Advances in Clinical and Experimental Medicine

MONTHLY ISSN 1899-5276 (PRINT) ISSN 2451-2680 (ONLINE) advances.umw.edu.pl

2025, Vol. 34, Special Issue 1

European Rural and Isolated Practitioners Association (EURIPA)
14th Rural Health Forum

Lutherstadt Wittenberg, Germany
June 26–28, 2025

ABSTRACT BOOK

doi:10.17219/acem/2025euripa-abstractbook

Impact Factor (IF) – 1.9
Ministry of Science and Higher Education – 70 pts
Index Copernicus (ICV) – 171.00 pts

Wroclaw Medical University

Advances
in Clinical and Experimental Medicine

ISSN 1899-5276 (PRINT) ISSN 2451-2680 (ONLINE) advances.umw.edu.pl

MONTHLY 2025
Vol. 34, Special Issue 1

Advances in Clinical and Experimental Medicine (*Adv Clin Exp Med*) publishes high-quality original articles, research-in-progress, research letters and systematic reviews and meta-analyses of recognized scientists that deal with all clinical and experimental medicine.

Editorial Office
ul. Marcinkowskiego 2–6
50-368 Wrocław, Poland
Tel.: +48 71 784 12 05
E-mail: redakcja@umw.edu.pl

Publisher
Wroclaw Medical University
Wybrzeże L. Pasteura 1
50-367 Wrocław, Poland

Online edition is the original version of the journal

Editor-in-Chief
Prof. Donata Kurpas

Deputy Editor
Prof. Robert Śmigiel

Managing Editor
Marek Misiak, MA

Statistical Editors
Wojciech Bombała, MSc
Anna Kopszak, MSc
Dr. Krzysztof Kujawa
Jakub Wronowicz, MSc
Maciej Wuczyński, MSc

Manuscript editing
Marek Misiak, MA
Paulina Piątkowska, MA

Scientific Committee
Prof. Sandra Maria Barbalho
Prof. Antonio Cano
Prof. Chong Chen
Prof. Breno Diniz
Prof. Erwan Donal
Prof. Chris Fox
Prof. Yuko Hakamata
Prof. Carol Holland
Prof. Sabine Bährer-Kohler
Prof. Markku Kurkinen
Prof. Christopher S. Lee
Prof. Christos Lionis
Prof. Raimundo Mateos
Prof. Zbigniew W. Raś
Prof. Jerzy W. Rozenblit
Prof. Silvina Santana
Prof. Sajee Sattayut
Prof. James Sharman
Prof. Jamil Shibli
Prof. Michał J. Toborek
Prof. László Vécsei
Prof. Cristiana Vitale
Prof. Hao Zhang

Section Editors

Basic Sciences
Prof. Iwona Bil-Lula
Prof. Dorota Danuta Diakowska
Prof. Paweł Andrzej Karpiński
Prof. Bartosz Kempisty
Dr. Wiesława Kranc
Dr. Anna Lebedeva
Dr. Piotr Chmielewski
Dr. Sławomir Woźniak

Clinical Anatomy, Legal Medicine, Innovative Technologies
Prof. Rafael Boscolo-Berto

Dentistry
Prof. Marzena Dominiak
Prof. Tomasz Gedrange
Prof. Jamil Shibli
Laser Dentistry
Prof. Kinga Grzech-Leśniak

Dermatology
Prof. Jacek Szepietowski
Assoc. Prof. Marek Konop

Emergency Medicine, Innovative Technologies
Prof. Jacek Smereka

Evidence-Based Healthcare
Assoc. Prof. Aleksandra Królikowska
Dr. Robert Prill

Gynecology and Obstetrics
Assoc. Prof. Tomasz Fuchs
Dr. Christopher Kobierzycki
Dr. Jakub Staniczek

Histology and Embryology
Dr. Mateusz Olbromski

Internal Medicine

Angiology
Dr. Angelika Chachaj

Cardiology
Dr. Daniel Morris
Assoc. Prof. Joanna Popiołek-Kalisz
Prof. Pierre François Sabouret

Endocrinology
Prof. Marek Bolanowski

Gastroenterology
Assoc. Prof. Katarzyna Neubauer

Hematology
Prof. Andrzej Deptała
Prof. Dariusz Wołowiec

Nephrology and Transplantology
Prof. Mirosław Banasik
Prof. Krzysztof Letachowicz

Rheumatology
Assoc. Prof. Agata Sebastian
Dr. Sylwia Szafraniec-Buryło

Lifestyle Medicine, Nutrition and Health Promotion
Assoc. Prof. Michał Czapla
Prof. Raúl Juárez-Vela
Dr. Anthony Dissen

Microbiology
Assoc. Prof. Adam Junka

Molecular Biology
Dr. Monika Bielecka

Neurology
Assoc. Prof. Magdalena Koszewicz
Dr. Nasrollah Moradikor
Assoc. Prof. Anna Pokryszko-Dragan
Dr. Masaru Tanaka

Neuroscience
Dr. Simone Battaglia
Dr. Francesco Di Gregorio

Omics
Prof. Mariusz Fleszar
Prof. Paweł Andrzej Karpiński

Oncology
Prof. Andrzej Deptała
Prof. Adam Maciejczyk
Prof. Hao Zhang

Gynecological Oncology
Dr. Marcin Jędryka

Ophthalmology
Dr. Małgorzata Gajdzis
Prof. Marta Misiuk-Hojło

Orthopedics
Prof. Paweł Reichert

Otolaryngology
Prof. Tomasz Zatoński

Pediatrics

Pediatrics, Metabolic Pediatrics, Clinical Genetics, Neonatology, Rare Disorders
Prof. Robert Śmigiel

Pediatric Nephrology
Prof. Katarzyna Kiliś-Pstrusińska

Pediatric Oncology and Hematology
Assoc. Prof. Marek Ussowicz

Pharmaceutical Sciences
Assoc. Prof. Marta Kepinska
Prof. Adam Matkowski

Pharmacoeconomics
Dr. Sylwia Szafraniec-Buryło

Psychiatry
Dr. Melike Küçükkarapınar
Prof. Jerzy Leszek
Assoc. Prof. Bartłomiej Stańczykiewicz

Public Health
Prof. Monika Sawhney
Prof. Izabella Uchmanowicz

Pulmonology
Prof. Anna Brzecka

Qualitative Studies, Quality of Care
Prof. Ludmiła Marcinowicz

Radiology
Prof. Paweł Gać

Rehabilitation
Assoc. Prof. Aleksandra Królikowska
Dr. Robert Prill

Surgery
Assoc. Prof. Mariusz Chabowski

Telemedicine, Geriatrics, Multimorbidity
Assoc. Prof. Maria Magdalena Bujnowska-Fedak
Prof. Ferdinando Petrazzuoli

Editorial Policy

Advances in Clinical and Experimental Medicine (Adv Clin Exp Med) is an independent multidisciplinary forum for exchange of scientific and clinical information, publishing original research and news encompassing all aspects of medicine, including molecular biology, biochemistry, genetics, biotechnology and other areas. During the review process, the Editorial Board conforms to the "Uniform Requirements for Manuscripts Submitted to Biomedical Journals: Writing and Editing for Biomedical Publication" approved by the International Committee of Medical Journal Editors (www.ICMJE.org). The journal publishes (in English only) original papers and reviews. Short works considered original, novel and significant are given priority. Experimental studies must include a statement that the experimental protocol and informed consent procedure were in compliance with the Helsinki Convention and were approved by an ethics committee.

For all subscription-related queries please contact our Editorial Office: redakcja@umw.edu.pl
For more information visit the journal's website: advances.umw.edu.pl

Pursuant to the ordinance of the Rector of Wroclaw Medical University No. 37/XVI R/2024, from March 1, 2024, authors are required to pay a fee for each manuscript accepted for publication in the journal Advances in Clinical and Experimental Medicine. The fee amounts to 1600 EUR for all types of papers.

Indexed in: MEDLINE, Science Citation Index Expanded, Journal Citation Reports/Science Edition, Scopus, EMBASE/Excerpta Medica, Ulrich's™ International Periodicals Directory, Index Copernicus

Typographic design: Piotr Gil, Monika Kolęda
DTP: Wydawnictwo UMW
Cover: Monika Kolęda
Printing and binding: Drukarnia I-BiS Bierońscy Sp.k.

European Rural and Isolated Practitioners Association

14th EURIPA Rural Health Forum

Rural Reformation:
Meeting Wellbeing and Healthcare Needs in Rural Communities

Lutherstadt Wittenberg, Germany
26th – 28th June 2025

ABSTRACT BOOK

Special thanks to:

Advances in Clinical and Experimental Medicine

Wonca
World family doctors. Caring for people.
EUROPE

VIATRIS

NCD Academy
Powered by American College of Cardiology

DEGAM
Deutsche Gesellschaft für
Allgemeinmedizin und Familienmedizin

IAM

UMH UNIVERSITÄTSMEDIZIN HALLE

Organising Committee

Juan Barranco	EURIPA International Advisory Board and SemFYC
Alexander Bauer	Martin Luther Universität, Halle Wittenberg
Thoms Frese	Martin Luther Universität, Halle Wittenberg
Markus Herrman	EURIPA International Advisory Board and Otto von Guericke Universität Magdeburg
Lisa Marie Klix	EURIPA International Advisory Board and Otto von Guericke Universität Magdeburg
Oleg Kravtchenko,	President EURIPA
Helene Markham-Jones	Lincoln Institute for Rural and Coastal Health
Ferdinando Petrazzuoli	EURIPA Scientific Board and president-elect EURIPA, Lund University, Sweden
Jane Randall-Smith	Executive Secretary EURIPA
Jo Robins	EURIPA Executive Committee

Scientific Committee

Alexander Bauer Co-chair	Luther Universität, Halle Wittenberg
Gindrovel Dumitra	EURIPA International Advisory Board Member for Romania, University of Medicine and Pharmacy of Craiova
Miriam Dolan Co chair	Co-chair EURIPA Scientific Board
Thomas Frese	Luther Universität, Halle Wittenberg
Sam Cooke	Lincoln Institute for Rural and Coastal Health
David Halata	EURIPA Executive Committee
Markus Herrmann	Otto von Guericke Universität Magdeburg
Joyce Kenkre Co-Chair	Co-Chair EURIPA Scientific Board and University of South Wales
Donata Kurpas	EURIPA Executive Committee, Wroclaw University
David Nelson	Lincoln Institute for Rural and Coastal Health
David O'Brien	University of Lincoln
Ferdinando Petrazzuoli	EURIPA Scientific Board and President-elect EURIPA, Lund University, Sweden
Bohumil Seifert	Czech Society of General Practice
José Ignacio	Santos Plaza SEMFYC

The **International Advisory Committee** is represented by members from across Europe who are members of the **EURIPA International Advisory Board**.

Moderators of the sessions

Oleg Kravtchenko
Helen Markham-Jones
Andrea Balbarini
Anna Falk
Rosario Falanga
Beata Blahova
Miriam Dolan
David Halata
Juan Barranco
L'ubomír Molčan
Katerina Javorska
Alexander Bauer
Ferdinando Petrazzuoli
Thomas Frese
Solveig Weise
Tobias Deutsch
Kathleen Denny
Susanne Unverzagt
Johannes Fluch-Niebuhr

English Editors

Miriam Dolan
Joyce Kenkre
Helene Markham-Jones
Brian Norton
Rebecca Payne
Jo Robins
Louise Wilson

Editorial Office

Jane Randall-Smith, United Kingdom, EURIPA Executive Secretary
e-mail: secretary@euripa.org

Rural Reformation:
Meeting Wellbeing and Healthcare Needs in Rural Communities

Welcome to the Abstract Book of the 14th EURIPA Rural Health Forum 2025 at Wittenberg Lutherstadt. Thanks to its residence and university foundation in the 15th century, Wittenberg was ultimately able to become an intellectual centre of humanism and, as Martin Luther's place of work, the centre of the Reformation. Wittenberg's status as a UNESCO World Heritage Site dates back mainly to this period. In reference to the beginning of the Reformation, after Martin Luther spread his 95 Latin disputation theses from here on 31 October 1517, our gathering as a cornerstone of this year's gathering under the theme "Rural Reformation: Meeting Wellbeing and Healthcare Needs in Rural Communities."

This collection of abstracts represents the innovative ideas, research, and strategies that aim to address the pressing challenges faced by rural healthcare systems across Europe and beyond.

The Forum serves as a unique platform for healthcare professionals, researchers, and policymakers to exchange knowledge and inspire actionable solutions. The abstracts featured here delve into critical areas such as workforce shortages, health policy, clinical excellence, and the transformative potential of digital health solutions. They reflect the Forum's commitment to preserving the core values of rural primary care, such as continuity of care and person-centered approaches, while embracing innovation and collaboration.

Key topics explored in this Book include leveraging team-based care while maintaining patient-physician relationships, supporting rural clinicians through mentorship and peer networks, and utilizing telehealth and mobile health units to improve access to care. Additionally, the abstracts highlight the importance of community engagement, patient-centered care planning, and integrating community health workers into care teams to strengthen ties between healthcare providers and the communities they serve.

As EURIPA foresees a future where rural general practitioners are empowered, connected, and proud of their role, this Abstract Book serves as a testament to the resilience and creativity of those dedicated to rural healthcare. It is a call to action to transform rural healthcare into a sustainable, high-value system that meets the wellbeing and healthcare needs of rural communities.

We invite you to explore the ideas and insights presented in this Book, which will inspire discussions and workshops throughout the forum. Together, let us shape the future of rural healthcare and make a lasting difference in the lives of patients, communities, and healthcare professionals.

We invite you to a "Rural Reformation for a Future in Wellbeing for Healthcare in Rural Communities".

Dr. Ferdinando Petrazzuoli
Professor Thomas Frese
Professor Markus Herrmann

Co-chairs of the Organizing Committee

14th EURIPA Rural Health Forum, Wittenberg, Germany – Programme at a Glance

Rural Reformation: Meeting Wellbeing and Healthcare Needs in Rural Communities

THURSDAY 26/06/2025

Hours	Room 1	Room 2	Room 3
	Posters will be displayed throughout the Forum in the Auditorium Maximum		
09:30 – 12:00	EURIPA Executive Committee, International Advisory Board and Scientific Board Joint Meeting (with coffee)		
12:00 – 14:00	Registration		
14:00 – 14:45	**Official Opening Ceremony** 1. Prof. Thomas Frese, Director Institute of General Practice and Family Medicine, Martin-Luther-University Halle-Wittenberg 2. Dr. Ferdinando Petrazzuoli, EURIPA President 3. Secretary of State Wolfgang Beck 4. Prof. Dr. med. Heike Kielstein, Dean of the Medical Faculty of the Martin Luther University Halle-Wittenberg 5. Inaugural Address Prof. Dr. med. Markus Herrman, Institute of General Practice and Family Medicine, Otto-von-Guericke-University, Magdeburg, on behalf of DEGAM		
14:45 – 16:15	**Workshop 1** **#66 Medication Management in Rural Primary Care: The Role of AI-Based Based Decision Support with ChatGPT** Nurmuhammed Arynov, Markus Herrmann, Martin Berwig D	**Workshop 2** **#63 Empowering youth to drive equity and community engagement in medical education and rural general practice** Gabriel-Cristian Vacaru, Roxana Surugiu, Alexandra-Aurora Dumitra, Popescu Maria-Cătalina, Maria Loredana Nicolae, Gheorghe Gindrovel Dumitra	**Workshop 3** **#21 Less stress, more competence: self-care, communicative competence, quality of life and professional medical action** Peter Vogelsänger, Markus Herrmann
16:15 – 16:45	Coffee break		
16:45 – 17:45	**Keynote addresses** Key Note 1 – Prof. Kerstin Hämel, University of Vienna; Workforce-Team working Key Note 2 – Ass. Prof. Andree Rochfort, President of EQuIP – One Health		
17:45 – 18:45	**Oral Presentation 1** **Moderators:** Oleg Kravtchenko, Tobias Deutsch **#11 Attitudes of Medical Students in Croatia Towards Rural Medical Education and Practice** Natasa Mrduljaš Đujić, Ivana Radić, Nina Bašić-Marković, Toni Vrgoč, Maja Buljubašić **#38 Are nurse-led patient consultations acceptable for the general practitioners and practice nurses in Germany? Results from a cross-sectional survey in two federal states** Julia Morgner, Marcus Heise, Celina Wiens, Felix Bauch, Thomas Frese, Solveig Weise	**Oral Presentation 2** **Moderators:** Andrea Balbarini, Kathleen Denny **#5 Looking for the REMEDY for out of hours medication access in rural communities** Rebecca Payne, Adam Mackridge **#31 Drones, are they ready to fly?** Aleksandra Tanaka, Elinor Thomas, Rebecca Payne	**Oral Presentation 3** **Moderators:** Anna Falk, Beata Blahova **#10 Evaluation of Skin Cancer Knowledge Level and Sun Protection Behavior** Deniz Cebeci, Melahat Akdeniz **#12 Exploring how comorbidities, ageing and intimacy intersect with sexual behaviour: a qualitative interview study with older people in a coastal and rural community.** Charlotte Evans, Ros Kane, Helene Markham Jones

