail-specific literature, the field of cutaneous/dermatological surgery was replete with evidence. Various authors have concluded that the evidence increasingly favours continuation of antithrombotic medications during such surgery because the risks associated with stopping these medications exceeds the benefits^{21,25,29-33}, and that the surgical results of antithrombosed patients compared to control groups are identical^{25,29}.

Blasdale and Lawrence³⁴ performed a prospective controlled observational study of 65 warfarinised patients undergoing excision of cutaneous tumours (mean peri-operative INR: 2.1, range 1.0 – 4.2) compared to 92 non-warfarinised in a control group. They found no increase in intra-operative bleeding tendency in the warfarinised patients but five of those patients (8%) reported moderate or severe post-operative bleeding, compared to no significant post-operative bleeding reported in the control group. The authors concluded that even when INR is in the therapeutic range, the risk of post-operative bleeding is increased for warfarinised patients: a reminder for all not to put our entire faith in the result of a single laboratory test.

Bordeaux et al²⁹ considered the rates of bleeding, infection, flap/graft necrosis and dehiscence in dermatological surgery, and examined this data in relationship to the type/anatomical location of the repair, antibiotic use, antiplatelet or anticoagulant use. They found that patients on both clopidogrel and warfarin were 40 times more likely to have bleeding complications. A range of complications was demonstrated in their study, but all resolved without sequelae, suggesting that the incidence of complications in dermatological surgery is low, even when multiple oral anticoagulant and antiplatelet medications are continued. The authors concluded that anticoagulant and antiplatelet medications should be continued to avoid adverse thrombotic events.

Callahan et al³² reviewed the literature on antithrombotic medications commercially available in the United States in dermatological surgery. The authors found concerns regarding bleeding, but no reports of life-threatening haemorrhage from continued antithrombotic therapy. They note that potentially fatal cardiovascular events after cessation of antithrombotic medications are increasingly recognised, leading to the growing acceptance in dermatology that the risk of stopping most antithrombotics may outweigh the risks of bleeding incurred by continuing antithrombotic therapy.

The British Society for Dermatological Surgery (BSDS) issued guidance on antithrombotics and skin surgery in 2016³⁰ to complement generic local hospital protocols that mainly relate to more major surgery, noting that those protocols typically address procedures with a much larger risk of bleeding than skin surgery. They also state that what constitutes as 'minor' skin surgery is often not clearly defined, and suggest a stratification of bleeding risk by procedure type (from highest to lowest):

- Secondary intention wounds following excision,
- Local flaps,
- Grafts,
- Direct closure,
- Curettage and electrocautery.

The BSDS document algorithm suggests that one can proceed with surgery for all minor to moderate procedures for those patients with an INR of less than 3.5. This can be usefully extrapolated to conclude that nail surgery – even for incisional techniques – should also be regarded as low risk, based on how the BSDS guideline stratify skin surgery. Readers of this paper are referred to the BSDS document for further suggestions over the management of the antithrombosed patient, for example the need to weigh up the risk factors and obtain informed consent for a plan agreed with the patient, relevant physicians and surgeons, and the patient's family or advocate.

Isted et al²⁵ conducted a systematic literature review to determine the risks of haemorrhagic and thromboembolic complications associated with the continuation or cessation of anticoagulant/antiplatelet (AC/AP) therapy in minor cutaneous surgery. They identified 30 studies with data from over 14,000 patients, of which more than 5000 took regular antithrombotic therapy. There was no increase in haemorrhagic complications in patients taking aspirin monotherapy, but conflicting evidence regarding warfarin and clopidogrel monotherapy, which showed a small increase in the rate of bleeding complications. However, no increase in wound dehiscence, graft failure, wound infection or cosmetic outcome was seen. Data was sparse in comparing multiple versus single AC/AP regimens and the use of DOACs. Thromboembolic events were rare but carried high morbidity when they did occur in the two papers they reviewed. Isted et al concluded that a case-by-case risk assessment is warranted in all patients but where possible, clinicians should prioritise meticulous haemostasis over cessation of agents. The extrapolation of this review to nail surgery further suggests that continuation of antithrombotic medication should be the norm.

The situation is mirrored in dental surgery where Wahl^{25,35} states: "Although there is now virtually universal consensus among national medical and dental groups and other experts that anticoagulation therapy should not be interrupted for most dental surgery, there are still some arguments made supporting anti-coagulation therapy interruption. An analysis of these arguments shows them to be based on a collection of myths and half-truths rather than on logical scientific conclusions. The time has come to stop anticoagulation therapy interruption for dental procedures".

It seems, therefore, that the fields of dermatology and dental surgery have done the heavy lifting for podiatry to draw upon. As the authors planned this article it was envisaged that an algorithm might be required to guide practice, but having reviewed the associated literature, the situation is somewhat clearer cut for nail surgery. An update for the profession is put forward, and it's about bleeding time. However, in podiatry's defence, the continued heterogeneity of patient management strategies by medics has been highlighted in the literature³⁶, exacerbated by the expansion in the range of available antithrombotic drugs²⁵.

Conclusion

Little podiatry-specific evidence was available to guide management of the antithromboted patient requiring nail surgery. The two papers highlighted in table 2 give appropriate advice and the conclusion of these authors coincides with those put forward. It is hoped that this paper provides greater clarity drawing on work from the associated dermatological literature, where more extensive and aggressive surgical techniques are applied.

Consider each patient on a case-by case basis; take clinical responsibility for decision making but enlist specialist advice where and when necessary. It almost goes without saying – but not quite – evaluate, communicate, and document all aspects of the process let there be a later challenge to your clinical judgement. In general – even for the patient on combination therapy – nail surgery can proceed without cessation of antithrombotic medication. This holds true even where resection of hypergranulation tissue is required³⁷. Should the clinician have confidence over the patient's INR – for example through access to shared computer records – the authors see no absolute requirement to require an opinion from the attending consultant or GP if the patient is on a standard monotherapy (see table 3). That said, patients can be poor historians and courtesy communication to appropriate physicians prior to nail surgery seems prudent. More research in this specific area would be beneficial.

The focus of this article has been one aspect of medical management: patients taking antithrombotics, written for the benefit of UK podiatrists. There is a need for similar research and enquiry to be undertaken for nail surgery on patients who are pregnant/breastfeeding, those with vascular disease, diabetes mellitus, rheumatoid arthritis, or acute infection, and we challenge others to pick up this mantle. Perhaps with time, UK podiatrists will mirror the medical management demonstrated by our American cousins, for example being the clinician that requests an up-to-date INR reading prior to nail surgery. Whilst UK podiatrists are skilled in the phenol-alcohol technique, a look at the wider dermatology literature by authors such as Haneke and Richert will highlight a range of other techniques not performed by UK colleagues. We highly recommend their work.

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Aging – Theories and Fall-Out

Part I – A Review of Aging and Associated Theories



By Tracey O'Keeffe
MA (Education), BSc (Critical Care),
RN, MAFHP, MCFHP
Programme Lead
(Diploma in Foot Health)

Introduction

This is the first paper in a short series looking at the concept of aging and the impact growing older has on the individual, their health and their feet. Consideration will be given to the role the foot health clinician plays in maintaining function and enablement to live the life of choice.

