Curriculum Vitae

Dr Ewan J McKay

B.Sc, MBChB, FRCP (Edin), FRCP(London), CCDS

Contents

Curriculum Vitae	1
Personal Information	3
Specialist Memberships and affiliations:	3
Personal statement	4
Current Appointments:	5
Clinical Experience	7
Heart Failure	7
Complex Devices	7
Clinical Governance	7
Teaching qualifications and experience	8
Research	8
Invited National Presentations	9
Presentations at International Meetings	9
Publications1	1
Other Publications	2
Invited Reviews	2
Clinical Trial involvement12	2
Course Organisation and Management12	2
Interests14	4
References14	4

Personal Information

Date of birth:	14 th July 1982
Nationality:	British
GMC number:	6145472
CCT date:	Awarded 22/06/16
Indemnity:	Medical Protection Society (MPS) British Medical Association (BMA)
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Specialist Memberships and affiliations:

International Society of Adult Congenital Heart Disease (ISACHD 2020 -) Heart Failure Association of ESC (HFA 2015 -) International Society of Heart and Lung Transplantation (ISHLT 2015 -) Acute Cardiovascular Care Association of ESC (ACCA 2018 -) British Society of Heart Failure (BSH 2015 -) European Association of Cardiovascular Imaging (EACVI 2016 -)

European Working Groups

European Society of Cardiology Working Group for Aorta and peripheral vascular diseases (2020-)

European Councils

European Society of Cardiology Council for stroke (2016 - Lifetime membership)

Sports Cardiology

British Association of Sports and Exercise Medicine (BASEM 2021 -) British Association of Sports and Exercise Sciences (BASES 2021 -) Perioperative exercise testing and training society (POETTS 2021 -)

Other memberships and affiliations:

British Cardiovascular Society (BCS 2011 -) Professional Member of the ESC (2017 -) European Society of Cardiology (ESC 2011 -)

Personal statement

My main professional passions are Advanced Heart Failure with cardiomyopathies and the invasive study of RV dysfunction in Pulmonary Hypertension.

Having completed heart failure sub-speciality training with complex cardiac device implantation, I undertook further training and a subsequent post-CCT international fellowship in Mechanical Circulatory Support and Cardiac Transplantation.

I am routinely involved in the complex evaluation and haemodynamic assessment of patients prior to transplant surgery, prediction of RV support devices following complex valve intervention and pulmonary hypertension therapies.

I am heavily involved in teaching and training of undergraduates, postgraduates and physicians associates. As a recognition of my skills and experience I am a Senior Clinical Lecturer at the University of Liverpool.

In my free time I enjoy SCUBA diving, swimming and going to Old Trafford to watch Manchester United football club..

Education and Qualifications

Qualifications:

2020 FRCP (London, UK)
2018 FRCP (Edinburgh, UK)
2016 International Board of Heart Rhythm Examiners Certification (CCDS)
2016 Certificate of Completion of Specialist Training (CCT)
2016 Member of the Academy of Medical Educators (MAcadMEd)
2016 British Heart Rhythm Examiners (BHRS) written examination
2010 MRCP (Edinburgh, UK)
2006 MBChB (University of Manchester, UK)
2003 B.Sc (University of St Andrews)

National Awards:

Best Research Project Prize National Vascular Surgical Society Meeting 2005

Other Awards:

Teaching Excellence Award 2019 University of Liverpool, UK

Current Appointments:

Clinical Post(s):

- Consultant Cardiologist Royal Liverpool University Hospital Trust Feb 2019 -
- Young National Ambassador to the Acute Cardiovascular Care Association (ACCA) of the ESC Jan 2019 -
- Network Lead for Advanced Heart Failure/Transplantation Mersey Region Feb 2019 -
- Advanced Heart Failure and Transplant Advisor to North West of England Adult Congenital Heart Disease (ACHD) service Feb 2019 –
- Heart Failure Co-lead for Liverpool University Hospitals NHS FT May 2021 –
- Wellness and mental health champion Liverpool University Hospitals NHS FT Aug 2021 -

Current Academic Undergraduate Teaching Post(s):

• Honorary Senior Clinical Lecturer - University of Liverpool, Faculty of Medicine Dec 2017 -

Current Postgraduate Teaching Post(s):

- Merseyside Speciality Training Committee member Cardiology Nov 2018 -
- Postgraduate Education Lead (Cardiology) Royal Liverpool Hospital Feb 2019 -