THURSDAY 26/06/2025

Hours	Room 1	Room 2	Room 3
17:45 – 18:45	**#39 Are practice nurse-led patient consultations acceptable for the general population in Germany? Results from a population-based survey.** Solveig Weise, Celina Wiens, Felix Bauch, Marcus Heise, Jan Schildmann, Rafael Mikolajczyk, Thomas Frese **#76 Nurturing our professional identities to enable engagement with the challenges we face** Ralph Hammond	**#35 Carbon Footprint Awareness of Family Medicine Residents** Şeyda Özcan Maden, Ayşe Gülsen Ceyhun Peker **#3 Overmedicalization, quaternary prevention and deprescribing** Rosario Falanga, Amanda Joan Keefe, Sonia Zenari, Andrea Balbarini, Salvatore Condorelli, Enrico Distefano, Andrea Posocco, Ferdinando Petrazzuoli	**#20 Understanding Late HIV Diagnosis and Testing in Rural and Coastal Communities in the UK: A Rapid Systematic Review** Wania Burhan, Helene Jones, Ros Kane **#73 Optimising diabetic kidney disease (DKD) management in a rural setting to optimise patient outcomes** Danielle Reesby, Carl Deaney
18:45 – 20:00	**Welcome reception**		

FRIDAY 27/06/2025

Hours	Room 1	Room 2	Room 3
	Posters will be displayed throughout the Forum in the Auditorium Maximum		
09:00 – 10:00	**Oral Presentation 4** **Moderators:** Rosario Falanga, Thomas Frese **#61 HPV Vaccine Myths: Perspectives from Romanian Family Doctors in Clinical Practice** Maria Catalina Popescu, Roxana Surugiu, Carmen-Adriana Dogaru, Gindrovel Dumitra, Alexandra-Aurora Dumitra, Loredana-Maria Nicolae, Andreea-Maria Diaconu, Gabriel-Cristian Vacaru **#15 Addressing Healthcare Disparities in Centre Val-de-Loire: The Role of Primary Care Teams** Nicolas Pignon, Charlotte De Fontgalland, Katerina Kononovich, Jean-Marc Mace **#32 Engaging general practitioners in EU public health projects: lessons from the EUVABECO initiative** Dorota Stefanicka-Wojtas, Donata Kurpas **#67 Rural CPTS and access to care: realities of medicine in "crisis management" mode.** Faustine Marcourt Baldinot, Alice Rochette, Charlotte De Fontgalland, Laetitia Thoyer, William Meeus	**Oral Presentation 5** **Moderators:** Beata Blahova, Konstantin Moser **#71 Strategic Policy Mechanisms to Address General Practitioner Shortages in Latvia's Primary Healthcare System: A Qualitative Analysis of National-Level Documents (2017–2024)** Beate Livdanska, Ieva Griķe, Ilze Grope, Matiss Kore, Arita Kohva, Cindy Lisa Heaster, Michael Frank Harris **#26 Innovating Rural Recruitment: A National Program Supporting Future GPs in Underserved Areas of the Czech Republic** David Halata, Katerina Javorska **#36 Recruitment and retention of doctors i rural Norway: dealing with complexity** Anders Svensson **#13 Remote and online continuous professional development for rural primary care practitioners: what do we need and what's missing.** Dirk Pilat	**Developing a Forum statement** **Chair:** Prof. Joyce Kenkre, EURIPA

FRIDAY 26/06/2025

Hours	Room 1	Room 2	Room 3
10:00 – 10:30	Coffee break		
10:30 – 12:00	**1 Slide 5 Minutes** **Moderators:** Thomas Frese, Juan Barranco **#56 A retrospective analysis of an improved strategy employed by a primary care provider within a rural community aimed to increase participation rates in colorectal cancer screening.** Natalie Daly, Carl Deaney **#57 Meeting well-being needs: a retrospective review of a proactive approach to encouraging patients to engage more using exercise programmes** Natalie Daly, Carl Deaney, Michelle Daff, Sarah Knudsen, Sophie Kirk **#53 Rural well-being & healthcare needs: a paradigm shift to a holistic approach to dementia to improve clinical practice for our aging population** Natalie Daly, Carl Deaney **#51 Revisiting management paradigms to enhance clinical practice in the rural setting to meet the healthcare needs of patients with chronic conditions and our ageing population** Carl Nigel Deaney, Scott Glickman **#44 From Isolation to Innovation: Strengthening Rural Health Through a Learning Healthcare Community** Shabanam Asghari, Tayebeh Sohrabi, Cheri Bethune, Wendy Graham, Emily Hussey **#33 Patient and doctor satisfaction related to doctor-patient patient consultations in rural family practice** Andras Mohos, Péter Torzsa, Gergely Ágoston	**Workshop 4** **#16 POCUS Applications in the Curriculum for Frontline Physicians** Mihai Iacob, Andrea Balbarini, Kundnani Nilima Rajpal	**Workshop 5** **#41 Mapping rural health research and educational activities in Europe: A scoping exercise** Viet-Hai Phung, Ferdinando Petrazzuoli, Kateřina Javorská, Josep Vidal-Alaball, Anette Fosse, John Wynn-Jones, Anette Liljegren, Rebecca Payne, Ioanna Tsiligianni, Rosario Falanga, Christos Lionis, Chris Clark, Jean-Pierre Jacquet, Donata Kurpas, Nataša Mrduljaš-Đujić, Liam Glynn, Peter Hayes, Joyce Kenkre, Sarah-Anne Muñoz, Pam Nicoll, Roxana Surugiu, Tim Sanders, David Halata, Mark Gussy

FRIDAY 26/06/2025

Hours	Room 1	Room 2	Room 3
10:30 – 12:00	**#30 The Role of Collection Lockers and Vending Machines in Modern Pharmacy Services** Elinor Thomas		
	#23 Uncovering hidden causes of anaemia in young patients: a case study of paraesophageal hernia in Latvia Glenda Kuciņa, Valerija Mizavcova, Vija Siliņa		
12:00 – 13:00	**Oral Presentation 7** **Moderators:** Miriam Dolan, Konstantin Moser **#70 Experiences of collaboration between the Lincolnshire Living with Cancer Programme and Primary Care within a rural and coastal setting in England.** Kathie Mcpeake, Ellie Sadler, Samuel Cooke, David Nelson, Ros Kane, Peter Selby **#42 Identifying mental health research priorities in rural (and coastal) settings: A rapid systematic review** Viet-Hai Phung, David Nelson, Ros Kane, Kyla Pennington, Joseph Akanuwe, Harriet Moore, Robert Dean, Russell Roberts, Derek Ward, Jaspreet Phull, Tracy Mccranor, Colin Hopkirk, Jon Mansfield, Richard Morriss, Mark Gussy, David Dawson, Nima Moghaddam **#6 Needs of older people in Brandenburg (BeMenBB)** Romina Jasmin Frenzel, Dr. Claudia Diederichs **#25 The paradox of teleconsultation: when technological innovation reinforces inequalities in access to healthcare in rural areas of the Centre-Val de Loire region.** Charlotte De Fontgalland, Katerina Kononovich, Alice Rochette, Jean Marc Macé	**Oral Presentation 8** **Moderators:** L'ubomír Molčan, Susanne Unverzagt **#17 A prospective observational cross-sectional study with Focused cardiac ultrasound (FOCUS) or Rapid Cardiac Assessment conducted by family physicians assisted by AI on patients with a high risk of cardiovascular diseases.** Mihai Iacob, Kundnani Nilima Rajpal **#28 Implementation of Point-of-Care Ultrasound in Czech General Practice: Rural Practices Leading the Way** David Halata, Dusan Zhor **#72 Adherence to the Chronic Obstructive Pulmonary Disease Guidelines between rural and urban areas in Primary Care: the Greek COPD COCARE study** Ioanna Tsiligianni, Stavroula Papageorgakopoulou, Antonios Christodoulakis, Izolde Bouloukaki **#27 Accuracy of point-of-care ultrasound examination of the lung in primary care performed by general practitioners: a cross-sectional study** David Halata, Dusan Zhor	**Intergenerational session: Passing the torch** **Face-to-Face and On-line** Dr. Oleg Kravtchenko, EURIPA Dr. Johannes Fluch-Niebuhr, Halle University Hospital **Panellists:** Ass.Prof. Dr. Karen Flegg, Austalia Dr Veronika Rasic, Croatia and UK Dr John-Michael Stevens, Canada Philip Vogt, Germany Dr Jean Tori Pantel, Germany Julius Alexander Klabunde, Germany
13:00 – 14:00	Lunch provided		
14:00 – 15:00	**Virtual Practice Tour to set the scene, followed by discussion panel** **Moderator:** Dr. Oleg V Kravtchenko, EURIPA and Dr. Johannes Fluch-Niebuhr, Halle University Hospital		

FRIDAY 26/06/2025

Hours	Room 1	Room 2	Room 3
15:00 – 16:30	**Elevator Pitch** Dr. Alexander Bauer Dr. Ferdinando Petrazzuoli Join us to share your research ideas - or learn about other people's research ideas! If you have a new research idea, and have not sent an abstract to present it at the EURIPA Wittenberg Forum, why not present it to us as an 'elevator pitch'? 'Elevator pitches' are usually used to 'sell' a business idea, but here you will have 2 minutes to tell us.		**Interactive Round Tables** **Understanding Rural Practice through sharing practice experiences: A Dialogic Workshop** Dr Miriam Dolan Dr. Anna Falk Prof. Dr. Markus Hermann Dr Mateja Kokalj Kokot Jane Randall-Smith
16:30 - 17:00	Refreshments		
17:00 – 17:30	**Keynote address** Key Note 3 – Prof. Russell Roberts, Charles Sturt University, Australia – Developing rural research capacity		
17:30 – 1830	**Poster presentations** **The best five posters with the highest scores** Dr. Helene Markham-Jones		
20:00 – 22:00	Rural Dinner, Martas Hotel (booking required)		

SATURDAY 28/06/2025

Hours	Room 1	Room 2	Room 3
Posters will be displayed throughout the Forum in the Auditorium Maximum			
09:00 – 09:30	**Keynote address** Key note 4 – Ass Prof Karen Flegg, President World WONCA		
09:30 – 11:00	**Oral Presentations 9** Moderators: Miriam Dolan, Tobias Deutsch **#55 The use of remote screening for CKD detection in at-risk patients with hypertension in a rural population** Danielle Reesby, Carl Deaney **#19 Results from nurse-assisted mobile telemedicine services in rural Hungarian areas** Ábel Perjés, Eszter Iván, Rita Kovács, Anita Pálinkás, Ferenc Vincze, János Sándor, Péter Maróti, Dániel Eörsi, Ferenc Nagy **#60 Utilising the prostate cancer UK risk assessment tool to improve patient outcomes in rural primary care** Stephanie Koliandris, Michelle Daff, Sophie Kirk, Sarah Knudsen, Natalie Daly, Carl Deaney	**Workshop 6** **#78 The country doctors with a lifelong patient-doctor relation – extinct species? Or the best job one can have!** Anna Falk, Beata Blahova, Manuela Castanheira, David Halata, Kateřina Javorská, Mateja Kokalj Kokot, Victoria Tkachenko, Ferdinando Petrazzuoli	**NCD Academy: supporting the primary healthcare workforce with online education to reduce the global burden of NCDs** Sponsor: Viatris Ferdinando Petrazzuoli Joris Van Vugt Thomas Frese

SATURDAY 28/06/2025

Hours	Room 1	Room 2	Room 3
09:30 – 11:00	#22 **Does It Really Work? -- Patient and Health Care Professional Satisfaction with a Telemedicine Based Health Care Program in Underserved Regions** Daniel Eorsi, Eszter Ivan, Rita Kovacs, Abel Perjes, Peter Maroti		
11:00 – 11:30	Coffee break		
11:30 – 12:30	**Plenary session** **Rural Reformation discussion panel** **Moderators:** Dr. Alexander Bauer Martin-Luther-University Halle-Wittenberg Dr Miriam Dolan, EURIPA Prof Dr Markus Herrmann Otto-von-Guericke-University Magdeburg **Panellists:** Dr Markus Hermann, Germany Dr. Marijan Gjukicto, Austria Ass. Prof. Andree Rochfort, Ireland Prof. Russell Roberts,Australia Prof. Mark Gussy, UK		
12:30 – 13:00	**Closing Ceremony** **Presentation of the Forum Statement, and adoption** **Award presentations** Dr. Ferdinando Petrazzuoli, EURIPA President Berit Hansen award oral communication (young physician) Award for best oral communication **Best poster presentation** Prof. Donata Kurpas – Editor-in-Chief Award of free publication **Presentation by Dr. Juan Barranco of the 15th EURIPA Rural Health Forum, Cartagena, Spain, 1–3 October 2026**		
13:00 – 14:00	Lunch - provided		
14:00 –	**Tourist Excursion (booking required)**		

Posters

#45 Enhanced Skin Lesions Management in Rural Practice: The Power of Teledermatology, Dermatoscopy, and Targeted Education.
Laura Siauciuniene, Alena Nicholson, Meredith Donaldson, Agne Meskauskiene, Danielle Reesby, Carl Deaney

#50 The role of pharmaceutical services in rural areas in Poland
Joanna Siennicka, Jolanta Pańkowska, Damian Chaciak, Michał Żuk, Paweł Żuk, Joanna Oberska, Magdalena Łoś

#24 Model Regions for Medical Training
Jamal Bannourah, Josephine Pritzkow

#69 Impact of Socioeconomic Deprivation and Rurality on Mortality in Cardiovascular Patients
T.h. An Dang, Kathrin Gödde, Susanne Haucke, Philipp Jaehn, Christine Holmberg, Stefanie Schmitz, Martin Christ, Oliver Ritter, Benjamin Sasko

#75 Diagnosis of acute rheumatic carditis in an asymptomatic child during a sports examination: the role of family physicians in early diagnosis
Kübra Efe, Turgay Polat

#54 Enhancing the Management of Chronic Conditions in Rural Communities Through SGLT2i: A Collaborative Population Health Initiative
Danielle Reesby, Carl Deaney

#29 Municipal Interventions to Attract Family Medicine Residents in Latvia: Challenges and Strategies
Matīss Kore, Arita Kohva, Ieva Griķe, Cindy Lisa Heaster, Beāte Livdanska, Michael Harris, Līga Kozlovska, Ilze Grope

#64 How successful are we at meeting the challenge of providing an integrated cardiorenal-metabolic approach to primary care in our rural area?
Carl Nigel Deaney, Danielle Reesby

#37 Addressing the continuous professional development needs of rural GPs using e-learning- Pre-liminary findings of a survey among members of the European Rural and Isolated Practitioners Association (EURIPA) and the Royal College of General Practition
Miriam Dolan, Dirk Pilat, Rebecca Orr, Iva Petricusic, Mary Robertson, Veronika Rasic

#65 How One European Changed the Landscape of America's Rural Healthcare: Lessons Learned.
Douglas Dyer

#52 Holistic outcomes in real-world secondary prevention: strategies and treatment for established ASCVD patients in a rural English primary care network
Carl Nigel Deaney, Meredith Donaldson, Agne Meskauskiene

#40 Delayed Diagnosis of Isolated Tracheoesophageal Fistula in a 5-Year-Old with Recurrent Respiratory Tract Infections: A Case Report.
Ieva Elizabete Maldupa, Ieva Zvirbule

#47 Prognosis of the Real and Due Demand for Family Medicine Services in Poland
Małgorzata Kalisz, Anna Kordowska, Jolanta Michałowska, Leszek Średziński, Anna Krawczyk, Magdalena Łoś, Artur Prusaczyk

#68 Individual Task Card (ITC) for medical and non-medical staff as a tool for the optimal resource utilization
Sabina Karczmarz, Paweł Żuk, Marika Guzek, Anna Kordowska, Małgorzata Kalisz