Why talk about aging?

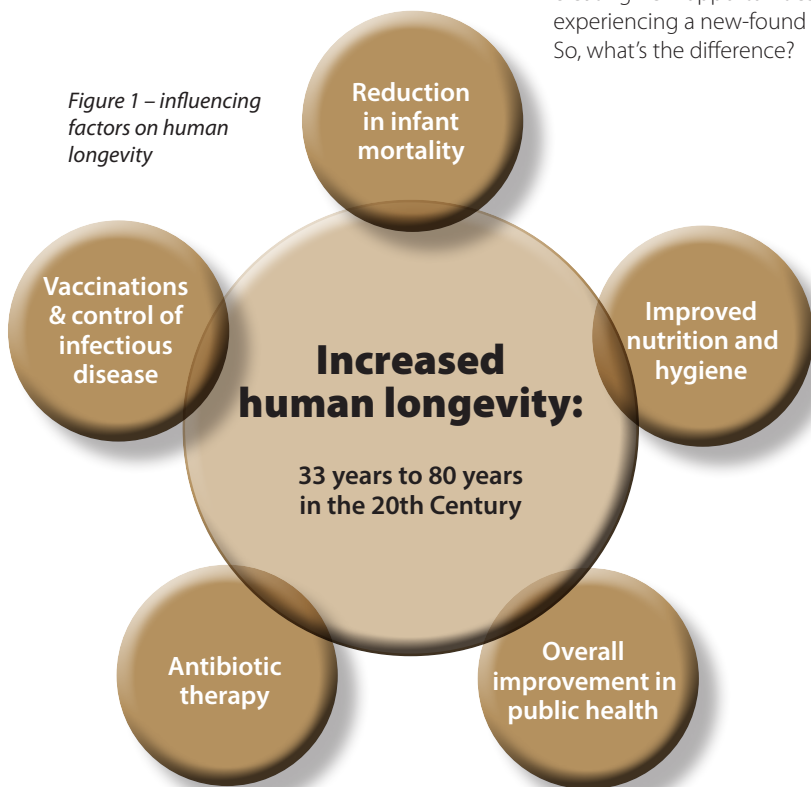
In a world of current uncertainty, one thing we are fairly sure of is that we will not grow younger! Although certainty can give a sense of security, for some aging is a scary journey ahead with unknown experiences looming and a potential risk of losing the real "self" that has become comfortable and familiar. The journey length is unpredictable and the wish for it to be long may also be variable for each individual. The manifestation of this can be seen in various ways from Botox and fillers to withdrawal from society. However, others embrace old age with vigour, creating new opportunities and experiencing a new-found freedom. So, what's the difference?

This first paper will look at some of the theories of aging in an attempt to understand the process better. Medvedev (1990) suggests that there are over 300 different theories of aging. Clearly a foot health clinician cannot be expected to understand them all (and some arguably lack scientific evidence), but it may help promote a quality service for the older person if some level of awareness is reached of the key ideas. Furthermore, Jin (2010; 72) states "by understanding and testing the existing and new aging theories, it may be possible to promote successful aging" and it seems obvious that this is something that any healthcare professional should aspire to be instrumental in as part of their practice.

As foot health clinicians we have this opportunity. As the population demographic becomes older, the number of people presenting for foot care in the later years of life increases. Foot problems become more common, more debilitating and more challenging to the individual as age increases (Rodriguez-Sanz 2018; Matricciani and Jones 2015, Stolt et al 2012) and therefore the role played to support those in need becomes more vital requiring thought and evidence-based practice.

What is aging?

Strehler (1977) suggested that four criteria help to define aging. Aging is universal (occurs throughout the species), aging is intrinsic (causes are endogenous), aging is progressive (through the lifespan) and aging is deleterious (causes damage or harm). Although the broad concepts here seem true and valid today, it is clear that individuals age differently, at a perceivable different pace, and with variable impact on physical and mental function and resultant changes to everyday capability. Indeed, aging cannot really be separated from the concept of longevity. Vina et al (2007) suggest that mean longevity (life expectancy at birth) is increasing in humans and this is related to a number of influencing factors (see Figure 1).



Rogers and Guarente (2020) suggest that aging entails sequential progression which results in more risk of debility, disease and death. Vina et al (2007) reiterate this highlighting how aging affects the efficiency of the system overall, with reduced ability to maintain homeostasis and immune defences. Associated to this is escalated risk of trauma, stress and infections as well as a rising incidence of degenerative diseases and cancer.

Aging theories aim to explain the process of what happens within the body and to the body. Some focus heavily on the physical changes, whilst others consider the more holistic viewpoint to include perspectives on psychosocial understanding of growing old and the adaptation to that change. These latter theories consider the way that older person sees themselves including their behaviours and attitudes to aging, rather than just the biological and physical processes occurring in the body as years pass.

Exploring the aging theories

Physiochemical and biological theories of aging

Rogers and Guarente (2020) stress the importance of exploring the way disease or damage may interfere with the “normal” physiological aging process, and indeed, Jin (2010) divides biological theories into two main categories: “programmed” or “damage/error”. Lange and Grossman (2021) highlight how this differentiation can also be labelled stochastic or nonstochastic. The stochastic stance considers events throughout life which may impact the body resulting in harm to cells, in other words damage or error theories. Conversely, the nonstochastic perspectives consider the programmed concept where events and aging are predetermined and sit within a time framework related to the organism, like a body clock (see Figure 2).

Programmed or Nonstochastic Theories		Error of Stochastic Theories	
Theory	Summary	Theory	Summary
Programmed Longevity/ Cellular Senescence	Cell death, or apoptosis, occurs when they can no longer divide	Free Radical or Oxidative Stress (Mitochondrial Theory)	Damage occurs to the cells due to unstable oxygen molecules (free radicals) over time
Neuroendocrine Theory	Changes to hormone levels, transmitters and feedback systems results in disease	Cross-linking Theory (and Glycation) or Connective Tissue Theory	Protein molecules stick together, enzyme structures alter and collagen changes
Immunological Theory	Aging causes cells to change and the body loses ability to recognise them, seeing them as foreign bodies	Wear and Tear Theory	The physiological work of cells causes aging and an gradual inability to repair

Figure 2 – physiochemical and biological theories of aging

Programmed or Nonstochastic Perspectives

There are a number of nonstochastic theories and this next section will consider three of the main ones: programmed longevity related to cellular senescence, neuroendocrine and immunological.

Programmed Longevity/Cellular Senescence

Rogers and Guarente (2020) suggest that aging seen in terms of physiological change results in reduced biological function and an inability to adapt to metabolic stress. This essentially comes from senescence. Although there is evidence around aging being related to genetic involvement (Lagaay et al. 1991), there are also questions about whether this is the whole story. Senescence, as a pre-programmed genetic journey, refers to changes in the telomeres (repeated segments of DNA occurring at the end of the chromosomes), resulting in either an “activation or suppression of specific ‘aging’ genes” (Cefalu 2011; 495).