Current Management posts:

• Liverpool Single service CV operational group committee member

Previous Academic undergraduate teaching post(s):

• MBChB programme CV systems lead (Yrs 1-5) – University of Liverpool Dec 2017 – October 2019

- Academic Advisor University of Liverpool, Faculty of Medicine August 2018 - October 2019
- Undergraduate Education Lead (Cardiology) Royal Liverpool Hospital Feb 2019 – Feb 2021
- Medical Education Governance committee member Royal Liverpool Hospital Feb 2019 – Feb 2021

Previous Clinical Posts: (post- CCT)

- Advanced Heart Failure and Transplant Advisor to North West of England Adult Congenital Heart Disease (ACHD) service Feb 2019 – Nov 2020
- Consultant Cardiologist Lead Cardiologist for Heart Failure services – COCH and West Cheshire CCG Countess of Chester Hospital Feb 2017 - Feb 2019
- Senior Fellow in Advanced Heart Failure and Cardiac Transplantation (ISHLT accredited Transplant Fellowship) North West Heart Centre University Hospital South Manchester Educational Supervisor: Dr Steven Shaw Aug 2016 – Feb 2017

Training Posts:

- Aug 2014 Aug 2016 Sub-speciality Trainee in Heart Failure, Complex devices, Cardiac transplantation and Mechanical Circulatory Support North Western Deanery
- Aug 2011 Aug 2014 Core Cardiology Higher Specialist Training North Western Deanery
- Aug 2010 Aug 2011 Cardiology Clinical Fellow in Imaging and arrhythmias University Hospital Aintree
- Aug 2008 Aug 2010 Core Medical Training (CMT) Mersey Deanery
- Aug 2006 Aug 2008

Foundation Training North Western Deanery

Clinical Experience

Heart Failure

- I am experienced in all aspects of investigation and treatment of advanced heart failure including those being considered for transplantation.
- I have provided heart failure in-reach services to provide speciality opinions to noncardiology consultants.
- I am fully independent in left and right heart catheterisation for heart and lung transplant assessment.
- I have completed a training course in CPET and peri-procedural mortality
- I am independent in the assessment and management of acute decompensated (ionotrope/MCS) dependent heart failure patients awaiting heart transplantation.

Complex Devices

- I am implanting and teaching regional registrars bradycardia pacing
- I have been trained in the implantation of complex pacing devices at three large tertiary teaching hospitals.
- I have begun learning the technique of subcutaneous ICD (S-ICD) implantation.
- I have early experience of Leadless pacemaker implantation (mainly as 2nd operator)
- I have experience of device extraction (mostly as 2nd operator)
- I have passed the BHRS written examination
- I have been awarded International Board of Heart Rhythm Examiners (IBHRE) certification (CCDS)

Clinical Governance

Management and Leadership Commitments

1. Lead Cardiologist for Heart Failure services for an innovative District General Hospital

Previous Governance positions

- 1. Chair of the West Cheshire CCG Heart Failure steering Group
- Lead for RITMOCORE European Public Procurement and Innovation project

 Lead for 1 of 2 centres in the UK involved in this project

- 3. Cardiology and HF representative on the Accountable Care Organisation/ Integrated Care Partnership for West Cheshire
- 4. Royal College of Edinburgh 2017 National Cardiology Symposium
 - a. Via a process of competitive application, I am one of 5 doctors from around the UK that sit on the organisation committee for the national symposium. We are responsible for financial control, working with industry colleagues and the selection of esteemed speakers from around the world.
- 5. HENW Medical Leadership in Practice (MLiP) course
- 6. Completed the Edward Jenner Programme via the NHS leadership academy

Teaching qualifications and experience

- 1. University of Liverpool MBChB CV systems Education lead (yrs 1-5)
- 2. University of Liverpool Academic Advisor MBChB programme
- 3. University of Liverpool Member of the Faculty of Medical Educators
- 4. Accredited and experienced Educational and Clinical supervisor Allocated ST3/4/CMT/F2 trainees
- 5. Royal College of Physicians (RCP) effective teaching skills course as part of the RCP educator accreditation March 2016
- 6. Royal College of Physicians (RCP) 'on-the-job-teaching' skills course September 2016
- 7. Educational and Clinical supervisor course (Manchester Medical School) November 2015
- 8. Associate Royal College Tutor, Royal Albert Edward Infirmary Aug 2012 Feb 2013

Public and Patient Interactions (PPI)

I have been invited by the Cardiomyopathy Association (CMA) to provide patient, family and general public educational lectures on a number of occasions.