#48 The role of AI, telemedicine and digital tools in alleviating the phenomenon of medical deserts
Magdalena Łoś, Adrian Kuś, Marika Guzek, Paulina Wójcik, Aleksandra Prusaczyk-Świerzewska, Piotr Gryza, Jakub Magdziarz, Łukasz Lasyk

#77 "Let's walk together for health" - a way to build a healthy community
Ľubomír Molčan, Jana Bendova

#14 Coordinated care in PHC in Poland - patients' perspective Results of the study
Sabina Karczmarz, Artur Prusaczyk, Magdalena Kołodziej, Agnieszka Mastalerz-Migas, Marcin Połowniak

#46 Education in Action: A Case Review of Early Referral for Rare Skin Cancer Following Clinical Training on Skin Lesions Recognition
Laura Siauciuniene, Carl Deaney

#74 Severe anemia identified in chronic disease monitoring
Kübra Efe, Turgay Polat

#59 Utilising the weight reduction agent orlistat to manage obesity in at-risk patients with obesity in rural primary care.
Stephanie Koliandris, Natalie Daly, Carl Deaney

#49 Health care in depopulation areas – contemporary challenges related with population wellbeing and shortage of medical staff
Przemysław Dybciak, Dorota Lenarcik, Grzegorz Bańka, Sabina Karczmarz, Artur Prusaczyk, Magdalena Łoś

#43 Taking the pledge for planetary health
Miriam Dolan

#62 Understanding Vaccine Hesitancy: Insights into Influenza Vaccine Refusal in Romania
Maria Loredana Nicolae, Maria Catalina Popescu, Alexandra Aurora Dumitra, Gabriel Cristian Vacaru, Andreea Maria Diaconu, Roxana Surugiu, Gheorghe Gindrovel Dumitra

#34 Survey of Cooperation Between Rural Doctors and Specialists
Andrea Fuleova, Lenka Szwanczar Tomkova, Xenia Xenia Wostmann, Ferdinando Petrazzuoli

#58 Using recipes incorporating oral nutritional supplements to enhance engagement and compliance in patients at risk, improving dietary intake beyond food first.
Stephanie Koliandris, Danielle Reesby, Carl Deaney

#7 Study on Food Intake and Emotions in Individuals: Differences Based on Rural and Urban Habitats
Rafael Ríos Bernabé, Teresa Sánchez Moya, Rafael Ríos De Moya-Angeler, Carmen Frontela Saseta, Rubén López Nicolás, Alfonso Ríos Bernabé

Collaborative Practice in Rural Primary Health Care: Expanding Nurse Roles to Meet the Complex Needs of Chronically Ill Persons

Prof. Kerstin Hämel

Department of Health Services Research and Nursing Science, School of Public Health, Bielefeld University, Universitaetsstrasse 25, 33615, Bielefeld, Germany. Department of Nursing Science, Faculty of Social Sciences, University of Vienna, Alser Strasse 23/12, Vienna, 1080, Austria

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Kerstin Hämel
E-mail: kerstin.haemel@univie.ac.at

Funding sources
None declared

Conflict of interest
None declared

Abstract

In face of accelerating population ageing, rural primary health care (PHC) professionals are increasingly required to address complex health needs. Combining skills and expertise of multiple professionals is seen as a cornerstone of high quality, comprehensive PHC and can facilitate the participation of patients, families and communities in care. While in many European countries fragmented care models and mono-professional practices persist, there is a clear shift towards interprofessional, integrated PHC models, enhanced task-sharing arrangements between professionals and closer collaboration in PHC. Rural regions are considered as innovation incubators where such transformative models can emerge and be tested. In this context, nurses have been gaining prominence in rural PHC through enhanced approaches to chronic illness management, including health promotion, self-management support, case management, and the assumption of more and advanced clinical tasks traditionally within the physician scope of practice.

In this presentation, I will first examine the ongoing trend of expanding nursing practices in PHC, exploring both the possibilities and barriers that emerge in collaborative practice. I will then analyse how nurses are transforming patient-nurse relations by promoting the participation of chronically ill persons, their families and communities in PHC nursing. Subsequently, I will focus on the evolving nature of nurse-physician collaboration in the context of expanding nurse roles. Finally, I will discuss how collaboration and integration of expanded nursing practice in rural PHC can be effectively promoted at both policy and practice levels, highlighting emerging opportunities and potential challenges.

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

One health, and a sustainable future for rural populations and rural family medicine

Prof. Dr. Andrée Rochfort

Director of Quality Improvement and Doctors Health and Wellbeing, Irish College of GPs, Dublin

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Andrée Rochfort
E-mail: andree.rochfort@icgp.ie

Funding sources
None declared

Conflict of interest
None declared

Abstract

Family doctors working in rural environments have unique roles in delivering medical care and supporting primary healthcare prevention and health promotion services to rural and remote populations.

In addition, rural doctors are rural citizens, with a collective role in mitigating and adapting to climate change and extreme weather events, associated disruptions to rural infrastructure, communications and transport, electricity, supplies of food, water and healthcare. Geographical location, access to services and delays in restoration of disrupted services may rapidly become significant challenges for all people in rural areas, particularly for outdoor workers and vulnerable subgroups.

Planned coordination of responses to early warning systems by rural family doctors in conjunction with primary healthcare and other services and disciplines are crucial to meet intense needs during extreme events and to contribute to generic and specific longer term responses in rural communities.

This lecture will illustrate how actions taken in clinical practice to reduce the carbon footprint of healthcare can make a significant difference by focussing on high-resource high-impact areas such as prescribing, diagnostics and transport. Family medicine can guide patient populations to choose healthier lifestyle options, to coordinate efficient use of available services and to avoid overdependence on health services and overmedicalisation through patient self-management support and reliable sources of information.

In this presentation we will also explore how human health is interconnected with one health, the healthy survival of animals (domesticated and wild), insects, fish and birds and all plant life in a healthy environment. For a sustainable future, rural family doctors can also play a part in a sustainable society, a circular economy and influence development that invests in environmental health and planetary health.

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Low-hanging fruit left to rot? Applying research to optimise clinical and public health impact

Russell Roberts

Professor of Management and Health Leadership at Charles Sturt University. Clinical Associate Professor at The University of Sydney. National Director of Equally Well Australia. Chair of the Global Leadership Exchange Physical Health Stream. International Collaborative Learning Network on Mental Health and Physical Illness Chair

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Russell Roberts
E-mail: rroberts@csu.edu.au

Funding sources
None declared

Conflict of interest
None declared

Abstract

The last 3 decades has seen remarkable progress in health outcomes. This progress is related to advances in health promotion, illness prevention, screening and treatment. However, people living in rural communities have not benefitted equally from these system enhancements. This presentation overviews the extent and pattern of the health disparities for marginalised population groups, including people living with mental health conditions, and offers practical, easily implementable actions that will make a difference.

There is an unacceptable, and indeed scandalous health equity gap for significant sections of our population. The premature death rates for marginalised groups are between 4–6 times higher than for the rest of the population, and approx. 2/3 of these deaths are 'excess' or potentially preventable. A deeper analysis of the data patterns in research provides important insights that if applied to clinical and public health practice, would dramatically improve the physical health and wellbeing of at-risk populations.

The research data underscores the urgent need for targeted solutions to reduce the health inequalities for marginalised populations, especially those living in rural communities. However, they also demonstrate that research evidence alone is not sufficient to drive change. As such, the presentation offers key governance principles for researchers, advocates and service providers to more effectively address the access and health disparities for marginalised population groups.

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Wellbeing and health care needs: Is it all about rural disadvantage?

Assoc. Prof. Karen Flegg (Australia)

President WONCA – rural doctor

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Karen Flegg
E-mail: Karen.Flegg@anu.edu.au

Funding sources
None declared

Conflict of interest
None declared

Abstract

The Reformation has a place in history – let's not forget our history.

WHO has considered how to meet global well-being and health care needs and this could be divided into 7 different factors, including promoting Universal Health Coverage and promoting Primary Health Care. There is evidence of disadvantage for rural communities – that equates to being less likely to achieve Universal Health Coverage by 2030. Numerous factors such as poverty, health inequities, lower life expectancy are more common in rural populations. How can this be mitigated and are there possible advantages yet to be taken full benefit of in rural communities?

What is important for improving access in rural areas to Universal Health Coverage? A focus on Primary Health Care which includes strong Family Medicine is a prime factor. What will help strengthen family medicine in rural settings? Rural Family Medicine matters because, half the world's population lives in rural areas, but half the world's doctors do not.

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Overmedicalisation, quaternary prevention and deprescribing

Rosario Falanga[1], Amanda Joan Keefe[2], Sonia Zenari[3], Andrea Balbarini[4], Salvatore Condorelli[5], Enrico Distefano[5], Andrea Posocco[6], Ferdinando Petrazzuoli[7]

[1] Department of Primary Care, Local Health Authority, Pordenone, Italy, 33070 Polcenigo, Italy
[2] Department of Primary Care, Local Health Authority, Pordenone, Italy
[3] Department of Primary Care, Local Health Authority, Verona, Italy
[4] Department of Primary Care, Local Health Authority, Modena, Italy
[5] Department of Primary Care, Local Health Authority, Catania, Italy
[6] Department of Primary Care, Local Health Authority, Treviso, Italy
[7] EURIPA President

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Rosario Falanga
E-mail: dr.rosariofalanga@gmail.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Justification. In recent decades, medicine has made great strides in, advances in diagnostic techniques, drug therapies and new surgical techniques that have led to significant improvements in care. However, there are some negative aspects of this medical progress, related to inappropriateness or side effects. A particularly significant example concerns over testing (especially in screening), overdiagnosis and overtreatment, especially polypharmacy in the elderly, with a raised risk of adverse drug reactions and drug interactions. Quaternary prevention is defined as any action taken to protect people from medical interventions that are likely to cause more harm than good. This concept might be a tool that, to some extent, could help clinicians in preventing overdiagnosis and inappropriate prescriptions. In an era of increasing medicalization, quaternary prevention is crucial for promoting patient-centred care, enhancing the quality of life, and ensuring a balanced approach to healthcare.

Objectives. To spread knowledge about the problem of overdiagnosis and overtreatment among rural GPs. To understand the risk of overdiagnosis deriving from examinations and imaging for individual health assessment in asymptomatic people. To explore potential strength, limitations and risk of quaternary prevention. To spread the concept of polypharmacy, medical review and deprescribing. To promote a more sustainable, ethical and patient centred approach in everyday practice.

Organisation. Brief presentation by the workshop leader. Participants will be invited to discuss 5 different interactive clinical cases focusing on potential benefits and harms in cancer screenings, overdiagnosis in the setting of primary, secondary and tertiary prevention and inappropriate prescriptions. At the end, outcomes will be summarized in a plenary session.

Participation. Interactive participation of rural practicing GPs and nurses. Estimated number of participants: maximum 50.

Expected outcomes. Learning how to reduce and prevent over-testing, overdiagnosis, overtreatment, especially polypharmacy in elderly patients. Learning how to raise awareness of the problem and inform patients.

Key words: overdiagnosis, overtreatment, polypharmacy, quaternary prevention, medical review, deprescribing

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Municipal Medical Care Centres as a new development in the provision of GP care in rural areas: The case study of Marienmünster

Dominic Behde

Urban Development and Quantitative Methods of Urban and Regional Research, 20457 Hamburg, Germany

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Dominic Behde
E-mail: dominic.behde@hcu-hamburg.de

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Many rural areas face challenges in ensuring GP care. Medical care centres are seen as a possible solution, as they can offer attractive working conditions for GPs. In recent years, more and more municipalities have therefore been exploring whether and how municipal Medical Care Centres (mMCC) can contribute to ensuring GP care. However, implementation experience is limited.

Aim of the study. This study analyses the foundation, establishment and design of a mMCC in the rural town of Marienmünster. The aim is to analyse the design of the founding and establishment process as well as the design of the new institution. The focus is on hurdles and success factors, conceptual and organisational innovations and special features as well as opportunities and risks for the municipality.

Methodology. The study is based on a literature review, a structured document analysis and semi-structured interviews with key actors: the mayor, the consulting company manager/mMCC director and a manager of the regional Association of Statutory Health Insurance Physicians. The analysis was carried out using qualitative structuring content analysis.

Results. Marienmünster has secured local GP care for the time being by founding an mMCC as a GmbH. The foundation and establishment succeeded because there was a pronounced problem awareness and a co-operative collaboration with the previously existing GP practice. One of the hurdles was that the responsibility and distribution of tasks for GP care are subject to change. Marienmünster faces the challenge of avoiding staff shortages in the mMCC and counteracting inter-municipal competition. The municipality now has the opportunity to actively shape healthcare planning and link it with town and neighbourhood development.

Conclusions. The analysis shows that mMCCs can secure GP care when municipal commitment, cooperation and strategic planning align. There are many hurdles to overcome and a variety of risks and opportunities for the municipality. Marienmünster provides valuable insights into mMCC foundation, establishment and organisation.

Key words: GP care, Medical Care Centres, healthcare infrastructure, municipal healthcare planning, rural health, municipalities

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Looking for the REMEDY for out of hours medication access in rural communities

Rebecca Payne[1], Adam Mackridge[2]

[1] Oxford University, LL65 4HB Anglesey, UK
[2] Bangor University, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Rebecca Payne
E-mail: rebecca.payne@phc.ox.ac.uk

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Remote consultations are common in the provision of primary care to rural populations in the out of hours period, but mean access to medication can be challenging.

Aim of the study. To develop, implement and evaluate a technological solution to provide access to urgently required medication following an out-of-hours tele-consultation.

Methodology. A researcher was embedded within the North Wales GP Out-of-hours (GPOOH) service as they worked with industry to develop and implement a medication machine, the Pharmaself REMEDY machine in the North Wales GPOOH service. Patton's developmental evaluation was used within Stakes's case study approach to evaluate against Greenhalgh's NASSS framework.

Results. The technology required significant modifications to suit this new use case and patient group, including the development of a new user interface for both clinicians and patients. While navigating the broader system was challenging, it was achievable with the support of senior stakeholders, particularly in securing the necessary regulatory approvals. Organizational constraints, such as financial limitations, restricted capital funding, and concerns around cybersecurity and information governance, led to considerable delays in the anticipated timeline. Adoption attitudes varied among groups, patients and the pharmacy team were highly enthusiastic and eager to use the technology, whereas clinicians were more hesitant. Notably, patient demand played a crucial role in encouraging clinician adoption. The overall value of the machine is still under evaluation. Patients perceive significant benefits, particularly in reducing their need for travel, but the broader health system remains uncertain about its overall impact. We anticipate having further results by the time of the conference, particularly in the areas of condition management, integration, and long-term adaptation.

Conclusions. Tele-pharmacy needs to be considered alongside tele-consultations when providing healthcare to remote and rural communities. Technological solutions may provide a reliable and accessible option for providing access to urgently required medications.

Key words: tele-health, tele-pharmacy, rural, general practice

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Needs of older people in Brandenburg (BeMenBB)

Romina Jasmin Frenzel[1], Claudia Diederichs[2]

[1] Center for Aging Research, Brandenburg an der Havel, Germany
[2] Center for Aging Research (Brandenburg Medical School Theodor Fontane), Germany

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Romina Jasmin Frenzel
E-mail: rominajasmin.frenzel@mhb-fontane.de

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. In recent years, Brandenburg has experienced significant demographic shifts characterized by an aging population and regional disparities in population growth. Consequently, there is an increasing demand for healthcare services, social support systems and age-appropriate housing to accommodate the needs of the aging population. With this background, people aged 75 and over are invited to take part in a preventive home visit by trained social workers in a rural district in Brandenburg in Germany.

Aim of the study. What is the social and health situation of older people who live independently at home in the district of Teltow-Fläming and other regions? What needs do older people have regarding municipal social participation services as well as counselling and support services, in order to be able to lead a self-determined life for as long as possible?

Methodology. The prospective survey and observation study analyses quantitative data using a questionnaire, which is completed by the participants after the preventive home visit and subsequently evaluated. The questionnaire contains information on the social and health situation of older people, e.g., social support, loneliness, everyday activities and digital health literacy as well as the utilisation of and need for several services in the community, including e.g. health care, voluntary work and leisure activities.

Results. The survey phase is currently running from March until probably July 2025. Data will be analysed on an ongoing basis so that the results can be presented and discussed at the EURIPA forum.

Conclusions. The data will indicate the current needs of the population group aged 75 and over, who live independently in their own domestic environment in a rural region. Conclusions are expected on feelings of loneliness, social support, state of health, need and utilisation of different services in the community.