Gonidakis and Longo (2009) suggest that cells will continue to divide until that ability ceases. As the body recognises this inability, apoptosis occurs, which is cell death (Thompson 1995). The apoptosis results in organism dysfunction (Cefalu 2011). The aging of the cells is triggered by the shortening of the telomere and when this becomes critical, the associated senescence manifests as age-related deficits (Jin 2010, Artandi 2006).

Neuroendocrine Theory

This theory relates to the concept that hormones have a role in driving and regulating the biological clock (Jin 2010). Lange and Grossman (2021) suggest that hormones levels change as humans age, and these in particular include oestrogen, growth hormone and melatonin. The reduction in them affects the way the body functions as well impacting protective

THE FREE RADICAL THEORY IS ARGUABLY ONE OF THE MOST SIGNIFICANT OF THE PHYSIOLOGICAL AGING THEORIES.

EXAMPLES OF EXOGENOUS FREE RADICALS INCLUDE TOBACCO SMOKE, RADIATION AND PESTICIDES, AND THE THEORY RELATES TO THE ACCUMULATIVE CONTACT WITH THESE THROUGHOUT LIFE.

mechanisms. Indeed, Zuevo (2015) indicates that the “normal” feedback systems which regulate the body are changed and this can result in problems with heart rate variability as well as alterations to other physiological processes. There also seems to be evidence linking raised cortisol levels (from stress over the years) to aging and the prevalence of many diseases (Cefalu 2011, Rodenback and Hajak 2001).

Rogers and Guarente (2020) discuss how there is an overall aging of neural and endocrine systems. As well as the above, they suggest that there is both atrophy and death of neurons aligned with a resultant decrease in blood flow to the brain. Alongside this, it is thought that cells that had previously been responsive to hormones become less sensitive and active, thereby creating an inefficiency in metabolic processes notably the reduction in ability to maintain glycaemia when the system is assaulted by large doses of oral glucose (Vina et al 2007).

Immunological Theory

This theory suggests that aging is related to immunological function (Effros 2004). As the function decreases with age, individuals become more at risk of infection, cancer and autoimmune disorders. Jin (2010) suggests that this vulnerability increases as would be expected and those changes can be indirectly implicated for conditions such as Alzheimer’s and cardiovascular disease. Kent (1977) highlights the links between increasing deficit in T-cell function and autoimmune conditions such as Rheumatoid Arthritis. Indeed, Rogers and Guarente (2020) the likelihood of autoimmune disorders increase with age as the body mistakes irregular, old cells as foreign bodies.

Error or Stochastic Theories

Again, there are many different thoughts around theories which proposit that aging is not a pre-determined timeline but instead is related to damage and events that may occur as the person moves through life. As with programmed theories, three main examples of these will be discussed: free radical theory (oxidative stress), cross-linking or connective tissue theory and the wear and tear theory.

Free Radical Theory or Oxidative Stress

The Free Radical Theory is arguably one of the most significant of the physiological aging theories (Grune and Davies 2001). It came about in the fifties (Harman 1956) and it suggests that damage from free radicals (superoxides) occurs to cells, affecting the DNA and causing protein and lipid inflation. This ultimately causes organs to stop functioning (Jin 2010). It was later explored in terms of specific molecules known as reactive oxygen species (ROS) and how damage or stress results in aging (Rogers and Guarente 2020). ROS are derived from mitochondria. As they are damaged, they have the potential to mutate

and fail to function. This limits energy creation and the cells can no longer continue as normal. Indeed, Vina et al (2007) suggest that the effects of continuous ROS generation by mitochondria are fundamental to the aging process and directly related to lifespan. For this reason it can also be called the mitochondrial theory (Miquel and Fleming 1986).

Examples of exogenous free radicals include tobacco smoke, radiation and pesticides, and the theory relates to the accumulative contact with these throughout life. It seems clear that oxidative damage correlates with age (Lange and Grossman 2021), hence the value held against this theory.

Cross-linking or Connective Tissue Theory

The Cross-linking Theory (Bjorksten 1968) came before the Free Radical Theory. It is also known as the Connective Tissue Theory (Lange and Grossman 2021) and it relates to the idea of an accumulation of cross-linked proteins. Rogers and Guarente (2020) suggest that excess sugars in the bloodstream can cause protein molecules to stick together, resulting in lower body process and a reduction in normal function. Bjorksten and Tenhu (1990) indicate that this concept of cross-linking relates to aged proteins, but there is arguably a point that the changes described may in fact be related to a more normal and expected aging trajectory. Indeed, Lange and Grossman (2021) state that research is lacking which could prove that there are preventative strategies to stop cross-linking and that this, therefore, could suggest that the alterations to connective tissue are more related to a natural decrease in extracellular fluid.

Wear and Tear Theory

This theory often appears quite logical to people as it reflects the expectation of longevity. It suggests that repeated use results in parts of the body wearing out including cells and tissues (Jin 2010). The concept here is one of aging being a secondary effect of the work cells do over a period of time (Vina et al 2007). Lange and Grossman (2021) suggest this accumulated wear and tear causes damage to the cells with resultant changes to cellular metabolism and an inability to repair. Nevertheless, it is clear that the body can facilitate some repair mechanisms, but Rogers and Guarente (2020) argue that the waste products accumulated in the cells interfere with normal function. Furthermore, Aigner et al (2004) suggest the limitation to this may be related to senescence and the body being unable to fully protect itself against insult and injury. This leans towards the possibility that different theories can cross over and merge.

Psychosocial theories of aging

The theories discussed above help to explain some of the physiological processes evident in aging, but they do not examine the psychological or social impact growing older has on individuals. This next section will consider some of the theories which suggest that successful aging is also related to the attitudes, behaviours and social context of the person as they age.

Social Theories of Aging

Activity Theory

Havighurst and Albrecht (1953) developed the Activity Theory and proposed that society sets expectations of people as they age and as they retire. They suggest that retired individuals should remain active and that this not only prolongs middle age, but it is associated with psychological health by delaying the adverse effects of aging. Essentially, maintaining a level of productivity has positive outcomes on self-concept and creates a sense of happiness. Lange and Grossman (2021) suggest that although this is largely unproven in terms of scientific evidence, most researchers support the notion. There are, however, questions raised about how this fits with physical disability and the challenges that poses to maintain activity into old age. Nevertheless, Schroots (1996) suggests that limitations should not prevent activity and successful aging.

As well as being productive, it is worth noting that most positivity seems to come from ensuring the activity has a quality element (Lemon et al 1972) and a social element (Longino and Kart 1982, Harlow and Cantor 1996). This would suggest that the need for an individual approach is relevant here to ensure satisfaction and fulfilment.