Research

Invited International Presentations

Invited Expert Speaker The decompensated ACHD patient when on call Acute Cardiovascular Care Association of the ESC (ACVC ESC) Digital international meeting March 2021

Invited Expert Speaker – Plenary speaker

Heart failure and the Management of Cardiogenic Shock - medical therapy and methods of delaying or avoiding mechanical assist European Association of Cardiothoracic Anaesthetists (EACTA) Berlin, Germany April 2017

Invited National Presentations

Invited Expert speaker

Royal College of Physicians HF: Something old, something new, what to do when your patient goes blue... Liverpool Medical Institute, Liverpool, UK December 2018

Invited Expert Speaker x 3 National Heart Failure Nurses Meeting – Affiliated to the British Society of Heart Failure Iron Deficiency in Chronic Heart Failure – Hepcidin/Ferroportin Axis Birmingham, September 2017 Manchester, September 2018 London, September 2019

Presentations at International Meetings

Mckay.EJ, Ebden.L, Ashrafi.R, Burgess.M Endocarditis in a Large District General Hospital: A Study of the Microbiological Spectrum for the Period 2000-2011 University Hospital Aintree, Liverpool, UK American College of Cardiology 61st annual scientific session, Chicago, Illinois, USA 24th-27th March 2012

Mckay.EJ, Wyper.A, Anantharaman.A, Appleby.C, Kumar.S, Macdonald.J, Eccleshall.S, Roberts.DH Blackpool Victoria Hospital, Blackpool, UK Day case Transradial Coronary Angioplasty – a 4 year single-centre experience 7th International Conference for Coronary Artery Disease, Venice, Italy 7th-10th October 2007

Presentations at National meetings

Mckay.EJ, Smyth.JV, Manchester Royal Infirmary, UK CT scanning of Ruptured Abdominal Aortic Aneurysms – Priceless or Worthless? Would it compromise or improve care? National Vascular Surgical Society Annual General Meeting, October 2005

Abstracts presented at International Meetings

McKay.EJ, Heyes.K, Chaggar.P, Williams.SG, Bernard.J, Yonan.N, Venkateswaran.R, Shaw,SM, Muldoon.E: A retrospective analysis of *C*-reactive protein and correlation with infection in the immediate post-surgical period following Left Ventricular Assist Device (LVAD) implantation International Society of Heart Lung Transplantation Manchester Grand Hyatt, San Diego April 4th-8th 2017

McKay. EJ, Chaggar.P, Heyes.K, Williams.SG, Bernard.J, Yonan.N, Vekateswaran.R, Shaw.SM: Outcomes of patients undergoing Veno-Arterial Extra Corporeal Membrane Oxygenation (VA-ECMO) compared to the SAVE survival prediction score in a UK transplant population implantation International Society of Heart Lung Transplantation Manchester Grand Hyatt, San Diego April 4th-8th 2017

Chaggar.P, *McKay.EJ*, Williams.SG, Bernard.J, Yonan.N, Venkateswaran.R, Shaw.SM: Predictors of Survival in Critical Cardiogenic Shock Admissions to a Quaternary Heart Failure Unit in the UK International Society of Heart Lung Transplantation Manchester Grand Hyatt, San Diego April 4th-8th 2017

Chaggar.P, *McKay.EJ*, Foden.P, Williams.SG, Bernard.J, Yonan.N, Venkateswaran,R, Shaw.SM: Outcomes and Characteristics of Patients with Critical Cardiogenic Shock Admitted to a Quaternary Heart Failure Unit in the UK International Society of Heart Lung Transplantation Manchester Grand Hyatt, San Diego April 4th-8th 2017

Ashrafi.R, *Mckay.EJ* Endocarditis in a Large District General Hospital: A Study of the Microbiological Spectrum for the Period 2000-2011 University Hospital Aintree, Liverpool, UK European Society of Clinical Microbiology and Infectious Diseases 22nd ECCMID, London, UK 31st March – 3rd April 2012

Ashrafi.R, *Mckay.EJ*, Garg.P, Davis.GK Biomarkers in the Metabolic Syndrome: The Overlap with Predictive Markers in Cardiovascular Disease American Heart Association, Hyatt Regency Capitol Hill, Washington D.C, USA May12-14th 2011