Key words: healthy aging, preventive home visits, rural healthcare, aging research

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Study design on food intake and emotions in individuals: Differences based on rural and urban habitats

Rafael Ríos Bernabé[1], Teresa Sánchez Moya[2], Rafael Ríos De Moya-Angeler[1], Carmen Frontela Saseta[2], Rubén López Nicolás[2], Alfonso Ríos Bernabé[3]

[1] Servicio Murciano de Salud, 30800 Lorca, Murcia, Spain
[2] Universidad de Murcia, Spain
[3] Universidad Alfonso X el Sabio, Spain

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Rafael Ríos Bernabé
E-mail: jenasrios@yahoo.es

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Emotions have a powerful effect on food choices and eating habits. There is a clear relationship between eating, emotions, and increased caloric intake. Understanding this relationship is crucial for improving weight-loss programs and determining how emotions influence dietary behaviour in different emotional states.

Aim of the study. 1. To identify emotional eating in individuals who are overweight/obesity compared to those with normal weight. 2. To distinguish differences in food intake based on rural versus urban habitats.

Methodology. Study Design: This is a cross-sectional observational study analyzing the relationship between individuals' food intake and their emotions. The Emotional Eater Questionnaire will be used to classify participants based on their scores: 1) 0–5: Non-Emotional Eater; 2) 6–10: Slightly Emotional Eater; 3) 11–20: Emotional Eater; 4) 21–30: Highly Emotional Eater. A systematic random sampling method will be used to select 324 individuals from La Paca Health Center and an equal number from San Diego Health Center, both in Lorca (Murcia, Spain). Inclusion criteria: Participants aged between 14 and 75 years, without eating disorders or anxiety disorders. Exclusion criteria: Individuals younger than 14 or older than 75, those diagnosed with eating disorders, or those undergoing treatment with anxiolytics/antidepressants. Sociodemographic variables (age, sex, country of origin, education level) and anthropometric measurements (height, weight, BMI, waist circumference) will be collected. For menopausal women, the date of their last menstruation will be recorded. The questionnaire will be administered anonymously at the health centres between February 2026 and July 2026, under the supervision of a physician or nurse. Statistical Analysis: Student's t-test, ANOVA, and Pearson's r correlation coefficient.

Ethical and legal considerations. The study will be approved by the Ethics Committee of Health Area III. Participants will provide signed informed consent. The study will adhere to the Declaration of Helsinki.

Key words: food intake, emotion, overweight/obesity

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Evaluation of skin cancer knowledge level and sun protection behaviour

Deniz Cebeci[1], Melahat Akdeniz[2]

[1] Muratpaşa District Health Department, 07030 Antalya, Turkey
[2] Akdeniz University, Turkey

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Deniz Cebeci
E-mail: drserifecebeci@gmail.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. The incidence of skin cancer has increased worldwide since 1950. Although mortality in young people has decreased with early diagnosis and treatment, there has been a dramatic increase in mortality in people over the age of 65. It is possible to protect against skin cancer with simple methods and skin cancer is a disease that can be treated with early diagnosis.

Aim of the study. It was aimed in this study to determine the relationship between socio-demographic characteristics, skin characteristics, eye and hair colour conditions, skin burn and skin cancer expressions, as well as the level of skin cancer knowledge and sun protection behaviours of patients over 18 years of age.

Methodology. Our research, which was designed as descriptive and cross-sectional, was conducted with face-to-face surveys and online survey interviews. Two scales were used in the study, namely "Skin Cancer and Sun Knowledge Scale" and "Sun Protection Behaviour Scale".

Results. Four hundred people aged 18 and over were included in the study. The mean age of the participants was 37.34 ±15.38, 73.5% female, 60.8% married, 85.8% university graduates, 81% active in an income generating job, 31.2% have chronic diseases. 5.5% of the participants were very light-skinned and 30% had light-coloured eyes, 24% had freckles, 79% had moles, 53.3% had a history of skin burn at least once, and 2.8% had a family history of skin cancer. 17% of the participants stated that they were exposed to the sun for more than 2 h a day, and 90.3% of them stated that they knew sun causes skin cancer.

Conclusions. In our study, it was observed that there was not enough awareness among the participants on skin cancer knowledge level and sun protection behaviour, considering their skin cancer risk factors and socio-demographic characteristics. There are few studies in the literature on skin cancer knowledge level and/or sun protection behaviour using validated scales. More studies can be developed and conduced to increase the level of knowledge and awareness of primary care physicians and/or their patients.

Key words: skin, cancer, sun, protection

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Attitudes of medical students in Croatia towards rural medical education and practice

Natasa Mrduljaš Đujić[1], Ivana Radić[2], Nina Bašić-Marković[3], Toni Vrgoč[4], Maja Buljubašić[5]

[1] SOOM, Postira, Croatia
[2] Ethos, Consultancy and Education Business, Algebra University College, Gradišćanska 24, Zagreb, Croatia
[3] Institution for primary health care, Medical Faculty of the University of Rijeka, Croatia
[4] GP, Split, Croatia
[5] Specialist practice in family medicine, Zagreb, Croatia

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Natasa Mrduljaš Đujić
E-mail: md.natasa@gmail.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Recruiting and retaining doctors in rural areas is challenging. In Croatia, medical school curricula lack content on rural medicine and specialized training for rural practice.

Aim of the study. This study explores the opinions and attitudes of 1st- and 6th-year medical students in Croatia regarding working in rural areas.

Methodology. An online questionnaire was administered to 690 Croatian medical students in their first and final years between January 2022 and February 2023. The cross-sectional study included 13 questions, with 5 on socio-demographic data. Data were analyzed using descriptive statistics and non-parametric tests (χ^2) to assess group differences.

Results. Compared to 1st-year students, final-year students feel less prepared by their education for rural practice ($\chi^2 = 84.287$, $p = 0.000$) but are more interested in working in rural areas ($\chi^2 = 26.810$, $p = 0.000$). Most students believe rural doctors need additional financial incentives, with this belief significantly stronger among final-year students ($\chi^2 = 14.192$, $p = 0.000$). Both groups agree that rural doctors face poor working conditions ($\chi^2 = 1.524$, $p = 0.217$). No statistically significant differences were found regarding job interest outside city centres ($\chi^2 = 2.041$, $p = 0.564$) or choosing rural medical practice ($\chi^2 = 4.795$, $p = 0.187$) among medical students from the Universities of Osijek, Rijeka, Split, and Zagreb. Students from rural settlements were more often interested in jobs outside the city centre (72.1%) compared to those from smaller towns (60.6%), ($\chi^2 1 = 5.142$, $p = 0.023$) and larger cities (44.1%), ($\chi^2 1 = 28.978$, $p = 0.000$).

Conclusions. Croatian medical students are interested in working in rural areas, but their education lacks adequate preparation for such practice. They view the current conditions for rural doctors as inadequate and believe that additional financial incentives are necessary. Interest in rural practice is consistent across medical faculties in Croatia, with students living in rural areas showing a higher interest in working there.

Key words: rural medicine, family doctor, family medicine, rural curriculum, medical students

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Exploring how comorbidities, ageing and intimacy intersect with sexual behaviour: A qualitative interview study with older people in a coastal and rural community

Charlotte Evans[1], Ross Kane[2], Helene Markham-Jones[3]

[1] Universities of Lincoln and Nottingham, CF31 5BW Bridgend, UK
[2] School of Health and Care Sciences, University of Lincoln, UK
[3] Lincoln Institute for Rural and Coastal Health (LIRCH), University of Lincoln, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Charlotte Evans
E-mail: mzyce6@nottingham.ac.uk

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Sexual behaviour encompasses biological, psychological and social elements and good sexual health is essential to wellbeing. Within rural and ageing populations, understanding what impacts sexual behaviour is critical to supporting positive sexual experiences. An ageing population contributes to more people having health issues, yet the impact on sexual behaviour is under researched. Coastal and rural towns often experience higher deprivation, limiting access to health services, yet little is understood about the impact on sexual health.

Aim of the study. This study aimed to examine the influence of comorbidities, ageing and intimacy on sexual behaviour in a rural and coastal population.

Methodology. Nineteen in-depth semi-structured life history interviews were conducted with adults over 65 in an east coast Lincolnshire rural coastal town. Analysis of the data used deductive thematic analysis with a specific focus on sexual behaviour in this setting.

Results. Older adults encounter numerous health issues affecting their sexual health and that of their partners. Many seek sexual relationships and experiences though participants' attitudes varied. Handholding and cuddling are valued expressions of intimacy. Some felt modern society allowed more openness to talk about sexual health and behaviour whilst others experienced ageism and discrimination. Geographically, lack of service provision and digital illiteracy may reduce access to health services.

Conclusions. Many older adults are still sexually active but experience difficulty discussing sexual health with healthcare providers. Healthcare providers should avoid age-related prejudice and initiate sexual health discussion when addressing apparently unrelated health concerns. Policy makers and healthcare providers should seek to develop accessible services for rural and coastal populations and to provide support for older adults with accessing digital tools.

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Remote and online continuous professional development for rural primary care practitioners: What do we need and what is missing

Dirk Pilat

RCGP, P75YY75 Kilcrohane, Ireland

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Dirk Pilat
E-mail: dirk.pilat@rcgp.org.uk

Funding sources
None declared

Conflict of interest
None declared

Abstract

Justification. For rural GPs, the delivery of continuous professional development and its outcomes, both for doctors and their patients, are affected by major challenges, including isolation from colleagues and secondary/tertiary centres. The unique attraction (and downside) of rural medicine is its vast scope: it's not only traditional f2f general practice at the office, but frequent house calls and nursing home visits, but for some practitioners also admission and ongoing care of in-hospital patients, emergency medicine, obstetric medicine, as well as procedures such as ultrasound, anaesthesia and minor surgery. Patients are different as well, with completely different health seeking behaviour and beliefs, compared to urban patients.

Objectives. To keep up to date, rural practitioners need excellent continuous professional development, covering all aspects of their practice (i.e. farming medicine, zoonotic diseases, first line emergency psychiatry). In this workshop I suggest we (the participants) collate the existing CPD offer available for rural practitioners and then determine the gaps.

Organisation. A room with a digital or analog whiteboard will suffice. An overhead projector would be great.

Participation. All members of the conference invited: medical students, trainees, nurses, established rural GPs, academics, educationalists

Expected outcomes. Development of a collection of existing resources and more importantly a wish list for resources that do not yet exist: this can be the basis of a discussion paper to request funding for further online CPD from regional/international organisations targeted at rural practitioners.

Key words: e-learning, continuous professional development, blended learning, app development, user experience, knowledge transfer, rural communities

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Coordinated care in PHC in Poland: Patients' perspective

Sabina Karczmarz[1], Artur Prusaczyk[1], Magdalena Kołodziej[2], Agnieszka Mastalerz-Migas3, Marcin Połowniak[4]

[1] Medical and Diagnostic Centre (MDC), 08-110 Siedlce, Poland
[2] WE Patients Foundation
[3] Polish Society of Family Medicine
[4] Value Based Integrated Care Employers Association

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Sabina Karczmarz
E-mail: sabina.karczmarz@centrum.med.pl

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. In October 2022, the implementation of coordinated care (CC) started in Poland. It was a response to low-quality capitation-based model of PHC funding and concept to overcome deficiencies in care management for people with chronic diseases. CC is a concept aimed at improving quality of medical services and efficiency of use of resources in ambulatory health care.

Aim of the case report. Coordinated care was introduced as a model of care covering patients with chronic diseases in cardiology, diabetology, endocrinology, pulmonology and, a year later, nephrology. 38% of PHC providers implement coordinated care, covering 48% of Poland's population. After 2 years, we conducted a survey of 1024 patients under CC. The project leader was an NGO and partners – scientific societies and employers' associations.

Case report. The overall perception of CC is very positive. Key conclusions point to improved access to SHC, better organization of appointments and more effective communication between patients and medical staff. Respondents point to faster access to consultations and more efficient use of diagnostic tests. Integration of services and support of coordinator at clinics are highly rated. Patients feel safer and better informed about their health, which significantly improves their treatment experience. More than 92% of patients are satisfied with their level of involvement in decisions regarding diagnosis and treatment, a positive indicator of effective cooperation between patients and care professionals.

Conclusions. Most patients recommend CC to their relatives, pointing to its effectiveness and convenience. Patients appreciate the possibility of faster access to specialists and better organization of the treatment process. Among the recommendations for improving care, patients point to the need to increase the availability of CC in smaller localities and to introduce additional services, such as psychological and neurological care, as well as rehabilitation. The key aspect is to maintain the pace of development, quality control, evaluation and improvement of the system.

Key words: primary health care, coordinated care, patient experience

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Addressing healthcare disparities in Centre Val-de-Loire: The role of primary care teams

Nicolas Pignon[1], Charlotte De Fontgalland[2], Katerina Kononovich[3], Jean-Marc Mace[3]

[1] Fédération des Unions Régionales des Professionnels de Santé, 45100 Orléans, France
[2] Union régionale des professionnels de santé – médecins libéraux, France
[3] Laboratoire interdisciplinaire de recherches en sciences de l'action (LIRSA) (EA 4603) Conservatoire des Arts et Métiers (CNAM), France

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Nicolas Pignon
E-mail: etude-esp@urpsml-cvdl.org

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. In the Centre Val-de-Loire region, concentrating hospital care in urban centres whilst reducing services in small towns and rural areas has significantly impeded access to healthcare. An aging population, a shortage of healthcare professionals, and geographic remoteness further exacerbate these disparities.

Aim of the study. To address these challenges, the region played a pioneering role in the deployment of coordinated practice, facilitating the emergence of Primary Care Teams (PCTs) in 2020. These teams offer a flexible model to streamline coordinated practice, foster interprofessional collaboration, and enhance territorial attractiveness – particularly in rural areas. Running until 2025, the PCT initiative is a key component of the region's broader healthcare transformation. It complements existing coordinated multiprofessional structures and addresses current demographic and health challenges. A comprehensive evaluation assesses its organizational, collaborative, and economic impacts and determines its long-term integration into formalized coordinated practice. This evaluation aims to optimise resource allocation, tailor care to the specific needs of the region, and questions the effectiveness of PCT in improving healthcare access and quality in Centre Val-de-Loire.

Methodology. A mixed-method approach combines semi-structured interviews with a diverse panel of PCT professionals and project leaders, along with surveys of healthcare providers, coordinated practice actors, and patients. This methodology enabled the creation of a PCT typology based on territorial location and the unique organizational specificities and constraints.

Results. Results indicate that the model improves care quality and coordination, strengthens interprofessional collaboration, and enhances caregivers' sense of belonging. However, issues such as unclear leadership roles, inadequate compensation for certain professions, and limited funding for targeted actions persist, prompting recommendations for further improvements.

Conclusions. These findings offer valuable guidance for future reforms. The PCT initiative has shown promise in addressing healthcare disparities in rural areas of Centre Val-de-Loire, but further improvements are necessary to ensure its long-term success and integration into coordinated practice.

Key words: healthcare access, rural areas, Primary Care Teams, coordinated practice, interprofessional collaboration

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Workshop: POCUS applications in the curriculum for frontline physicians

Mihai Iacob[1], Andrea Balbarini[2], Kundnani Nilima Rajpal[3]

[1] EUVEKUS/Romanian National Society of Family Medicine/GPs., 300150 Timișoara, Romania
[2] Training Coordinator for General Practitioners in the Pavullo District, Italy
[3] Discipline of Internal Medicine and Ambulatory Care, Prevention and Cardiovascular Recovery, Department VI – Cardiology, Victor Babeș University of Medicine and Pharmacy, Timișoara, Romania

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Mihai Iacob
E-mail: dr_iacob@yahoo.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Justification. Family medicine/GPs has become a specialty at the European-level that solves most cases in medical offices through the judicious use of various modern, miniaturized medical devices alongside the classic-clinical examination for early and accurate diagnosis. Using POCUS will enhance the accuracy of diagnostics and quality at the primary healthcare level.

Objectives. We are pursuing the expansion of high-performance services from hospitals to the community, through a real democratization of the medical system. The workshop aims to equip frontline physicians with essential POCUS skills and knowledge, enhancing their ability to implement ultrasound techniques in urgent and emergency care settings. The integration of point-of-care ultrasound (POCUS) within frontline physicians' curricula will be explored.

Organisation. A short introduction with a presentation of last year's European-survey employed to assess the curricular application of POCUS throughout Europe among frontline physicians will provide the background. Also will be presented the results of a Delphi survey conducted within the EFSUMB POCUS Task Force Group, detailing the primary-level POCUS applications that will be included within the European POCUS curriculum for front-line physicians. Speakers will present the uses of POCUS in lung pathology, and the E-FAST (Extended-Focused-Assessment-with-Sonography-in-Trauma-and-Emergency) protocol.