Figure 3 – activity as a positive experience in aging

Disengagement Theory

The concept that old age brings a gradual disengagement from society was developed in the sixties (Cumming and Henry 1961). The Disengagement Theory suggests that this process is desired by both society and the individual with a purpose to maintain social equilibrium. As

older age approaches, responsibilities are passed to the younger members of society to “free” up the aging individuals for internal reflection. Potentially, it also seems that this denotes an element of succession building so that society continues as people transition into older age.

This theory contrasts with the Activity Theory and there are questions about whether culture or social context is influential (Achenbaum and Bengtson 1994). However, there is support for the theory and Adams (2004) suggests that as age increases into over 75 years, there is evidence of less engagement and investment with hobbies, future planning, creativity and taking care of other people. Furthermore, the necessity to balance societal needs and older adult activity is recognised (Back 1980, Birren and Schroots 2001). Although it can be seen that a mutual process of slowing down and withdrawal is expected, there is still a potential risk to damage self-concept if this approach does not suit the individual and they do not ready to behave like an “old person”.

Continuity Theory

The ideas in the Continuity Theory follow the two concepts above. Havighurst et al. (1968) recognised that personality has influence in terms of choice of role and associated behaviours in older age. If there is preservation of internal and external characteristics (such as values, personality, preferences and behaviours), then there is a positive sense of continuity. Indeed, Troll and Skaff (1997) agree that individuals who feel they stay the same have a more optimistic outlook on older age. It may be that the ability to map existing involvement and activity from earlier into lifelong patterns (Agahi et al. 2006) enables this positivity. Efklides et al. (2003) also suggest that quality of life is related to the individual’s attitude.



Figure 4 – fitting with society’s expectations of older people



Figure 5 – the importance of maintaining a sense of self

Interestingly, Havighurst et al. (1963) identified four different personality types: integrated, armoured-defended, passive-dependent and unintegrated. Each of these relate to how a person thrives or struggles in later life (see Figure 6). Certain tasks of older adulthood are suggested. These include adjustment to physical, financial and social decline, contemplation of death, and developing a personal and meaningful perspective as end of life is approached. It may be possible that the aging person who has maintained and continued meaningful habits and relationships, could be in a better psychological position to fulfil these tasks due to their social connections and engagement.

Integrated	Well-adjusted to aging
Armoured-defended	Continue roles and activities from middle age
Passive-dependent	Highly dependent or disinterested in the external world
Unintegrated	Fail to cope with aging

Figure 6 – personality types (based on Havighurst et al 1983)

Psychological Theories of Aging

Stages of Personality Development

This theory is based on Erikson's (1963) stages of personality development (see Figure 7), where the final stage of life as age increases involves "ego integrity versus despair". As aging occurs, individuals search for meaning in their life and evaluate their accomplishments. If this is a positive experience, then they are left with a sense of integrity, but if cannot come to terms or feel comfortable with that exploration, the result could be despair.

Approximate Age	Psychosocial Crisis
Infant – 18 months	Trust vs Mistrust
18 months- 3 years	Autonomy vs Shame/Doubt
3-5 years	Initiative vs Guilt
5-13 years	Industry vs Inferiority
13-21 years	Identity vs Role Confusion
21-39 years	Intimacy vs Isolation
40-65 years	Generativity vs Stagnation
65 and older	Ego Integrity vs Despair

Figure 7 – Erikson's stages of personality development

Erikson et al (1986) recognised that other further challenges associated with age exist, including a decline in physical or mental ability and this may influence that personal experience of the final stage of life. Peck (1968) expanded the notion of challenges to suggest that three other elements need to be considered: meaningful life after retirement, dealing with "empty nest syndrome", and contemplating the inevitability of death. Later, Neumann (2000) also postulated that self-worth, love and respect was associated with a feeling of fulfilment with high levels of meaning and energy. It is interesting to consider

whether the broad concept of personality types could affect the ability to appreciate oneself and whether the journey to old age also influences that strength rather than just a set series of stages.

Life Course (Life Span Development) Theory

As with the explanation of personality development above, Back (1980) suggested that life is divided into predictable stages and patterns. The Life Course Theory focuses on understanding the norms and characteristics associated with each age group. Stages of life reflect roles, relationships, values and goals and the success in achieving life satisfaction can also be affected by external factors. Cunningham and Brookbank (1988) raise the question of whether successful transition into different roles or relationships requires a willingness to reconsider beliefs and how they fit with expectations of society. The overlap here between this theory and others is evident, in that there seems to be importance placed on the context in which the individual sits as well as their own personality and journey.

Selective Optimisation with Compensation Theory

This final theory is a natural segue from the ones above. Baltes (1987) suggested that the adjustment to roles and activities reflect limitations. Individuals select new avenues to provide satisfaction (optimisation) and this allows compensation and ultimately a positive outcome of successful aging. Schroots (2012) highlights that aging and development are intrinsically linked throughout the whole life course with the structure of life being consistent but influenced by events and experiences. The Selective Optimisation with Compensation Theory therefore highlights a positive concept of each individual's ability to flex, grow and move as they age.

Conclusion

In reviewing some of the many different theories of aging, it is apparent that the evidence and science of becoming older is still evolving and developing. It could be argued that trying to reduce such a complex subject as aging into one "box" or theory is not acknowledging the intricacy of humanity. It seems evident that there could a potential infinite number of permutations of aging theory elements blended and working together to impact each individual in their journey. No one paradigm fits all. There, of course, sits the challenge in providing person-centred, quality care.

This series of papers on aging will continue in the next journal by considering some of the changes that occur within the body as age increases and the impact that can have on the individual.

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Lecturer: Andrew Hill

The child foot encounters large amounts of change as it grows and adapts to the environment. During these formative years, the foot can be at its most vulnerable as it is having to take the load of the whole body as well as changing its shape and size. Therefore any extra stresses or pressures can have long-term and potentially serious effects.

The field of Podopaediatrics is one that explores the natural development of the foot as well as any pathological conditions that are commonly found in children's feet. Podopaediatrics is a specialist area as the child foot and the adult foot are vastly different, and so treatment options for adult's feet are not always directly transferable into the child foot. This workshop is designed to help you in practice to identify foot pathologies in children, and undertake appropriate treatment regimes for them.

Cost: £56.00



Fostering Improvements in Patient Health Behaviour

12th August 2021

10.00am - 4.30pm

Lecturer: Andrew Hill

This workshop is aimed at Podiatrists and FHPs who spend time (or need to spend time) encouraging patients to consider behaviour change as a means to manage their condition(s) more optimally. Whilst this is a growing 'ask' of all health professionals to help encourage healthy and positive behaviours in patients, it is not something that they are collectively trained to do in any meaningful way. Accordingly, there is often a communication breakdown that ensues from this (well intentioned) attempt to influence a patients behaviour. This workshop is designed to help you start addressing communication in the context of promoting behaviour change in patients. It will introduce concepts related to reasons underpinning patient decision-making; ambivalence; your role as a communicator and tie all of this together in the context of motivational interviewing as a technique to improve this aspect of growing importance in clinical practice.

Cost: £56.00



Fungal Infection of the Skin and Nails – can you recognise it?