Ramsdale KA, *Mckay EJ*, Ramsdale DR, Rao A, Asghar O Late complications after drug eluting stent implantation in "real – world" clinical practice Cardiothoracic Centre, Liverpool 14th World Congress of Cardiology Meeting, Buenos Aires, Argentina, 18th-21st May 2008

Publications

- Chaggar.P, *McKay EJ*, Foden P, Williams SG, Barnard J, Yonan N, Venkateswaran.R, Shaw.SM Clinical characteristic and survival in cariogenic shock admissions to a UK heart transplant unit. <u>Future Cardiol.</u> 2018 Sep;14(5):397-406. doi: 10.2217/fca-2017-0094
- 2. *Mckay.EJ* British Society for Heart failure 19th Annual Autumn meeting update, British Geriatrics society newsletter, 2017
- 3. *McKay.EJ*, Heyes.K, Chaggar.P, Williams.SG, Bernard.J, Yonan.N, Venkateswaran.R, Shaw,SM, Muldoon.E: A retrospective analysis of C-reactive protein and correlation with infection in the immediate post-surgical period following Left Ventricular Assist Device (LVAD) implantation International Society of Heart Lung Transplantation San Diego April 2017
- 4. *McKay. EJ*, Chaggar.P, Heyes.K, Williams.SG, Bernard.J, Yonan.N, Vekateswaran.R, Shaw.SM: Outcomes of patients undergoing Veno-Arterial Extra Corporeal Membrane Oxygenation (VA-ECMO) compared to the SAVE survival prediction score in a UK transplant population implantation International Society of Heart Lung Transplantation San Diego April 2017
- 5. Chaggar.P, *McKay.EJ*, Williams.SG, Bernard.J, Yonan.N, Venkateswaran.R, Shaw.SM: Predictors of Survival in Critical Cardiogenic Shock Admissions to a Quaternary Heart Failure Unit in the UK International Society of Heart Lung Transplantation San Diego April 2017
- 6. Chaggar.P, *McKay.EJ*, Foden.P, Williams.SG, Bernard.J, Yonan.N, Venkateswaran,R, Shaw.SM: Outcomes and Characteristics of Patients with Critical Cardiogenic Shock Admitted to a Quaternary Heart Failure Unit in the UK International Society of Heart Lung Transplantation San Diego April 2017
- 7. Wynn.G, *Mckay.EJ*, Bragadeesh. TK, Morrison.WL, Somauroo.JD Pulmonary stenosis leading to massive pulmonary artery aneurysm demonstrated by multi-modality imaging *Int J Cardiol* 2014 Mar 1;172(1):e177-9
- 8. Ashrafi.R, *Mckay.EJ*, Ebden.L, Burgess.M Endocarditis in a Large District General Hospital: A Study of the Microbiological Spectrum for the Period 2000-2011Exp Clin Cardiol.2012 Winter;17(4):175-8.
- 9. Ashrafi. R, *Mckay.EJ*, Jones.J, Amadi.A: Long Term Outcomes in Stress Echocardiography: Ten Year Follow up of a Cohort in a Large Single Centre *Cardiol Res* 2012;3(1):23-27
- 10. *Mckay.EJ*, Ashrafi. R, Mckay V, Amadi.A: Aneurysmal 'Pepper-Pot' Atrial Septal Defect in an elderly gentleman with multiple cerebrovascular attacks *BMJ Case Reports* 2012;10.1136
- 11. *Mckay.EJ*, Ashrafi.R: When the dentist said: "Be still your beating Heart!"Br J Cardiol 2011;18:217

- 12. Garg.P, Ashrafi.R, *Mckay. EJ*, Davis.GK: Cardiac involvement in SLE is not only limited to pericarditis Journal of the Royal College of Physicians *Clin Med.* 2011 Oct;11(5):507
- 13. Ashrafi.R, Garg.P, *Mckay.EJ*, Gosney.J, Chuah.S, Davis.GK: Aggressive Cardiac Involvement in Systemic Lupus Erythematosus: A Case Report and a Comprehensive Literature Review *Cardiol Res Pract*. 2011 Feb 15;2011:578390
- Ramsdale. D.R, Rao.A, Asghar.O, Ramsdale.K.A, *Mckay.EJ*, Outcomes after drug eluting stent implantation in "real world" clinical practice. *J invasive Cardiol* 2008; 20: 493–500
- 15. *Mckay.EJ*, Ramsdale KA, Ramsdale DR. Drug eluting stent implantation for radial artery graft aorto-ostial stenosis. *NZMed* [2008; 121, 1273
- 16. Ramsdale K, Mckay EJ, Ramsdale DR: Plait Br J Hosp Med 2008; 69, 49