Following these presentations, a practical session will be conducted during which participants will be taught real-time ultrasound skills. With some ultrasound-machines/portable-ultrasound-probes, each participant will have hands-on experience obtaining ultrasound views under the mentorship of experts.

Participation. This interactive workshop is structured to equip frontline doctors with the POCUS skills that enable the integration of ultrasound procedures into primary and emergency care. The session also illustrates the evolving role of family medicine, which is increasingly becoming the spine of modern health systems that offer proactive, integrated, and comprehensive care.

Expected outcomes. This workshop will provide an excellent learning opportunity and skill development to prepare healthcare professionals to improve patient care using POCUS in daily practice at the basic level.

Key words: POCUS, clinical ultrasound, multiparametric POCUS, E-FAST, emergency ultrasonography in frontline physicians

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

A prospective observational cross-sectional study with focused cardiac ultrasound (FOCUS) or Rapid Cardiac Assessment conducted by family physicians assisted by AI on patients with a high risk of cardiovascular diseases

Mihai Iacob[1], Kundnani Nilima Rajpal[2]

[1] EUVEKUS/Romanian National Society of Family Medicine/GPs., 300150, Timișoara, Romania

[2] Discipline of Internal Medicine and Ambulatory Care, Prevention and Cardiovascular Recovery, Department VI – Cardiology, Victor Babeș University of Medicine and Pharmacy, Timișoara, Romania

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Mihai Iacob
E-mail: dr_iacob@yahoo.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. FOCUS could be a complement to the clinical exam for evaluating the structural and functional abnormalities of the heart. Just a few studies have assessed the value and accuracy of focused cardiac ultrasound (FOCUS) performed by family physicians.

Aim of the study. This study aimed to evaluate the diagnostic accuracy of FOCUS performed by family doctors compared to cardiologists' evaluation as a „Gold-Standard-method" on patients with a high cardiovascular risk and to find a new AI-supported-algorithm for early detection of heart-pathology.

Methodology. We conducted a prospective observational cross-sectional study on1780-patients with high-risk (Score2/OP2). Patients were first examined by family physicians (FP) with expertise and subsequently by cardiologists to determine the accuracy of this application. We used the 5 standard-cardiac-scans: Subxiphoid-view,/Parasternal-long/short-axis,/Apical-four-chamber-view,/IVC-assessment with AI-support (self-detected-LVEF). We have developed a computerized diagnostic supported by AI-Software. The agreement was evaluated using Cohen's kappa coefficient. We did a logistic regression analysis to assess the impact of clinical-ultrasound variables on cardiovascular risk and to test the performance of the AI algorithm in the cardiovascular risk prediction model based on independent variables (risk factors/clinical/ultrasound parameters).

Results. We identified 585 patients with pathology subsequently confirmed by the cardiologist. We did the descriptive analysis. The accuracy was 94.33%, with a sensitivity of 89.91%, specificity of 96.49% and prevalence of 32.87%. We did the χ^2 test to compare the results of the AI-combined FOCUS algorithm proceeded by FP with traditional clinical assessments. The statistical significance level was very high, $p < 0.0001$. Reports of the 2 groups for identifying cardiac pathology showed very good agreement ($k = 0.88$, 95% CI: 0.81–0.95), standard error (SE) of 0.037. The logistic-regression showed strong-significance-predictors like: hypertension/LVEF<50%(AI)/valvular-abnormalities with $p < 0.0001$.

Conclusions. FOCUS performed by trained-FP AI-assisted was comparable to cardiologists' results. The logistic regression reveals that several factors significantly predict high cardiovascular risk including hypertension/diabetes/smoking/clinical symptoms/AI-assisted-LVEF/and atheromatous-plaque on the carotid artery. The AI-assisted LVEF measurement, in particular, shows a strong association with cardiovascular risk, highlighting the importance of AI in assisting with the diagnosis in primary care settings.

Key words: FOCUS, Rapid Cardiac Assessment, AI ultrasound support, multiparametric ultrasound cardiac assessment, POCUS in frontline physicians

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Challenges and solutions in delivering telemedicine services in rural settings: A collection of practical experiences

Dániel Eörsi[1], Ábel Perjés[2], Ferenc Boka[1]

[1] Hungarian Order of Malta, 1118 Budapest, Hungary
[2] Semmelweis University, Department of Family Medicine, Hungary

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Dániel Eörsi
E-mail: eorsi.daniel@maltai.hu

Funding sources
None declared

Conflict of interest
None declared

Abstract

Justification. Telemedicine is expanding worldwide to improve access to healthcare. Telemedical solutions must be adapted to the specific circumstances of different care settings.

Objectives. In this workshop, we will: 1) conduct a real-time online demonstration of the complex design of the Naszlady Attila Health Promotion Program by the Hungarian Order of Malta, which serves developing settlements in Hungary. The program operates Mobile Health Care Units equipped with diagnostic tools such as wide-angle and focused cameras, ECG, spirometers, ankle-arm index meters, and point-of-care laboratory diagnostic tools. Nurses and technical staff are present on-site to help patients using the platform and operate the devices, while medical doctors provide consultations via videoconference platforms. While physical examinations are somewhat limited, healthcare professionals report that the professional reliability of this approach is nearly equivalent to traditional in-person care. 2) discuss challenges and solutions encountered in unique circumstances, such as equipment instability on rough roads, weak local electricity networks, and limited broadband internet access. 3) invite participants to share their experiences in adapting telemedical standards to local conditions.

Organisation. This is an interactive workshop where all participants are encouraged to share their experiences and collaborate in drawing both general and specific conclusions.

Participation. Healthcare professionals engaged in telemedical services are warmly invited to join. We also welcome colleagues without direct experience but with an interest in telemedicine.

Expected outcomes. 1. Participants will learn: a) the concept of nurse assisted telemedical care; b) possible pitfalls of telemedicine delivery in rural setting; c) good practices that help to overcome said pitfalls. 2. We could establish the formulation of comprehensive recommendations for designing effective telemedical settings in rural environment.

Key words: telemedicine, point-of-care testing, devices, nurse-assisted telemedicine

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Results from nurse-assisted mobile telemedicine services in rural Hungarian areas

Ábel Perjés[1], Eszter Iván[2], Rita Kovács[2], Anita Pálinkás[3], Ferenc Vincze[3], János Sándor[3], Péter Maróti[4], Dániel Eörsi[2], Ferenc Nagy[2]

[1] Semmelweis University, 1092 Budapest, Hungary
[2] Hungarian Charity Service of the Order of Malta
[3] University of Debrecen, Hungary
[4] University of Pécs, Hungary

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Ábel Perjés
E-mail: perjes.abel@semmelweis.hu

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Healthcare access is a main problem in rural, socioeconomically underprivileged areas. The Hungarian Charity Service of the Order of Malta operates a telemedicine-based mobile healthcare program (MHP) in 35 rural settlements. MHP units are vans equipped with broadband internet connection, a high-resolution teleconference platform, devices enabling certain aspects of the physical examination via telemedicine and additional diagnostic tools, such as point-of-care lab devices. These units are operated by trained nurses who meet the patients in person, while the physician performs consultations using the teleconference platform.

Aim of the study. We aimed to measure the performance of MHP regarding care delivery and effect on chronic disease management.

Methodology. Patient traffic data were collected from the electronic health records system of MHP. From patients visiting MHP units in the first 6 months (April 1, 2023–October 31, 2023) of operation, 3 cohorts were formed, based on their chronic condition: hypertension, type-2 diabetes and obesity. Disease markers (blood pressure, HgbA1C, weight) were measured for each cohort upon the first and last visits at the MHP (with min. 30 days separation).

Results. The overall serviced population is approx. 26,000 (35 settlements). 2571 people had at least one consultation at MHP, with 6918 consultations overall in 2024. The average number of care events per person was 2.69 (SEM: 0.02). The proportion of patients with controlled blood pressure grew from 12.3% to 19.5% in the hypertension cohort, and from 25.0% to 52.8% in the diabetes cohort. The relatively short time was not sufficient to identify any trend in weight and in diabetes or lipid markers.

Conclusions. Our early results show that MHP can effectively deliver medical care and improve chronic disease management in underprivileged regions. Further data collection and analysis is currently being executed by the research group, in order to accurately assess the performance of telemedicine-based healthcare services.

Key words: telemedicine, rural health, underserved population, chronic disease, hypertension, diabetes

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Understanding late HIV diagnosis and testing in rural and coastal communities in the UK: A rapid systematic review

Wania Burhan[1], Helene Jones[2], Ros Kane[3]

[1] University of Nottingham, Lincoln, UK
[2] Lincoln Institute for Rural and Coastal Health (LIRCH), UK
[3] School of Health and Care Sciences, University of Lincoln, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Wania Burhan
E-mail: w.b.virgo@hotmail.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Late HIV diagnosis remains a significant public health challenge in rural and coastal areas of the UK, where limited healthcare access, social stigma, and low awareness exacerbate delays in testing. Early diagnosis is crucial in preventing progression to AIDS, saving lives, and reducing healthcare burdens. Understanding the barriers to timely HIV testing is essential to improving public health outcomes in underserved communities.

Aim of the study. This review aimed to identify barriers to HIV testing and diagnosis in rural, remote, and coastal communities, exploring contributing factors such as geographical isolation, healthcare infrastructure, and social stigma. Key research questions were: What are the barriers to timely HIV testing in rural and coastal areas, and how can they be addressed to improve early detection and healthcare outcomes?

Methodology. The systematic review included studies published between 2014 and 2024. Overall, 6465 studies were screened, 116 met the eligibility criteria, and 8 were included in the final review. Qualitative and quantitative research was included, and key criteria included adults or adolescents aged 15 or over from rural and coastal areas of the UK and studies reporting on late diagnosis and testing of HIV infections.

Results. The review found that primary barriers included: 1) Geographic isolation: long travel distances to healthcare facilities for treatment and testing. 2) Limited healthcare resources: a shortage of HIV testing services in rural areas. 3) Social stigma: cultural factors discouraging HIV testing. 4) Lack of targeted education: Insufficient HIV awareness campaigns in rural settings.

Conclusions. Overcoming these barriers requires targeted public health initiatives that are culturally appropriate and tailored to the place-based needs of rural communities. Comprehensive education and training for health and social care professionals in geographically isolated and peripheral populations could significantly improve early HIV diagnosis, treatment, and care.

Key words: HIV diagnosis, rural healthcare, social stigma, healthcare access, UK

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

"Less stress, more competence": Self-care, communicative competence, quality of life, and professional medical action

Peter Vogelsänger, Markus Herrmann

Institute of General Medicine (IALM), 39120 Magdeburg, Germany

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Peter Vogelsänger
E-mail: peter.vogelsaenger@web.de

Funding sources
None declared

Conflict of interest
None declared

Abstract

Justification. Physical and mental self-care, quality of life and highly professional behaviour represent major challenges for healthcare providers. Complexity, acceleration, and task intensification characterise their professional and personal everyday lives. The health burden can have a significant impact on medical practice and is a cause for concern worldwide. In 2017, they prompted the World Medical Association to include medical self-care in the revised Geneva Declaration. The German Medical Association placed the health of Physicians as the focus at the annual meeting held in 2019.

Objectives. The "Magdeburg Mindfulness Modules (MAM)" programme was developed in 2018 at the Institute of General Medicine in Magdeburg to support healthcare providers maintaining physical and psychological presence, self-care, empathy, self-compassion and professional communication. It is based on the ReSource project of the Max Planck Society as well as the National Competence-Based Learning Goals Catalogue for Medicine (NKLM)

Organisation. Mindfulness-based techniques underlying the MAM program, which help maintain physical and psychological presence, self-care, empathy, and self-compassion, dealing with difficult feelings, and effectively supporting medical communication and research (mindfulness, empathy, health burden of healthcare providers) are the subject of the workshop.

Participation. A presentation introduces the topic. The group practice (meditation cushions and yoga mats are provided for up to 15 participants) allows for first experiences of body presence, affect, and cognition. The experiences are reflected upon and discussed in the group.

Expected outcomes. The overview of the topic, the shared practice, and discussions are intended to encourage healthcare providers to practice self-care, self-compassion, and mindful work, to promote their health and to support professional communication and patient care.

Key words: protecting against burnout, fostering empathy and self-care among healthcare providers, practicing mindfulness work with patients.

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Does it really work? Patient and healthcare professional satisfaction with a telemedicine-based healthcare program in underserved regions

Dániel Eörsi[1], Eszter Ivan[1], Rita Kovacs[1], Ábel Perjés[2], Peter Maroti[1]

[1] Hungarian Order of Malta, 1118 Budapest, Hungary
[2] Semmelweis University, Department for Family Medicine, Hungary

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Dániel Eörsi
E-mail: eorsi.daniel@maltai.hu

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. In Hungarian socio-economically disadvantaged regions there is a serious shortage of healthcare professionals. To address this challenge, the Hungarian Charity Service of the Order of Malta currently operates a nurse-assisted telemedicine based Mobile Healthcare Program (MHP), in 35 rural settlements nationwide. Nurses and social workers operate in local health centres, while medical Doctors provide consultations remotely. Physical examinations are aided by using advanced digital technologies. This study explores attitudes toward telemedicine in the Hungarian population.

Aim of the study. 1. Are participating patients and healthcare professionals satisfied with this novel model? 2. Is the developed system comfortable for users, and is it professionally reliable?

Methodology. Communication barriers, acceptance of digital diagnostic tools, and overall patient satisfaction were assessed by 2 surveys. The analysis of the Physicians' opinions is based on semi-structured questionnaires completed after each teleconsultation.

Results. In the 1st questionnaire ($n_1 = 203$), 91% of the participants reported that all their concerns were adequately addressed during the consultation. In another survey ($n_2 = 122$), 62% of participating patients described video consultations with their Doctor as 'neutral', 28.7% as 'exciting novelty', and only 1 participant found it 'uncomfortable'. Overall, 96.1% of patients were fully satisfied, and 95.1% expressed a willingness to return. MHP physicians found that 77.33% of all teleconsultations ($n_3 = 5440$) met the same professional standards as traditional in-person consultations, 15.79% exceeded these standards, and only 6.88% fell below expectations. Medical doctors rated this setting overall reliable by giving it an average score of 4.72 on a 1–5 scale ($n_4 = 5927$).

Conclusions. Both patients and medical doctors expressed convincing levels of satisfaction with this novel telemedicine setting, indicating strong professional reliability of this service. Healthcare professionals may also perceive that access to more diagnostic devices and real-time specialist consultations compensates for – or even surpasses – the lack of traditional direct physical examinations and personal doctor-patient relationships.

Key words: nurse-assisted telemedicine, underserved region, patient satisfaction, health care professional satisfaction

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Uncovering hidden causes of anaemia in young patients: A case study of paraoesophageal hernia in Latvia

Glenda Kuciņa, Valerija Mizavcova, Vija Siliņa

Rīga Stradiņš University, Rīga, Latvia

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Glenda Kuciņa
E-mail: glenda.kucina@gmail.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Paraoesophageal hernia accounts for about 5% of all hiatal hernias and is more common in patients over the age of 50. In this case, it may have been a congenital defect, given the patient's relatively young age. Iron-deficiency anaemia occurs in 45.6% of patients with giant paraoesophageal hernia. Anaemia may have been caused by iron malabsorption or chronic blood loss from small mucosal lesions, which are often too subtle to detect macroscopically.

Aim of the case report. The aim of this report is to highlight the importance of investigating the causes of anaemia and the need to ensure follow-up care. This reduces the risk of overlooking significant illnesses and risk of developing severe or even life-threatening anaemia.

Case report. A 32-year-old man presented to his general practitioner because of difficulty walking at work due to fatigue, headaches when breathing deeply, and the sensation of food getting stuck in the throat while eating. Five years ago, he had been diagnosed with iron-deficiency anaemia and was prescribed iron supplements. However, the patient was not invited to follow-up appointments and did not use supplements.

Conclusions. New laboratory results revealed that he had severe, potentially life-threatening anaemia (Hb 5.9 g/dL). The patient was hospitalised for a blood transfusion and further evaluation. He was found to have a paraoesophageal hernia (hiatal hernia IV).

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Model Regions for Medical Training

Jamal Bannourah, Josephine Pritzkow

Institut für Allgemeinmedizin – Universitätsklinikum Freiburg, Freiburg, Germany

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Jamal Bannourah
E-mail: jamal.bannourah@uniklinik-freiburg.de

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. In the south of the German state of Baden-Württemberg, most rural regions have had little involvement in medical training, despite a critical and worsening doctor shortage, especially in General Practice. The "Model Regions for Medical Training" programme seeks to engage students early, increasing their likelihood of working as rural doctors. The earlier they form a connection with a region, the greater the chance they will stay. According to the National Association of Statutory Health Insurance Physicians, 80% of GPs remain where they completed their training.