13th August 2021

10.00am - 4.30pm

Lecturer: Belinda Longhurst

This presentation identifies which organisms are responsible for both tinea pedis and onychomycosis and how to take appropriate tissue samples for microscopy and culture, as well as clinical testing for dermatophytosis. We examine the evidence base for treatments and discuss patient and species specific treatment plans for what is the most common skin condition of the foot.

Cost: £56.00



MEMBERS
FAVOURITE

What is that persistent pain in the ball of the foot?

Exploring Metatarsalgia

1st September 2021

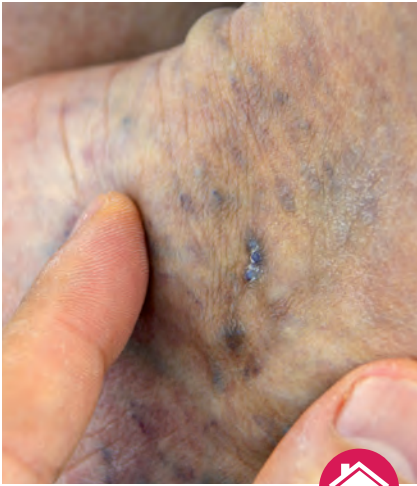
10.00am - 4.30pm

Lecturer: Andrew Hill

An umbrella term used to describe generalised forefoot pain. Whilst extremely common, the causes of Metatarsalgia are extremely varied and correctly diagnosing the cause is half of the battle when looking to relieve the pain. This workshop comprehensively covers each established cause of Metatarsalgia and discusses diagnosis and management of each of them. Ideal for practitioners new and experienced alike!

Cost: £56.00





Neurological & Vascular Assessment

9th September 2021

10.00am - 4.30pm

Lecturer: Andrew Hill

MEMBERS
FAVOURITE

Neurological and Vascular assessments form a fundamental part of good practice and offer an invaluable screening tool for practitioners, patients and whoever the patient is referred onto depending on their results. This workshop looks to discuss both of these body systems in detail with a view on how and why they go wrong as well as what observable signs and symptoms may present to practitioner. This will be further enhanced by an in-depth discussion about the assessments we can conduct as practitioners and how to document any findings.

Cost: £56.00



MEMBERS
FAVOURITE

Padding and Taping

Alleviate Pain in Minutes

10th September 2021 - **Fully Booked**

10.00am - 4.30pm

Lecturer: Andrew Hill

Would you like a hands-on practical workshop learning how to alleviate your patient's pain in just 5 minutes, but are worried about delving into biomechanics?

Padding and Taping can offer fantastic results for short and medium term pain relief and is the basis of lower limb biomechanics.

The following padding and tapings are taught:

Padding

- Plantar cover
- 'U' and winged plantar cover

- Plantar metatarsal pad
- Crescent pad
- Horseshoe pad
- Oval pad
- Shaft pad including extended shaft pad
- **Taping**
- Low dye
- High dye (ankle instability)
- Plantar fascial
- Posterior tibial tendonitis
- Achilles tendonosis
- Ray stabilisation

Cost: £56.00



What Type Of Joint Problem Does Your Patient Have?



16 September 2021

10.00am - 4.30pm

Lecturer: Andrew Hill

The arthritides cause sufferers chronic pain and make daily tasks difficult. This workshop looks at these conditions, and how we as practitioners can provide relief to the pain that these conditions can cause the feet.

We will look at:

Rheumatoid Arthritis

- RA and pathogenesis / epidemiology
- Process of synovial inflammation and progression to erosive arthritis
- Treatment / general principles /

Cost: £56.00

flowchart including DMARDS

- Particular problems of RA with respect to ulceration, vascular disease and infection
- Deformities and biomechanical problems associated with RA

Other Rheumatological / Inflammatory Problems and other arthritides

- Other forms of arthritis and its management
- Metatarsalgia in more detail and its various causes (other than RA)
- Ankle and mid-tarsal problems
- Achilles tendonitis and Bursitis
- General advice with respect to exercise
- Patient advice and information sheets, useful sources e.g. ARC

Biomechanics Level 2



A Focus on Pathology

28th & 29th September 2021 -

Fully Booked

10.00am - 4.30pm

Lecturer: Andrew Hill

A 2 day hands on workshop focused on further exploration of lower limb anatomy, biomechanics and pathomechanics including assessment of the knee and hip, leg length discrepancy, static and dynamic weight bearing examination and concepts of human motion.

NB: Successful completion of biomechanics Level 1 is a prerequisite for this course.

Cost: £289.00



Are you promoting evidence-based practice?



3rd November 2021

10.00am - 4.30pm

Lecturer: Andrew Hill

This workshop will look at the importance of evidenced-based practice and how this feeds into rationale and decision making in a clinical context. It will also consider the effect of dangerous claims and look at treatment myths that can have bad outcomes for you and your patients.

Cost: £56.00

Heel Pain – is it just another case of Plantar Fasciitis?



8th October 2021

10.00am - 4.30pm

Lecturer: Andrew Hill

Heel pain is an all too common complaint for a number of people with terms like 'Policeman's heel' and 'heel spurs' being widely used by the general public. In more recent years, a greater public awareness of 'Plantar Fasciitis' has emerged meaning that not only are patients self-diagnosing (often erroneously) but also a great many practitioners are too quick to assume that any heel pain is plantar fasciitis. This workshop looks into what is occurring in the heel anatomically and how these structures can lead to pain development when they become injured or malfunction. It is hoped that this can lead to more accurate diagnosis and treatment regimes accordingly.

Cost: £56.00

Common Foot Conditions



Things that you cannot
afford not to know about

16th November 2021

10.00am - 4.30pm

Lecturer: Debbie Rockell

This workshop provides the practitioner with the general conditions that present at their practice. The conditions that will be discussed will range from various basic dermatology conditions, neurological conditions, vascular conditions and musculoskeletal disorders. It is a great refresher course and can direct the practitioner into desired fields.

Cost: £56.00



The Sharp End of the Job



Scalpel Debridement & Enucleation
Technique

19th October 2021

10.00am - 4.30pm

Lecturer: Andrew Hill

In this workshop we will be looking at the anatomy of the skin, epidermal and dermal tissue, and its relation to the development of callus and of various heloma formations.

This workshop will present how to assess and treat callus and helomas, focusing on scalpel debridement and introducing an effective method for heloma enucleation using the scalpel 15T blade. The morning session will be based on theory, with the afternoon being a practical session on scalpel debridement with heloma enucleation on artificial corns.

Cost: £56.00

Biomechanics Level 3

Therapeutic interventions &
Prescription writing



24th & 25th November 2021

10.00am - 4.30pm - Fully Booked

Lecturer: Andrew Hill

A 2 day hands on workshop focused on consolidating patient centred assessments of the foot, ankle, knees and hips, as well as comprehensive gait analysis. It includes interpretation of all findings in the context of insole and orthotic prescription writing; including how to take templates or casts, and how to correct any identified pathomechanics of the lower extremities. On completion, the practitioner will have the knowledge and skill to confidently incorporate biomechanics into their practice.