European Posters

Jones.J, Khan.S, Taufik.A, Bryan.Angella, Cullington.D, Dua.J, Elgamal.S, Jenkins.P, Papaioannou.V, *Mckay.EJ*, Ashrafi.A Serial Cardiopulmonary exercise testing in adults with congenital heart disease: The rise and fall of the peak-predicted VO2 max Liverpool Heart and Chest Hospital Association for European Paediatric and Congenital Cardiology25th-27th May 2021

Other Publications

Mckay EJ: Misplaced and inappropriate Br Dent J 2006; 201, 613

Invited Reviews

Mckay EJ, Gray T Radial shapes Cordis Cardiac and Vascular Update March 2012

Clinical Trial involvement

1. I have been a key-investigator on the PARADIGM-HF, SIGNIFY and Engage AF trials

Course Organisation and Management

Course Director - MRCP Review course January 2011

I organised a national MRCP review course with specific, but not exclusive attention to cardiology. Much of the curriculum was focused upon basic science and physiology to help with those undertaking part 1. There was a strong clinical component with some bedside teaching for those attempting part 2. This was well attended with excellent feedback. 88% of attendees passed at their first attempt. NHS service development

Heart Failure Service Development

• Developed rapid access heart failure multi-disciplinary clinic: Delivered by heart failure nurse specialists and highly specialised pharmacists Community heart failure direct access pathway High risk patients now seen within 2 weeks

• Chair of Heart Failure steering group, West Cheshire CCG: Secured additional funding for a recurrent Band 7 Heart Failure Nurse specialist Secured additional funding for non-recurrent Band 6 post

• Chair of Heart Failure MDT, Countess of Chester Community, secondary care and cardiac rehabilitation specialists Secured dedicated time from a care-of-the-elderly consultant Established clear inter-departmental relationships with key specialties Ensures high-quality consultant input for complex cases and upskilling of clinical team

• Intensive Care Unit Heart Failure teaching Facilitates safe and joined-up heart failure management for complex patients Provides echocardiography delivery and quality assurance Mentoring intensivists in completing the FICE echo examination **Drugs and Therapeutics Development**

• Development and Implementation of Entresto clinics: Increased from 4 to 70-80 patients maintained on Entresto In top 30% of prescribers in region (from bottom) 14% uptake of drug - 2-5% higher than national average Working with industry partners to source additional resources as demand now overtaking capacity

• Ferinject Formulary Inclusion

Wrote and presented business case to divisional finance board To be presented at board of drugs and therapeutics September 2018.

• Ambulatory IV diuretic pathway:

Co-author of regional pathway

Increased safety and quality for most high-risk patients across Cheshire and Merseyside

Procedural Service Development

• Right heart catheterisation - Sole operator Advanced heart failure assessment for pre-transplant assessment Advanced atrio-ventricular valve workup for risk stratification prior to surgery.

• Nurse led and delivered LINQ implantation service

Mentored and trained band 7 Cather lab manager in procedural technique Now fully independent

European Innovation Projects

• RITMOCORE Clinical lead for 1 of 2 UK centres €20 million European Commission funded pacing procurement project

Journal Review

I have frequently been invited to provide a review for the Postgraduate Medical Journal (PMJ) and the journal 'BMJ case reports'.

Interests

As a younger man I was a competitive swimmer. I was successful at national level for many years with some international involvement before an injury ended things prematurely. I enjoy playing golf and until recently I have been a season ticket holder at Old Trafford, supporting Manchester United Football Club. I enjoy photography and reading books, mainly crime novels and architecture.

Reference(s)

Dr Jason Pyatt Consultant Cardiologist Liverpool University Hospitals Foundation Trust Liverpool, UK Jason.pyatt@liverpoolft.nhs.uk

Dr Jonathan Hasleton Consultant Cardiologist/Clinical Director for Cardiology Liverpool University Hospitals Foundation Trust and Liverpool Heart and Chest Hospital Liverpool, UK John.hasleton@liverpoolft.nhs.uk

Dr Reza Ashrafi Consultant Cardiologist (ACHD and EP specialist) Liverpool Heart and Chest Hospital, Liverpool, UK <u>reza.ashrafi@lhch.nhs.uk</u>