Aim of the study. The long-term aim is to encourage medical students to live and work in rural areas and to increase the attractiveness of medical training in these regions. We hope that this will have a knock-on effect, as good experiences during a traineeship can provide students with valuable contacts for future training.

Methodology. The Institute of General Practice in Freiburg has partnered with regions in southern Baden to create attractive training programmes. In a 10-day GP placement, students receive specialized teaching, leisure activities, and free accommodation, organized in cooperation with the district, General Practitioners, and local hospitals. This helps them explore the area, health care structures, and training opportunities.

Results. Six out of 9 regions in southern Baden-Württemberg have already joined the programme. Approximately 30% of the students choose a placement in these regions each semester. The average number of students in rural regions has increased by more than 5 times since the project started. The post-questionnaires show that the leisure activities and additional teaching were important factors in the decision to choose a region for their GP placement. The post-surveys also show a high level of satisfaction with the programme.

Conclusions. Model regions for medical training can make GP placements in rural areas more attractive to medical students, thereby increasing interest in general practice and long-term employment in these regions.

Key words: rural healthcare, doctor shortage, medical students, general practitioner supply, early career exposure, building education networks

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

The paradox of teleconsultation: when technological innovation reinforces inequalities in access to healthcare in rural areas of the Centre-Val de Loire region

Charlotte De Fontgalland[1], Katerina Kononovich[2], Alice Rochette[1], Jean Marc Macé[2]

[1] URPS ML, 45000 Orléans, France
[2] CNAM

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Charlotte De Fontgalland
E-mail: charlotte.defontgalland@urpsml-cvdl.org

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. The Centre-Val de Loire region has a chronic shortage and an uneven distribution of Doctors. Rural areas suffer from a combination of socio-economic vulnerability and difficulties in accessing healthcare. Following the COVID-19 crisis, teleconsultations were rapidly developed to provide faster access to care and avoid delays in treatment. However, without territorial coordination, local initiatives led by healthcare professionals coexist with an unregulated private sector offering.

Aim of the study. This research aims to assess whether the development of teleconsultation in the region helps to reduce inequalities in access to healthcare linked to medical desertification, particularly in rural areas.

Methodology. We carried out bivariate and multivariate treatment of data from the National Health Data System from 2022 to 2024 (location of patients and doctors, number of procedures, rate of work stoppages, etc.), mortality data from CepiDC and socio-economic data from INSEE, coupled with a qualitative methodology involving questionnaires and interviews with doctors.

Results. Between 2022 and 2024, teleconsultations increased by 500%, with only 36% carried out by a local doctor, which partly offsets the fall in face-to-face consultations. However, the 3-day and 5-day review rates show major variations depending on whether the teleconsultation is carried out with the patient's GP, and on how rural the beneficiary's living area is. Spatial analysis reveals a paradox: greater development of teleconsultations in urban areas already better endowed with GPs, to the detriment of rural areas disadvantaged by a shortage of healthcare services, and their use by rather young populations from affluent social backgrounds.

Conclusions. The development of telemedicine can be an essential element in the reorganisation of healthcare provision in rural areas. However, to be effective, telemedicine must be organised as closely as possible with local healthcare professionals, to provide patients with a high-quality response, as part of a regionalised care pathway that allows for post-expertise care if necessary.

Key words: teleconsultations, inequalities in access to healthcare, rurality, territories, healthcare pathways

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Innovating rural recruitment: A national program supporting future GPs in underserved areas of the Czech Republic

David Halata, Katerina Javorska

Czech Society of General Practice, 75622 Hostalkova, Czech Republic

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
David Halata
E-mail: halatad@gmail.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. The shortage of general practitioners (GPs) in rural areas is a growing challenge across Europe. In the Czech Republic, over 40% of GPs are aged 60+, and many rural practices are closing. A national program was launched to support recruitment and motivation of future GPs by offering targeted education and hands-on rural experience.

Aim of the study. The project, part of the Operational Programme Employment Plus (EU), aims to increase the number of young doctors choosing to work in rural primary care. What motivates early-career doctors from rural practice? Can immersive rural training change future career choices?

Methodology. A 3-year nationwide initiative was launched in spring 2025 by the Institute for Postgraduate Medical Education. Key components include organizing seminars to recruit motivated students from 8 Czech medical faculties into general practice, reaching over 1000 students annually. Additionally, training 26 rural practices will offer 1-week clerkships in underserved areas for medical students and GP trainees. A national survey to evaluate motivating factors and the impact of rural internships on future career decisions. Annual regional seminars to strengthen peer support and teaching quality.

Results. The program aims to immerse for 3 years, 300 medical students and 150 GP trainees into a rural experience that highlights the unique aspects of rural healthcare, the importance of community-based experience, and personal mentorship taking the challenges and rewards into account. Preliminary data suggest that rural internships positively influence attitudes toward rural practice.

Conclusions. This EU-funded, large-scale initiative offers an innovative model for rural recruitment in general practice. By combining immersive experience, mentoring, and researching it repositions rural practice as a rewarding 21st-century career path and helps to ensure a sustainable workforce for the future. The programme may inspire similar strategies across Europe.

Key words: rural practice, recruitment, motivation, education, primary care innovation

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Accuracy of point-of-care ultrasound examination of the lung in primary care performed by general practitioners: A cross-sectional study

David Halata, Dušan Zhor

Czech Society of General Practice, 75622 Hostalkova, Czech Republic

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
David Halata
E-mail: halatad@gmail.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Point-of-care ultrasound (POCUS) is increasingly used in general practice, offering rapid bedside diagnostics. In rural areas with limited access to imaging, lung ultrasound (LUS) can enhance clinical decision-making.

Aim of the study. Although LUS is well established in hospital settings, data on its use by rural general practitioners (GPs) are scarce. This study aimed to evaluate the diagnostic accuracy of LUS performed by GPs after their brief structured training. The key question: Can GPs accurately identify lung pathology using LUS in routine primary care?

Methodology. Adult patients with a current or recent diagnosis of dyspnoea were consecutively enrolled. Each underwent a standardized LUS exam, with findings video-recorded and independently assessed by a blinded expert sonographer. Diagnostic accuracy was calculated for A and B profiles, consolidation, and pleural effusion.

Results. A total of 128 patients and 768 thoracic segments were examined. Sensitivity and specificity were: A profile: 97.5%/88.1%, B profile: 87.0%/97.7%, consolidation: 100%/100%, pleural effusion: 83.3%/99.9%. inter-rater agreement was substantial to almost perfect ($\kappa = 0.85–1.00$). Examinations lasted under 5 min and were feasible in rural primary care settings.

Conclusions. GPs, including those in rural practices, can accurately perform LUS after a short training course. POCUS represents a practical, reliable tool that can expand diagnostic capacity in underserved areas and improve patient care.

Key words: rural practice, point-of-care ultrasound, lung ultrasound, primary care, diagnostic accuracy

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Implementation of point-of-care ultrasound in Czech general practice: Rural practices leading the way

David Halata, Dušan Zhor

Czech Society of General Practice, 75622 Hostalkova, Czech Republic

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
David Halata
E-mail: halatad@gmail.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Point-of-Care Ultrasound (POCUS) is a rapidly growing diagnostic tool across Europe. In General Practice and particularly in rural areas with limited access to imaging, POCUS provides immediate, bedside diagnostic support. The Czech Society of General Practice (CSGP) launched a national initiative to implement POCUS in daily GP practice, with rural practices playing a key role.

Aim of the case report. The aim was to create a national framework for the safe, effective, and evidence-based use of POCUS in Czech general practice. Key questions included: How can POCUS be integrated into routine GP care? What training, equipment, and quality assurance are needed? Can rural GPs act as early adopters and leaders in implementation?

Case report. In 2020, the CSGP launched the POCUS IGP (Implementation in General Practice) project. Seventeen GPs, mostly from rural areas, formed a pilot group and completed structured theoretical and hands-on training. Three clinical studies were initiated, focusing on diagnostic accuracy, patient satisfaction, and patterns of POCUS use. A national educational curriculum and dedicated POCUS training school were established.

Conclusions. To date, over 500 GPs have received POCUS training. Early findings from the pilot group show high diagnostic reliability in lung, abdominal, and vascular assessments. Rural GPs demonstrated strong engagement and often became regional pioneers. POCUS integration was feasible within standard consultation times and positively received by patients. Rural Czech GPs have successfully integrated POCUS into everyday practice, leading national implementation efforts. Their experience exemplifies the potential of rural practice in the 21st century and offers an inspiring, scalable model for other countries aiming to strengthen diagnostics in primary care, especially in underserved regions.

Key words: POCUS, primary care, rural practice, implementation, ultrasound education, rural research

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Municipal interventions to attract family medicine residents in Latvia: Challenges and strategies

Matīss Kore, Arita Kohva, Ieva Griķe, Cindy Lisa Heaster, Beāte Livdanska, Michael Harris, Līga Kozlovska, Ilze Grope

Riga Stradiņš University, LV-1002 Riga, Latvia

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Matīss Kore
E-mail: matiss.kore@rsu.lv

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. The shortage of family physicians in rural areas of Latvia significantly affects access to primary healthcare services. In contrast, the capital, Riga, experiences a surplus of family doctors. Rural municipalities face challenges in attracting and retaining medical professionals, especially in remote locations.

Aim of the study. The purpose of this research is to examine municipal-level efforts and interventions to attract young family medicine residents and understand the challenges faced. The key research question is: What interventions, if any, are municipalities implementing to encourage young family medicine residents to work in their regions?

Methodology. A qualitative study was conducted using semi-structured interviews with 5 municipal delegates from Latvia's largest municipalities in different regions, including the region of Riga. Participants provided insights into existing interventions and perceived challenges.

Results. A direct correlation exists between distance from Riga and worsening perceptions of family doctor shortages. Riga has an excess number of doctors, while rural municipalities face challenges in filling positions, even with various types of aid offered. The main barriers to recruitment include financial uncertainty, social and professional isolation, and better opportunities in urban areas. Common interventions include financial stipends with contractual obligations, housing assistance, and support for doctors' families. Some municipalities also offer financial aid for renovating practices. Reasons for not implementing more interventions include financial constraints, lack of clear government directives, and differing interpretations of their role in ensuring primary care accessibility, which they are obligated to do. No municipality systematically evaluates the effectiveness of these interventions or gathers official data on retention rates.

Conclusions. While some municipalities attempt to attract family doctors through financial and logistical support, efforts are inconsistent and often hindered by financial and policy-related limitations. A more structured, evidence-based approach with clearer governmental guidance is needed to improve rural healthcare accessibility in Latvia.

Key words: family medicine, rural healthcare, physician shortage, municipal interventions, Latvia

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

The role of collection lockers and vending machines in modern pharmacy services

Elinor Thomas[1], Aleksandra Tanaka[1], Rebecca Payne[2]

[1] Cardiff University, Bangor, UK
[2] University of Oxford, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Elinor Thomas
E-mail: elinorthomas@icloud.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Patients in rural areas often find it difficult to access prescribed or over-the-counter medication. Limited local medical and pharmacy services, and the increased use of teleconsultations, mean that services that dispense medication may be geographically distant from remote communities. Patient-facing medication collection lockers may provide a partial solution and are being introduced across Europe in both community and hospital contexts. Little is known about the impact on patients and the potential unintended consequences of such collection points.

Aim of the study. To understand how patient-facing medicines collection lockers are being used in healthcare.

Methodology. We reviewed existing literature to identify where such patient-facing collection lockers were used. We collaborated with a specialist subject librarian to refine key academic sources using targeted Key words: ("vending machine*" OR "automated dispensing machine*" OR "self-service machine*" OR "automated retail machine*" OR "Dispensing*) AND ("collection locker*" OR "parcel locker*" OR "medication lockers" OR "automated storage locker*" OR "smart locker*") AND ("healthcare" OR "hospital*" OR "clinic*" OR "medical center*" OR "medical centre*" OR "health institutions"). We searched the academic grey literature, including unpublished and non-peer-reviewed sources, to gather real-world data and insights.

Results. We identified 3 main uses of such patient-facing medicines collection lockers. Community pharmacies use collection lockers for dispensed medication to reduce waiting times, improve accessibility for patients, and increase efficiency within the pharmacy. Secondly, hospitals have implemented similar lockers to ease pharmacy workload. Vending machines are used to sell over-the-counter medication to patients without pharmacy involvement. These advancements may enhance accessibility and efficiency but require careful implementation to avoid excluding those with poor digital skills.

Conclusions. Medicine collection lockers may benefit pharmacies and patients but require careful implementation, ongoing evaluation, and further research.

Key words: collection locker, vending machine, medication

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Drones: Are they ready to fly?

Aleksandra Tanaka[1], Elinor Thomas[1], Rebecca Payne[2]

[1] Cardiff University, LL57 2BD Bangor, UK
[2] University of Oxford, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Aleksandra Tanaka
E-mail: TanakaA@cardiff.ac.uk

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Drones have, literally and figuratively, taken off in the past decade. Their potential to support vital public services frequently makes headlines, highlighting the capability of drones to fill in logistical gaps – the 'last-mile hurdles' that limit current transport fleets, particularly in rural or isolated communities. However, despite numerous trials and promising test flights, few routine and reliable drone-based services have been established in healthcare settings, the reason for which is yet unknown

Aim of the study. Our research question addresses this gap, interrogating the literature to identify barriers to operationalising drones in healthcare services internationally

Methodology. We worked with a specialist medical librarian to develop a strategy for a qualitative and non-systematic literature review. We identified key grey and published literature using search terms (and their combinations) such as: "drone*", "UAV*", "healthcare", and "health* provision*". Case examples were collated and analysed for factors influencing drone integration using Greenhalgh's NASSS framework to understand the reasons behind success or failure.

Results. We identified that African countries are current world-leaders in drone implementation, wherein drones successfully supply vast areas, including rural communities, with bloods and medications. Associated health outcomes improved, such as vaccine availability and decreased wastage. Elsewhere, drone trials have shown improved efficiencies, such as transportation times, environmental impact, turn-around of clinical decisions, and economical costs. However, complete drone implementation is still challenged by lack of regulatory airspace support, operational safety concerns, and workforce acceptability.

Conclusions. Case examples teach these barriers can be overcome with an approach tailored to adapt local guidelines and parameters to drone projects – as seen in those taking off in Africa and India. However, this will not be an easy path to follow. Further research can expand and consolidate additional findings from both studies and the real world.

Key words: drones, UAVs, telemedicine, rural medicine, healthcare innovations

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Engaging general practitioners in EU public health projects: Lessons from the EUVABECO initiative

Dorota Stefanicka-Wojtas, Donata Kurpas

Wroclaw Medical University, Poland

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Donata Kurpas
E-mail: donatakurpas@gmail.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. General practitioners (GPs) are essential to public health implementation at the local level, yet they are underrepresented in EU research projects. The EUVABECO project addresses this gap by integrating GPs into strategies aimed at strengthening vaccination practices across Member States through innovation, data linkage, and tailored national implementation plans.

Aim of the study. To explore how general practitioners can be effectively engaged in EU-funded public health projects, using the Polish pilot of EUVABECO as a case study.

Methodology. The Polish pilot involved GPs from urban and rural primary healthcare centres in co-designing and implementing a survey on vaccination attitudes. Over 1,200 patients were enrolled. Anonymised medical records were linked to survey data. The team secured ethical approval and coordinated communication, data collection, and contextual analysis involving family doctors and data analysts.

Results. GP involvement enabled the identification of local vaccine barriers and supported the development of a national vaccination report. High survey engagement was achieved through direct collaboration with clinicians. The process facilitated real-world insights into vaccine hesitancy and system challenges, demonstrating that GP participation enhances data quality, relevance, and the practical applicability of EU health initiatives.

Conclusions. Integrating general practitioners into EU research is feasible and impactful. The EUVABECO experience offers a replicable model for future initiatives aiming to bridge policy and practice. Active involvement of primary care in EU projects strengthens implementation, supports national strategies, and promotes sustainable innovation in public health systems.