NB: Successful completion of biomechanics Levels 1 & 2 are a prerequisite for this course.

Cost: £289.00



Gait Analysis

A Step-by-Step Approach



26th November 2021

10.00am - 4.30pm

Lecturer: Andrew Hill

What is Gait Analysis? What can it tell us? What do different walks mean potentially to me as a clinician? How do commonly occurring pathologies impact on gait? How can I undertake gait analysis on my patient? Gait analysis is a great tool to use to identify potential underlying pathomechanics and the smallest of interventions can prevent pain and improve quality of life. Come for a fun filled day and learn the basics within a small and friendly group of colleagues. What does your gait say about you?

Cost: £56.00



Tropical Diseases of the Foot



1st December 2021

10.00am - 4.30pm

Lecturer: Andrew Hill

Given that in today's society people can travel the world quickly and relatively easily – it is plausible that foot conditions of a curious origin could well be encountered within the UK. It also takes an interesting look at how our podiatric colleagues in different parts of the world face different challenges that we do in Western Europe.

This workshop will look at the various foot conditions that can be encountered that do not have a common domestic cause. Many conditions will be explored in how virulent bacterial strains can cause all manner of serious foot problems.

Cost: £56.00



How Would You Look After A Patient With Chronic Pain?



10th December 2021

10.00am - 4.30pm

Lecturer: Andrew Hill

This workshop is designed to explore the concept of chronic pain and its management. A variety of chronic pain conditions will be discussed and differences between the types of pain will be explored.

This session will look at not only the pharmacological and alternative methods of pain relief, but also how this impacts your patient and your treatments for these patients.

Cost: £56.00



Study from home



ONLINE COURSES

CPD@home

(Online only)

- Infection Control
- Padding and Taping
- Dermatology
- Rheumatology
- Biomechanics
- Podopaediatrics

Cost: £45 each

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FOR MORE DETAILS ABOUT OUR CPD@HOME RANGE

Fostering improvements in patient health behaviour

(Online only)

With a changing landscape of public health comes a change in the way that healthcare is delivered and received. In more recent years, healthcare professional across a wide number of disciplines have been moving away from a more traditional, didactic view of the patient-practitioner relationship towards notions of concordance and equity of decision making between both parties.

This change of direction, whilst far from complete, has re-defined the way in which healthcare professionals might best deliver their care within the context of facilitating behaviour change in patients and changing the mind-set away from considering a patient as 'adherent' / 'non-adherent' or 'compliant' / 'non-compliant'. This is particularly true in the delivery of healthcare for patients with more chronic health conditions in which altered lifestyle and amended behaviours are a cornerstone of disease management. As perspectives on healthcare delivery change, the emergence of different approaches towards delivering care to the patient is a logical consequence.

This CPD aims to explore patient-practitioner relationships and how we can improve our consultation skills to best help patients to to make beneficial decisions about their health and to foster any change in behaviour for the longer term.

Cost: £45.00

NEW

The On-Going Challenge of Ulcer and Wound Management

(Online only)

Ulcers and wounds are a large problem facing many individuals who are 'at risk'. Identifying the risk factors can certainly help to reduce the incidence and impact of these debilitating lesions. This CPD looks to address what a practitioner should do when encountering a wound or ulcer and help to alleviate the apprehension and fear that a practitioner may otherwise face by arming them with information and guidance.

This CPD covers:

- Structure and function of the skin
- Concept and issues of tissue viability
- The 'high-risk' patient
- Prevention of wound development and complications
- General considerations for treating high-risk patients
- Examining the wound
- Identifying and treating infection
- Osteomyelitis
- Treating the wound
- Dressings
- Other aspects of wound management
- Conclusions

Cost: £45.00

Tackling the Nerves

(Online only)

The nerves are a crucial part of our anatomy and neurological disorders in the lower extremity result from disease processes that involve sensory, motor and autonomic nervous systems. This can follow a metabolic or hereditary process or indeed an injury or trauma which can create progressive or static deformity and be treatable or incurable. Any process which impacts on the delicate nervous tissue and its ability to process electrical signals can create significant issues within the body, not least the lower limb. This CPD looks to assess the nervous system and tackle nervous system pathologies to help practitioners in their management of patients with neurological disorders.

Cost: £45.00

Anatomy, Cell Biology and Physiology Series

The Endocrine System

(Online only)

The endocrine system is made up of a network of glands. These glands secrete hormones to regulate many bodily functions, including growth and metabolism. Endocrine diseases are common and usually occur when glands produce an incorrect amount of hormones or when the hormones cease to work effectively. Thus, when these diseases occur many –if not all– body systems can be adversely affected leading to many life-altering, and possibly life threatening, outcomes. This CPD seeks to explore the main principles and anatomy and physiology of the endocrine system with a focus on pathology and management of endocrine disorders.

Cost: £45.00

The Cardiovascular System

(Online only)

Anatomy, cell biology and physiology are key and underpinning subject areas for all health disciplines. Understanding the way that the body works on both the micro- and macro scale allows us not only understand normal physiological function, but also to understand pathology of various body systems and how medicinal approaches can remedy these pathologies. Within this series of CPD subjects, this one in particular focuses on the Cardiovascular System.

Cost: £45.00

The Respiratory System

(Online only)

The respiratory system contributes to homeostasis by facilitating the exchange of gases – oxygen (O₂) and carbon dioxide (CO₂) – between the atmospheric air, blood and tissue cells. It also plays a role in adjusting the pH of body fluids. Oxygen is the single most important substance that our body requires. Without it death would occur in minutes. Therefore, the importance of the respiratory system is evident and when it doesn't work properly there are serious health implications. This CPD covers the anatomy and physiology of the respiratory system to provide context to help explain and understand respiratory conditions and how they affect the whole body.

Cost: £45.00

What is that pain in the foot my patient is complaining of?

(Online only)

Pain across the metatarsal region of the foot is very common, yet pinning down exactly what is causing it can be tricky. The term 'metatarsalgia' is used to describe such pain but this term only describes the symptoms - pain in the metatarsal region of the foot. This CPD looks to explore this area of the foot both anatomically as well as pathologically and covers the various conditions that can give rise to pain in the ball of the foot. This CPD is ideal for new and experienced practitioners alike and will help support and direct clinical assessments and treatments of this all too common problem.

Cost: £45.00

Can you avert a potential disaster?

Managing the foot in Diabetes

(Online only)

With diabetes mellitus consuming 10% of the entire NHS budget for England and Wales and a significant portion of that amount (some £300m) being spent on managing avoidable foot-related complications, there is a considerable focus on developing tools and strategies to minimise both the individual and financial cost of this devastating disease. The role, therefore, that podiatrists and foot health professionals play in the reduction of morbidity and mortality of the disease as well as improving patients' quality of life cannot be overstated. Against this backdrop this CPD will discuss diabetes mellitus from pathophysiology through to complications and implications for practitioners.

Cost: £45.00



Treating the Persistent Verruca CPD

(Online only)

This CPD tackles the area of patient Verrucas are one of the most common conditions treated by podiatrists and FHPs. Sometimes they resolve quickly and very often spontaneously. However, there is a large number that take many months (if not years) to resolve. These lesions are what are termed 'persistent verrucas' and successful treatment of them can be elusive.

This CPD explores this condition from pathophysiology of the condition through to the treatment modalities available to the patient. This serves as a useful guide to practitioners looking to keep up to date with treatment options (standard and contemporary) as well as providing theoretical interest for those looking to broaden their understanding of this common condition.

Areas covered include:

- Overview and Background of Verruca Pedis
- Types of Verruca
- Structure and function of skin
- Clinical Features
- Treatment options:
 - Sharp debridement + occlusion
 - Caustic treatment
 - 'Natural remedies'
 - Cryotherapy
 - Laser Treatment
 - Bleomycin
 - 'Needling'
 - Surgical intervention
- Patient suitability and prognosis

Cost: £45.00





Tropical Diseases of the Foot

(Online only)

This CPD looks to introduce various pathologies that have traditionally been encountered in foot health and Podiatry clinics within tropical climates. It is the responsibility of the modern and competent practitioner to identify certain tropical diseases of the foot and at least have a rudimentary understanding of them and their treatments given that more round the world travel is ever more common meaning that more and more of these conditions are being seen more frequently in temperate climates – certainly including the UK.

Cost: £45.00



Are you performing vascular assessments properly?

(Online only)

Vascular assessments are a crucial part of the patient appointment, but are significantly devalued if they are not being done regularly or correctly. The aim of this CPD program is to improve the diagnostic skills of practitioners in their assessment of the vascular system.

By applying more evidence-based actions to their clinical practice, the benefits to patients are significant. This is a must-do CPD for practitioners to ensure that they are providing excellent care for their patients.

Cost: £45.00

Common Conditions Affecting The Elderly

(Online only)

Elderly patients make up a very large proportion of our clients. It is also this demographic of patients who tend to have more underlying pathologies and chronic foot problems. The elderly foot, therefore, can present in many different ways and provide a complex set of challenges. This CPD will discuss the symptoms and treatments of various pathologies that are commonly seen in the elderly foot.

Conditions that will be discussed include:

- Arthritis
- Parkinson's Disease
- Peripheral Vascular Disease
- Peripheral Neuropathy
- Common Biomechanical pathologies in the elderly foot
- And many, many more

Cost: £45.00



Commonly Used Medications And Their Side Effects

(Online only)

The aim of this CPD is to educate the practitioner in the effects, both adverse and otherwise, of common medicinal interventions for equally common conditions. This CPD will go on to explore how these effects will influence the symptoms of your patients foot problems as well as the treatments that can be offered.

Cost: £45.00

VISIT WWW.SMAECPD.COM

FOR MORE DETAILS ABOUT OUR CPD@HOME RANGE

Is It Fungal Or Isn't It?

A guide to this most common of Skin and Nail Pathologies

(Online only)

The presentation of a fungal infection in the skin and / or nails is often considered easily distinguishable – however, as this CPD will explore, that is often far from the case with many fungal infections incorrectly labelled as being something else entirely, or a fungal infection going undiagnosed for long periods of time. This certainly can render treatments ineffective, which makes the already tricky task of effective treatment all the more complicated.

This CPD looks to cover all this and more:

- Structure and function of the skin
- Structure and function of the nails
- Types of fungal infection
- Fungal infection of the skin
- Fungal infection of the nails
- Prognosis and future considerations

Cost: £45.00

Are you a Modern Practitioner?

The Growing Need for Health Promotion & Patient Education

(Online only)

This CPD tackles the area of patient education and health promotion. It is easy for health professionals to slip into an isolated view of themselves in the context of their patients' overall health and the role that they may play in improving that.

Certainly within the context of many widespread and serious health conditions such as diabetes mellitus, concepts of 'patient empowerment' and patient-led management is a recent paradigm shift. As such, modern day Podiatrists and FHPs need to take a significant role in the multidisciplinary approach to healthcare. The CPD looks to discuss this theory and provide some useful and insightful guidance on this growing and changing landscape.

Cost: £45.00



Obituary

Bruce McLaggan



It is with great sadness we have to report that Bruce McLaggan, who was a clinic tutor at The SMAE Institute for twelve years, sadly passed away aged 62 years. Bruce was a great person and blended in with all of us here at Maidenhead. He moved to Canada where he built a very successful practice and was always grateful for the training he received. He was liked by the students he taught, who no doubt will have their own fond memories of him. He sadly passed after a long illness. RIP



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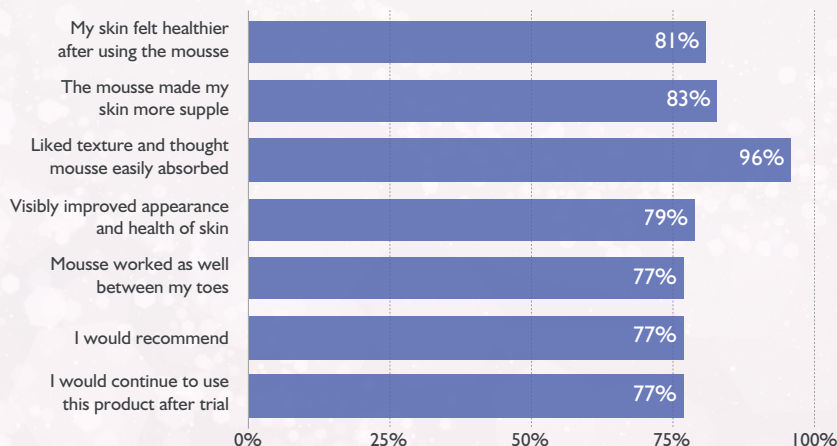
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Members' Zone

We love to hear from our Members and are excited to include this new Members' Zone within the Journal where we shall publish case studies, articles or personal reflections.

If you would like to submit something for publication, please send this to Carol O'Brien at COBrien@smainstitute.co.uk

The SMAE Institute reserves the right to edit or individual submissions as and when considered necessary. Opinions expressed are those of the individual author, and do not necessarily reflect the opinion of The SMAE Institute.



Belinda Longhurst
BSc (Hons), FHEA, FFPM RCPS
(Glasg.)
SMAE Lecturer

Forgotten Feet

Free footcare for the very poorest in our society

Hello! I thought I'd introduce myself to members, as I have been working with The SMAE Institute for a few years, providing CPD workshops and I have the privilege of assisting and teaching on the Podiatry Assistant HE Diploma, soon to be the eLearning Podiatry BSc (Hons) Degree in collaboration with Queen Margaret University. Exciting times!

I am also a Trustee and the volunteer coordinator for the registered charity, Forgotten Feet. This charity was set up 5 years ago by my good friend and colleague, Deborah Monk and started at Maggs' Homeless Centre in Worcester, with the overall vision of a network of free foot care for the very poorest in our society. Prior to the Covid pandemic, we had over 60 services spanning the UK, reaching many areas in England, Wales, Scotland, and Northern Ireland. Services were suspended during lockdown, but we are delighted that over 30 venues have now confirmed that they are resuming services, as there is clearly a need for foot health care for the homeless and socially isolated, more than ever.