Key words: general practitioners, primary care, EU-funded project, vaccination, public health, implementation, stakeholder engagement, health systems, pilot study, EUVABECO

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Patient and doctor satisfaction related to doctor–patient consultations in rural family practice

Andras Mohos[1], Péter Torzsa[2], Gergely Ágoston[3]

[1] University of Szeged Faculty of Medicine Family Medicine Department, 6726 Szeged, Hungary
[2] Semmelweis University, Medical Faculty, Department of Family Medicine, Hungary
[3] University of Szeged, Albert Szent-Gyögyi Medical University, Family Medicine Department, Hungary

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Andras Mohos
E-mail: mohosandris@gmail.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Patient care is teamwork, in which proper cooperation between healthcare professionals and the patients is crucial and good communication is a key factor. The quality of medical communication has a significant impact on patient satisfaction, which is directly related to patients' adherence, which finally influences the effectiveness of medical activities. On the other hand, good communication positively influences doctors' satisfaction, which has a protective effect in terms of burnout.

Aim of the study. The aim of our research to examine patients' and doctors' satisfaction related to doctor–patient consultations in rural family practices and the examination of the potential influencing factors, especially burnout and mental health problems.

Methodology. We used self-administered questionnaires in a cross-sectional study among rural general practitioners and their patients. Before the research, the doctors completed a preliminary questionnaire and after each consultation, the doctor and the patient complete an evaluation questionnaire. We collected sociodemographic and work related data. To measure patient satisfaction with the consultation we used the validated Communication Assessment Tool (CAT). We assessed burnout with the Maslach Burnout Inventory and calculated the proportion of physicians suffering from low, intermediate and high degree of burnout. We used shortened Beck Depression Inventory (BDI-9) and short Beck Hopelessness Scale to measure depression and hopelessness. Data collection was carried out between December 2024 and May 2025.

Results. The research is currently in the data collection phase. Our aim is to involve at least 10 rural general practitioners and analyse 400 doctor–patient consultations. We plan to present our results for the first time at the 14th EURIPA Rural Health Forum.

Conclusions. Our results can help better understand the patients' and doctors' opinions about consultations and highlight the most important influencing factors. With the implementation of these findings, we can improve the quality of care in rural family practices.

Key words: general practitioner, satisfaction, communication, doctor–patient consultation

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Survey of cooperation between rural doctors and specialists

Andrea Fuleova[1], Lenka Szwanczar Tomkova[1], Xenia Xenia Wostmann[1], Ferdinando Petrazzuoli[2,3]

[1] Outpatient clinic of a general practitioner, 04445 Bidovce, Slovakia
[2] Contract professor at the School of Specialization in Community Medicine and Primary Care, University of Naples "Federico II", Italy
[3] Center for Primary Health Care Research, Department of Clinical Sciences, Lund University, Malmö, Sweden European Rural

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Andrea Fuleova
E-mail: andrea.fuleova@gmail.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. One of the essential topics that concern us in Slovakia is the topic of cooperation between general practitioners and specialists. It could be relevant in other countries as well, and this topic could generate an interesting discussion on the Forum.

Aim of the study. The objective of the present study is to extend the survey amongst EURIPA members in order to gather data on how collaboration between general practitioners and specialists works in different countries. The data will also ascertain the main barriers to such collaboration, and possibly identify 21st-century solutions to these.

Methodology. We created a questionnaire with questions focusing on cooperation between general practitioners and specialists. We will evaluate the data collected and present it at the EURIPA Forum. We believe that the EURIPA Forum is a great opportunity to learn from each other and find solutions to problems.

Results. We will share the information obtained by the questionnaire in graphs and tables in our presentation and we are also presenting our own case report on GP-specialist collaboration.

Conclusions. In conclusion, we would like to discuss and look for ways to improve cooperation between general practitioners and specialists, because we believe that, especially in rural areas, improving it can bring wellbeing to patients, benefit and comfort to doctors and save money on healthcare.

Key words: cooperation between rural doctors and specialists, telemedicine, teleconsilium

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Carbon footprint awareness of family medicine residents

Şeyda Özcan Maden, Ayşe Gülsen Ceyhun Peker

Ankara University Family Medicine Department, 06790 Ankara, Turkey

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Şeyda Özcan Maden
E-mail: seydaozcan06@hotmail.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Comprehensive human health is not achievable without environmental health. Family medicine staff operates across diverse roles, from rural healthcare management to administrative responsibilities in central institutions. Sustainable healthcare practices, which include reducing carbon emissions and prioritizing eco-friendly solutions, are vital to public health. Family physicians can lead such initiatives by integrating the One Health approach, addressing human, animal, and environmental health collectively.

Aim of the study. This study aimed to assess carbon footprint awareness among family medicine residents, analyse the relationship between awareness and individual behaviours, and identify barriers to sustainability in health care practices

Methodology. A survey of 39 questions was conducted among 137 family medicine residents in Ankara (AHU: Full-time, SAHU: Contracted). Participants were classified into low (<57) and high (≥57) awareness groups based on their carbon footprint awareness scores. Statistical analyses included Mann–Whitney U, Kruskal–Wallis, and Spearman correlation tests, with $p < 0.05$ considered statistically significant.

Results. Among participants, 89.8% showed high awareness. SAHU residents had significantly higher scores than AHU residents ($p = 0.006$). The mean age of AHU participants was 29.17 years, compared to 43.07 years for SAHU. Professional experience averaged 10.65 years, with a significant positive correlation between experience and awareness ($r = 0.373$). Married participants and those with children had higher awareness levels, with scores increasing as the number of children rose. Recycling and prioritizing sustainable practices correlated with significantly higher scores ($p = 0.000$). A positive relationship was found between telemedicine use and awareness; 55.5% of participants had low belief in the impact of individual efforts on climate change.

Conclusions. Individual efforts to reduce carbon footprints are often hindered by a lack of societal support. Institutional and government support is critical for fostering environmentally conscious behaviours. Family health centres can serve as key mechanisms in promoting sustainability, aligning with the core values of the medical profession.

Key words: carbon footprint, One Health, family medicine

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Recruitment and retention of doctors in rural Norway: Dealing with complexity

Anders Svensson

Norwegian Centre for Rural Medicine, 8450 Stokmarknes, Norway

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Anders Svensson
E-mail: anders.svensson@boe.kommune.no

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Recruiting and retaining a skilled health workforce is a common challenge for remote rural communities, negatively affecting access to services, and in turn people's health. Vesterålen is a region in Northern Norway with 5 municipalities and a rural hospital. The municipalities and the hospital recruit from the same cohort of doctors. As previous attempts in recruiting health care personnel have failed, this project has used a joint municipal-hospital strategy based on The Making it Work: Framework for Rural Remote Workforce Stability to meet the challenges. Developed over 7 years by an international collaboration, the Framework describes a spectrum of 9 key strategic elements, grouped into 3 main tasks (plan, recruit, retain) with 5 conditions for success.

Aim of the case report. Improving recruitment and retention of doctors in a rural region in Northern Norway

Case report. Based on information from local survey mapping of doctors in the region the project implemented 9 measures to achieve the aim of the project, focusing mainly on retention, during the project period 2022–2024. Continuous mapping of the situation was important for regular evaluations, but it also gave legitimacy to the project at all levels in the involved organizations. The project had to adapt to the complex environments in municipalities and the hospital, and a flexible and dynamic approach was necessary. The results for the GP services are encouraging: the fraction of specialists in family medicine has increased from 30% to 70% in the region and the mobility in family medicine positions in the municipalities has decreased. The number of vacant positions in the local hospital, and the use of employment agencies have both decreased.

Conclusions. Recruitment and retention are closely linked and interconnected. The Framework secured a comprehensive, flexible, adaptable and systematic approach to a complex challenge.

Key words: workforce, recruitment, retention, rural

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Addressing the continuous professional development needs of rural GPs using e-learning: Preliminary findings of a survey among members of the European Rural and Isolated Practitioners Association (EURIPA) and the Royal College of General Practition

Miriam Dolan[1], Dirk Pilat[2], Rebecca Orr[3], Iva Petricusic[4], Mary Robertson[5], Veronika Rasic[6]

[1] The European Rural and Isolated Practitioners Association, QUB, RCGP Rural Forum, WONCA Europe Special Interest Group on Social Prescribing and Community Orientation, BT93 4AA Enniskillen, UK
[2] Royal College of General Practitioners, UK
[3] Queens University Belfast, UK
[4] Croatia, GP Trainee
[5] Royal College of General Practitioners
[6] EURIPA

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Miriam Dolan
E-mail: miriamdolan@btinternet.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. General Practitioners in rural areas provide health and urgent care often in resource-poor healthcare environments and at times in isolation, deal with high levels of risk and uncertainty and an increasingly rural population with multi-morbidity. They have therefore specific continuous professional leaning needs. E-learning is flexible and easily accessible, involves no travel and is as effective as more traditional learning. After a successful oral presentation at the EURIPA Rural Forum in 2024 in England, the RCGP in the UK, the RCGP Rural Forum and WONCA EURIPA joined forces to start exploring how these specific learning needs can be partially addressed using e-learning. Two surveys were distributed – one as part of the evaluation of a successful RCGP webinar on emergency care in rural primary care and one among EURIPA members through the newsletter and google-group.

Aim of the study. The survey was designed to start sharing experiences and preferences concerning e-learning of rural GPs to discover consensus themes.

Methodology. Survey.

Results. The survey among RCGP members post-attendance of the webinar on emergency care in rural primary care was filled in by 96 GPs. 26 EURIPA members replied to the survey after it was promoted through the newsletter and google-group. Most respondents identified there was currently no provision of rural-specific e-learning. They prefer to spend from 20 to 50 min on e-learning, prefer e-learning modules, podcasts, webinars with interactive elements and online lectures. Subjects they mostly want to see covered (clinical and non-clinical): emergency care, mental health/addictions, managing uncertainty and risk, multi-disciplinary working, frailty, telemedicine and near-patient diagnostics, and community orientation/social prescribing.

Conclusions. The surveys identified gaps in continuous professional development resources for rural GPs. Further research in specifying what these gaps are and how best they can be addressed is needed but based on the findings opportunities to develop and disseminate rural-specific e-learning CPD are being explored.

Key words: e-learning, continuous professional development, general practitioners, rural medicine

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Are nurse-led patient consultations acceptable for the general practitioners and practice nurses in Germany? Results from a cross-sectional survey in 2 federal states

Julia Morgner, Marcus Heise, Celina Wiens, Felix Bauch, Thomas Frese, Solveig Weise

Institute of General Practice and Family Medicine, Martin-Luther-University, Halle-Wittenberg, 06112 Halle (Saale), Germany

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Julia Morgner
E-mail: julia.morgner@student.uni-halle.de

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Demographic shifts, the increasing prevalence of chronically ill and multimorbid patients, and the ongoing shortage of general practitioners (GPs) pose significant challenges for European general practice. Task delegation from GPs to practice nurses (PNs) through PN-led consultations may offer a viable solution.

Aim of the study. This study examined the attitudes of GPs and PNs towards PN-led consultations in general and for specific reasons for encounter.

Methodology. This cross-sectional survey was conducted among GPs and PNs in Saxony-Anhalt and Saxony between September 2023 and November 2024. Our self-developed, pre-tested questionnaire assessed attitudes towards PN-led consultations, reasons for encounter, potential benefits and concerns, as well as sociodemographic and practice characteristics. We performed descriptive statistics, bivariate and multivariate analyses using SPSS v. 27.

Results. Of 2071 contacted general practitioner offices (GPOs), 437 GPs and 339 PNs participated (21.1%). The majority of GPs (61.7%) and PNs (61.2%) were open towards PN-led consultations. In multivariate analyses, GPs showed greater openness if they had prior positive delegation experiences (OR = 5.88 [95% CI: 3.01–11.48]), or had already delegated specialized tasks (e.g., home visits, patient consultations, medication recommendations, (OR = 5.34 [95% CI: 2.29–12.46])). The GPs were less open if they worked in urban GPOs (OR = 0.44 [95% CI: 0.22–0.88]), or owned a single GPO (OR = 0.41 [95% CI: 0.20–0.83]). In multivariate analyses, PNs were more willing to perform PN-led consultations if they had prior positive delegation experiences (OR = 3.03 [95% CI: 1.12–8.18]) and advanced practice nurse training (OR = 3.50 [95% CI: 1.44–8.51]). The most commonly accepted reasons for referral of PN-led consultations were chronic wounds, diabetes mellitus, and arterial hypertension.

Conclusions. Roughly 2/3 of GPs and PNs expressed willingness to implement PN-led consultations in German general practice. However, concerns regarding PN qualifications persist. Further research should explore implementation strategies, with pilot projects focusing on structured PN training and well-defined guidelines in countries where this model remains untested.

Key words: professional delegation, task delegation, general practice, primary care, nurse led clinic, nurse-led care, advanced practice nursing

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Are practice nurse-led patient consultations acceptable for the general population in Germany? Results from a population-based survey

Solveig Weise[1], Celina Wiens[1], Felix Bauch[1], Marcus Heise[1], Jan Schildmann[2], Rafael Mikolajczyk[3], Thomas Frese[1]

[1] Institute of General Practice and Family Medicine, Medical Faculty, Martin-Luther-University Halle-Wittenberg, Magdeburger Str. 8, 06112 Halle (Saale), Germany, 06099 Halle, Germany
[2] Institute for History and Ethics of Medicine, Interdisciplinary Centre for Health Sciences, Medical Faculty of the, Martin Luther University, Halle-Wittenberg, Halle, Wittenberg, Halle
[3] Institute for Medical Epidemiology, Biometrics, and Informatics, Interdisciplinary Centre for Health Sciences, Martin Luther University, Halle-Wittenberg, 06112 Halle (Saale), Germany

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Solveig Weise
E-mail: solveig.weise@uk-halle.de

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Delegating tasks from general practitioners (GP) to practice nurses (PN) may address challenges in general practice. While studies show high acceptance, most data comes from established countries, limiting transferability to Germany, which lacks quantitative data.

Aim of the study. To examine the general population's attitudes toward PN-led consultations, focusing on willingness, condition-specific preferences, and influencing factors.

Methodology. A cross-sectional, population-based online survey was conducted in the HeReCa-study panel, with participants randomly selected from 5 German states based on urbanity and age distribution. Data was collected (July–September 2023) via a pretested questionnaire. The survey was completed by 1475 out of 1532 respondents with a personal GP. Analysis included descriptive statistics, bivariate and multivariable logistic regression, and imputation of missing data (IBM SPSS 25.0, Stata 13.0).

Results. The response was 49.97% (1,532/3,066). Approximately 39.3% of the study population received treatment at a single practice. PN-led consultations were previously experienced by 3.8% of participants, while 83.6% of the remaining 1,419 expressed willingness to accept them. Acceptance was high for consultations on superficial wounds, and care of diabetes, hypertension, asthma, and respiratory infections. Multivariable regression indicated greater willingness among participants with higher trust in PNs' professional (OR = 2.03, 95% CI: 1.35–3.06, reference: lower trust) and communication skills (OR = 1.76, 95% CI: 1.15–2.67). Older age (OR = 0.73, 95% CI: 0.97–0.99, effect per standard deviation = 13.94 years) and treatment in single practices (OR = 0.67, 95% CI: 0.47–0.96, reference: group practices) were associated with lower acceptance. Gender and residency did not reach a statistically significant level in our analysis.

Conclusions. We found a high willingness to accept PN-led consultations in the general population. Our findings provide valuable guidance for countries, where, like Germany, PN-led consultations have not yet been implemented. Future pilot projects on PN-led patient consultation should also consider our findings on factors of lower or higher acceptance for PN-led care.

Key words: delegation, doctor-nurse-substitution, nurse-led-care, patient consultation, interprofessional team care

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Delayed diagnosis of isolated tracheoesophageal fistula in a 5-year-old with recurrent respiratory tract infections: A case report

Ieva Elizabete Maldupa[1], Ieva Zvirbule[2]

[1] Riga Stradins University, LV1007 Riga, Latvia
[2] Ievas Zvirbules Ģimenes Ārsta Prakse, Latvia

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Ivea Elizabete Maldupa
E-mail: ievamaldupa@gmail.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Tracheoesophageal fistula (TEF) is a congenital foregut malformation characterized by an abnormal communication between the trachea and oesophagus. While TEF is typically diagnosed in the neonatal period, isolated (H-type) TEF, which lacks associated oesophageal atresia, often presents later in childhood with chronic respiratory symptoms, aspiration events, and recurrent pneumonia, leading to diagnostic delays and inappropriate treatment.

Aim of the case report. This study highlights the diagnostic challenges of isolated tracheoesophageal fistula (TEF) in children with recurrent respiratory infections. By analyzing a delayed TEF diagnosis in a 5-year-old, we emphasize the need for suspicion, recognition, and appropriate diagnostic workup to prevent prolonged morbidity.