Many of our kind volunteers are SMAE members, who generously provide their valuable time and skills. This is truly appreciated by us as a charity, but more importantly by the vulnerable people who really do value the service that is provided. The clinics run whenever they can fit in with our volunteers' workload, so that may be every month, every 6 weeks or every two months approximately. They are always based in

a homeless centre or similar, in essence we bring the service to where it's needed. This is easier for the service users to access rather than a remote clinic. The uptake is good, and the impact of the service is rewarding in so many ways. It is very easy to carry out: similar to domiciliary visits as the equipment is basically the same. Service users may not always be willing to provide medical or personal information, due to their personal circumstances, but that does not prevent us from offering them treatments. These drop-in clinics are easy to set up and can be held in any space available. It is advisable to work in pairs depending on the location, and most service users don't mind being treated side by side. We have a handbook which includes treatment guidelines, policies and procedures in place for the benefit of both volunteers and service users. Forgotten Feet will help with supplying instruments, medicaments and dressings which have been kindly donated.

We treat a range of foot conditions, tinea pedis and onychomycosis are commonplace as are blisters, pitted keratolysis, maceration, corns, hyperkeratosis, and long onychogryphotic or onychauxic nails. Many of these conditions are due to self-neglect and made considerably worse by ill-fitting or inappropriate footwear. We try to provide footwear that fits, this may be donated trainers which are ideal, or shoes. We also provide clean or new socks with every treatment where needed and provide insoles (subject to supplies), which add comfort or prolong the life of some footwear.



Homelessness can happen to anyone, and there is an incredibly diverse homeless population ranging from the very young to the very old, and from all kinds of backgrounds. Once a clinic is established the centre staff members usually create lists or can help us to prioritise those most in need. Offering foot care is an excellent tool for engagement, it helps to forge relationships, break down barriers with a hard-to-reach community, and encourage uptake of other healthcare services. There is a general distrust or fear of anyone in authority. We help overcome this by taking the opportunity to listen and talk without judgement. People often open up and are glad to have the opportunity to talk when a genuine personal interest is shown.

I would like to thank the SMAE Institute as they have been, and continue to be, very generous in their support of Forgotten Feet. They provide a stand for us in the trades exhibition during the Summer School and Annual Convention, so we can raise awareness and collect and redistribute donated items to our kind volunteers. Please do visit us at the SMAE annual convention this October, whether you are an existing volunteer, would like to find out how and where you can help, have items to donate, or just to say 'hello', we will be delighted to have a chat with you.

HOMELESSNESS
CAN HAPPEN TO
ANYONE, AND THERE
IS AN INCREDIBLY
DIVERSE HOMELESS
POPULATION
RANGING FROM
THE VERY YOUNG TO
THE VERY OLD, AND
FROM ALL KINDS OF
BACKGROUNDS.

Forgotten Feet are ALWAYS very appreciative of any donations of clinical items & instruments, which are then distributed across the UK to volunteers. Forgotten Feet are currently in need of:

- Aprons
- Medium size gloves
- Antifungals (even out of date)
- Blades
- Skin wipes/spray
- Scissors
- Diamond deb files
- Foot files
- Semi compressed felt
- Fleecy web



British Chiropody & Podiatry Association

The British Association of Foot Health Professionals

REGIONAL BRANCHES & CONTACT DETAILS



Hon. President

Michael J. Batt

info@smaeinstitute.co.uk
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Chairman of BCPA / BAFHP

Deborah Mercer MSSCh MBChA

chairman@bcpa-uk.org
Tel: 01268 741019 / 07932 928113

120 Bull Lane, Rayleigh, Essex SS6 8NQ



East Anglia Branch

Chairman: Alex Hepburn

alexhepburn30@hotmail.com

Treasurer: Deborah Hart

deborahhartuk@yahoo.com

Venue: The Army Reserve Centre,
Blenheim Camp, Newmarket Road,
Bury St. Edmunds IP33 3SW | 9am – 12:30pm



East Midlands Branch

Chairman: Ruth Cranmer

ruth.cranmer@feetaid.co.uk

Secretary: Julie Astill

thefootings@gmail.com

Facebook: East Midlands British Chiropody &
Pod Assoc + FHPs (unofficial)

Venue: Forest Hill Golf & Conference Centre,
Markfield Lane, Leicester LE9 9FH | 10am-1pm



Essex & East London Branch

Chairman: Deborah Mercer

deborah.mercer2@btinternet.com

Vice Chairman: Michele Pyne

michele.pyne@btinternet.com

Secretary: Anna Mapp

anna.mapp773@gmail.com

Venue: Bulphan Village Hall, Church Road,
Bulphan, Upminster, Essex RM14 3RU
1:30pm – 4:30pm



Kent Branch

Chairman: Graham Seath

foothealthcare@yahoo.co.uk

Secretary: Sally Johnston

sallyjohnston76@gmail.com

Venue: Davis Estate Community Centre,
Barberry Avenue, Chatham, Kent ME5 9TE
9am – 12noon



North West Branch

Chairman: Christopher Hunter

Christophe0@aol.com

Secretary: John Gobin

Jgobin@hotmail.com

Minutes Secretary: Angela Fenton

angela_fenton@hotmail.com

Venue: Ormskirk Civic Hall, Southport Road, Ormskirk L39 1LN
12noon – 3:30pm



Scottish Branch

Chairman: James Fisher

shirleyfisher411@btinternet.com

Secretary: Fiona Morgan

fiona.morgan22@btinternet.com

Venue: Diocese of Dunkeld,
24-28 Lawside Road, Dundee DD3 6XY
9am – 4:30pm



South East Branch

Chairman: Clare Dicker

clare_dicker@hotmail.co.uk

Venue: Copthorne Hotel Gatwick,
Copthorne Way, Copthorne,
West Sussex RH10 3PG
9am – 4pm



South West Branch



Chairman: Jayne Chudley
jaynechudley1@gmail.com

Secretary: Katharine Hardisty
katharinehardisty@yahoo.co.uk

Venue: St. Cuthbert's Conference Centre,
Buckfast Abbey, Northwood Lane,
Buckfast, Devon TQ11 0EG
9am – 5pm

Thames Valley Branch



Chairman: Sue Davies
sue.davies63@yahoo.co.uk

Secretary: Vacant

Venue: Boyn Hill Cricket Club,
Boyn Grove, Highway Road,
Maidenhead, Berkshire SL6 5AE
7:30pm – 9:30pm

West Midlands Branch



Chairman: Elena Serafinas Broom
elenapodiatry@hotmail.com

Venue: Aldridge Community Centre,
Anchor Meadow, Middlemore Lane,
Aldridge, Walsall, West Midlands WS9 8AN
12noon – 4pm

The Benevolent Fund



William J. Liggins (Bill)
wjsjiggins@gmail.com

Philip Clayton
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