Case report. We present a 5-year-old female with chronic laryngobronchitis and recurrent upper respiratory infections of unknown aetiology. She was first diagnosed with an airway infection at 2.5 months of age. She had 75 documented episodes of respiratory infections over 5 years, including acute bronchitis, laryngitis, pharyngitis, tracheitis and purulent endobronchitis. The patient was treated with multiple courses of antibiotics, along with antihistamines, nasal and inhaled corticosteroids, bronchodilators, and immune-modulating therapies. Despite persistent airway infections, she exhibited no significant feeding difficulties, and was diagnosed with overweight at 3 years of age. The patient also received a proton pump inhibitor (PPI) therapy for gastroesophageal reflux disease (GERD)-like symptoms. The first clinical suspicion of laryngomalacia was noted in 2022, but tracheoesophageal fistula was definitively diagnosed only in December 2024 following bronchoscopy and fibrogastroscopy.

Conclusions. This case highlights the diagnostic challenges of isolated TEF, which can remain undetected due to non-specific symptoms and the absence of neonatal feeding difficulties. While 6–12 upper respiratory infections per year are within the normal pediatric range, the excessive frequency, resistance to treatment, and recurrent lower respiratory involvement in this patient should have prompted earlier structural airway evaluation. Delayed diagnosis can lead to prolonged respiratory morbidity, unnecessary antibiotic exposure, and increased healthcare utilization.

Key words: tracheoesophageal fistula, recurrent respiratory infections, paediatric airway anomalies, aspiration pneumonia, delayed diagnosis

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Mapping rural health research and educational activities in Europe: A scoping exercise

Viet-Hai Phung[1], Ferdinando Petrazzuoli[2], Kateřina Javorská[3], Josep Vidal-Alaball[4], Anette Fosse[5], John Wynn-Jones[6], Anette Liljegren[7], Rebecca Payne[8], Ioanna Tsiligianni[9], Rosario Falanga[10], Christos Lionis[9], Chris Clark[11], Jean-Pierre Jacquet[12], Donata Kurpas[13], Nataša Mrduljaš-Đujić[14], Liam Glynn[15], Peter Hayes[15], Joyce Kenkre[16], Sarah-Anne Muñoz[17], Pam Nicoll[17], Roxana Surugiu[18], Tim Sanders[19], David Halata[3], Mark Gussy[1]

[1] University of Lincoln, LN6 7TS Lincoln, UK
[2] University of Naples "Federico II", Italy
[3] Charles University, Prague, Czech Republic
[4] Research and Innovation Unit, Primary and Community Care Management of Central Catalonia, Catalan Health Institute, Manresa, Spain Manresa, Spain
[5] The Arctic University of Norway
[6] Keele University, UK
[7] Umeå University, Sweden
[8] Bangor University, UK
[9] University of Crete, Greece
[10] Department of Primary Care, Local Health Authority, Pordenone, Italy
[11] University of Exeter, UK
[12] Collège de la Médecine Générale, France
[13] Wroclaw Medical University, Poland
[14] University of Split, Croatia
[15] University of Limerick, Ireland
[16] University of South Wales, UK
[17] National Centre for Remote and Rural Health and Care, UK
[18] University of Medicine and Pharmacy of Craiova, Romania
[19] University of Central Lancashire, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Viet-Hai Phung
E-mail: vphung@lincoln.ac.uk

Funding sources
None declared

Conflict of interest
None declared

Abstract

Justification. In 2022, the European Rural and Isolated Practitioners Association (EURIPA) published its Blueprint for Rural Practice in Europe. This followed the earlier Charter for Rural Practice (1997) and aims to set the vision and benchmark for European rural health care over the next 25 years. Rural practice is becoming increasingly important in Europe. The Blueprint identified the need to expand rural academic practice as essential to develop an evidence base for present and future rural health care. At the 13th EURIPA Rural Health Forum in 2024, a workshop was held which led to the establishment of the Rural Health European Academic Network (RHEAN). The RHEAN is a working group within EURIPA, which includes clinicians and academics working in rural health research, as well as in multidisciplinary education and training for rural health practice.

Objectives. A scoping exercise is currently underway, which builds on the work of this workshop to develop collaboration between European rural health researchers and teachers. The scoping exercise aims to understand current rural health-related networking, research and educational activities across 32 countries (European single market countries and the UK). The workshop aims to validate the initial findings of the scoping exercise and to identify commonalities and differences between countries, as well as to share good practice.

Organisation. The workshop will present the findings of the initial scoping exercise.

Participation. Rural clinicians in Europe, including Eastern Europe, are the target audience, who will sense check the findings in small group discussions.

Expected outcomes. The workshop will inform future collaborations in rural health research and education. The outcomes of the workshop will inform the future work programme of the RHEAN and stimulate further rural health research and educational activities. These findings will also provide the baseline for involving other European countries in the RHEAN.

Key words: scoping exercise, rural health, research, Europe

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Identifying mental health research priorities in rural (and coastal) settings: A rapid systematic review

Viet-Hai Phung[1], David Nelson[1], Ros Kane[1], Kyla Pennington[2], Joseph Akanuwe[1], Harriet Moore[1], Robert Dean[1], Russell Roberts[3], Derek Ward[4], Jaspreet Phull[5], Tracy Mccranor[5], Colin Hopkirk[6], Jon Mansfield[6], Richard Morriss[7], Mark Gussy[1], David Dawson[1], Nima Moghaddam[1]

[1] University of Lincoln, LN6 7TS Lincoln, UK
[2] University of York, UK
[3] Charles Sturt University, UK
[4] Lincolnshire County Council, UK
[5] Lincolnshire Partnership NHS Trust, UK
[6] Every One
[7] University of Nottingham, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Viet-Hai Phung
E-mail: vphung@lincoln.ac.uk

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. There is a spatial mismatch in rural and coastal communities between demand for, and uptake of, mental health services. To date, there has been no existing synthesis of mental health research priorities as they directly relate to rural and coastal contexts.

Aim of the study. This rapid systematic review aimed to identify and map international evidence on rural and coastal mental health research priorities.

Methodology. We adhered to guidance from the Cochrane Rapid Review Methods Group and reported in line with the PRISMA statement. PubMed and PsycINFO were searched in September 2024. Supplementary searching was performed in Google Scholar. Data were extracted using an adapted version of the REPRISE framework. Content analysis was conducted to establish research priorities.

Results. 1,285 studies were screened, and 20 publications were included (Australia n = 8, USA n = 9, UK n = 2, no geographical focus n = 1). Priorities were grouped into 7 categories: 1) interventions, 2) space and place, 3) stakeholder engagement, 4) improving understanding, 5) standardising data and terminology, 6) outreach, and 7) collaboration. Within these 7 categories, there were 16 priorities, and 53 sub-priorities. No literature focused on mental health research priorities in coastal contexts.

Conclusions. Future research requires stronger collaboration between relevant stakeholders to reflect local needs. Participatory research is key to achieving that. There was no priority setting that explicitly accounted for the coastal context, highlighting a notable gap. A cultural adaptation framework can fill this notable gap by adapting research findings to unique coastal characteristics, including transient populations and environmental risks. Moving forward, rural and coastal mental health research will require engaging with these communities, who have traditionally been reluctant to participate in research. The findings establish a baseline core set of principles from which to inform rural and coastal mental health research activity.

Key words: mental health, rural health, coastal health, research priorities, rapid review, systematic review, evidence synthesis

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Taking the pledge for planetary health

Miriam Dolan

The European Rural and Isolated Practitioners Association, QUB, RCGP Rural Forum, WONCA Europe Special Interest Group on Social Prescribing and Community Orientation, BT93 4AA Enniskillen, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Miriam Dolan
E-mail: miriamdolan@btinternet.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. WONCA Europe revised its definition of Family Medicine in 2023 including planetary health. Climate change is described as a global health emergency. The effects of climate change and/or the requirements to address issues like loss of biodiversity and intensive agriculture are directly felt in rural areas. Challenges to reduce the carbon footprint of delivering primary care in rural areas can be perceived as intractable e.g. due to longer travel times and a workforce under pressure.

Aim of the study. At last year's EURIPA Rural Forum a rolling initiative titled 'Taking the pledge for Planetary health' was launched. Delegates were asked to implement a small sustainable quality improvement project and were supplied with an easy-to-follow step-by-step guide. The projects were: 1. Reduce the use of Short-Acting Beta-Agonists (SABA) inhalers. 2. Reduce metered dose inhalers (MDIs). 3. Reduce polypharmacy. 4. Increase non-pharmacological management. 5. Reduce investigations and referrals. The aim of the overall project is to increase the awareness of planetary health among rural primary healthcare practitioners and to capture how small positive steps can have great impact when done at scale.

Methodology. Quality improvement

Results. 17 delegates signed up to 'the pledge for planetary health'. The majority (14) chose to reduce polypharmacy. Feedback collected indicates that most projects are still ongoing 6 months after starting, and the main difficulty people have encountered is the buy-in of others and a limitation in resources mainly time.

Conclusions. Planetary health is something which should be part of common good practice. This project shows a commitment to engage with sustainable quality improvement. This is a rolling project and delegates at future EURIPA conferences will be encouraged to 'take the pledge for planetary health'. It is envisioned that when more primary care teams get involved doing small SusQI projects requiring minimal effort it could reduce the carbon footprint of rural primary care significantly.

Key words: planetary health, quality improvement, primary care, rural health

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

From isolation to innovation: Strengthening rural health through a learning healthcare community

Shabanam Asghari, Tayebeh Sohrabi, Cheri Bethune, Wendy Graham, Emily Hussey

Memorial University of Newfoundland, St. John's, Canada

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Shabanam Asghari
E-mail: sasghari@mun.ca

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Rural communities face challenges including workforce shortages, limited access, and health disparities.

Aim of the study. To address these gaps, we are implementing a Learning HealthCare Community (LHCC) model that integrates continuous learning and data-driven improvements while actively engaging stakeholders. We examine the implementation of the LHCC model in Newfoundland and Labrador.

Methodology. Implementation science frameworks and a mixed-methods design were employed. Data are collected through surveys, focus groups, and observations. Stakeholders engaged through structured activities and co-design sessions. Capacity-building is supported by our Rural Research Capacity Building Program (RRCBP) including research training workshops, mentorship, and embedded research opportunities aimed at strengthening local research and decision-making capabilities.

Results. This research-in-progress is assessing implementation outcomes of the LHCC model, including acceptability, feasibility, adoption, fidelity, and sustainability. Preliminary findings highlight the importance of facilitators like strong digital infrastructure, effective leadership, and community readiness. Analysis revealed enablers and barriers at multiple levels. For learners, enablers included community-focused research, access to rural physicians as mentors. Barriers included time constraints, heavy workloads, limited research skills and tools, and difficulty developing one-year outcome projects. For rural physicians, challenges included geographic isolation, protected research time, funding access. Enablers include research training, mentorship and peer support through our RRCBP. Systemic issues at the local and national levels included minimal support for rural research and insufficient academic prioritization. Early results show improved research competencies among rural physicians who participate in RRCBP, with 83.3% reporting increased knowledge, 95.7% reporting improved attitudes, and 80.0% reporting improved skills. Initial observations indicate enhanced research capacity among learners (n = 50), the launch of 50 community-driven projects, and 43 publications.

Conclusions. The LHCCs offer a transformative approach to rural healthcare by leveraging technology, collaboration, and evidence-based decision-making. Addressing barriers and strengthening partnerships can enhance healthcare sustainability, providing valuable insights for policymakers, researchers, and healthcare practitioners.

Key words: Learning Health Care Community, rural healthcare, stakeholder engagement, patient-centered care, healthcare innovation

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Enhanced skin lesions management in rural practice: The power of teledermatology, dermatoscopy, and targeted education

Laura Siauciuniene, Alena Nicholson, Meredith Donaldson, Agne Meskauskiene, Danielle Reesby, Carl Nigel Deaney

Marsh Medical Practice, LN11 7QU, Louth, North Somercotes, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Laura Siauciuniene
E-mail: laura.siauciuniene@nhs.net

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Our clinic is situated in a rural coastal area, with 2 branches located in East Lincolnshire, the 2nd-largest county in England, spanning 6959 km^2. The area's geography, road infrastructure, and prolonged waiting times for initial outpatient dermatology appointments (ranging from 15 to 24 weeks) create significant barriers to timely patient care. To improve accessibility, an advice and guidance (A&G) dermatology service has been implemented. For this service to effectively reduce the need for in-person appointments and enable clinicians to manage conditions within the community, it is essential to ensure the appropriate use of dermatoscopy and the ability to manage benign lesions without specialist intervention.

Aim of the study. To assess the impact of a targeted educational intervention on teledermatology usage and staff confidence in recognising and managing specific skin lesions in the community.

Methodology. A clinical audit was conducted to review referrals to A&G dermatology service and identify associated educational needs. Following this, a targeted educational session was conducted to address areas for improvement and enhance the use of dermatoscopy. After the educational event, further analysis was performed on the utilisation of the teledermatology service over the subsequent 2 months.

Results. Following the implementation of an educational intervention, early detection of basal cell carcinomas facilitated the treatment of 5 out of 11 cases within the community through non-surgical approaches. Approximately 2/3 of referrals to the A&G service were effectively managed within the practice, thereby eliminating the necessity for patients to travel to hospital facilities. Furthermore, the use of high-quality dermatoscopic images enabled specialists to distinguish between more advanced actinic keratosis and squamous cell carcinomas, thereby enhancing the availability of appointments within the cancer pathway.

Conclusions. Teledermatology services, combined with education on skin lesions and dermatoscopy, enhanced community management of benign and early cancerous lesions, reducing the need for hospital appointments.

Key words: dermatoscopy, telemedicine, skin lesions

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Education in action: A case review of early referral for rare skin cancer following clinical training on skin lesions recognition

Laura Siauciuniene, Carl Nigel Deaney

Marsh Medical Practice, LN11 7QU, Louth, North Somercotes, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Laura Siauciuniene
E-mail: laura.siauciuniene@nhs.net

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Certain skin conditions, such as cutaneous T-cell lymphoma, are not only rare but also exhibit diverse clinical presentations. Research indicates that the diagnostic process can take anywhere from 3 to 4 years, and in some cases, even up to 4 decades. Understanding the basic principles for monitoring skin lesions, summarised by the acronym "EFG" – elevated, firm, and growing – can help healthcare professionals identify potentially malignant lesions more effectively. This case illustrates that educating a broad range of healthcare professionals on skin lesion recognition can improve patient management and enhance clinicians' self-awareness, ultimately leading to earlier diagnoses.

Aim of the case report. This case report aims to emphasise the importance of clinical training in recognising skin lesions among diverse healthcare staff. It demonstrates that applying simple principles can enhance early identification and facilitate timely referrals within medical practices. This approach benefits both patients and healthcare providers individually.

Case report. After receiving specialised education on managing skin lesions, a clinician recognised potentially malignant characteristics in a patient's lesion. This prompted a referral request through the skin cancer pathway. As a result, the lesion was removed and diagnosed as a rare type of cutaneous T-cell lymphoma within 4 months of the initial referral. Thanks to early detection, the patient's ongoing management involves check-ups with specialists every 6 months, with no further active treatment required.

Conclusions. Raising awareness of the characteristics of malignant skin lesions among a diverse range of primary healthcare providers can promote greater vigilance and enhance skin lesion screening within their practice. The identification of these lesions could be integrated into various patient interactions, including wound dressing appointments, phlebotomy clinics, and non-skin-related consultations.

Key words: cutaneous T-cell lymphoma, skin malignancies screening, healthcare staff education, resources optimisation

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Prognosis of the real and required demand for family medicine services in Poland

Małgorzata Kalisz[1], Anna Kordowska[1], Jolanta Michałowska[1], Leszek Średziński[1], Anna Krawczyk[2], Magdalena Łoś[1,2]

[1] Medical and Diagnostic Center in Siedlce, Poland
[2] Medical University of Warsaw, Poland

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Magdalena Łoś
E-mail: mbogdan@wum.edu.pl

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Family medicine forms the foundation of the healthcare system, ensuring comprehensive and continuous care for the population. Understanding the gap between actual and required demand for primary healthcare (PHC) services is crucial for optimising resource allocation and improving patient outcomes.

Aim of the study. This study concept aims to assess the real versus required demand for primary healthcare services in Poland. The research results can be used as an assessment of future staffing strategy in primary care.

Methodology. The real demand was estimated based on historical utilization data of PHC services across different age groups over the past 3 years, assuming similar future trends. The required demand will be additionally determined by analyzing the recommended number and type of services that should be provided annually for each age group, along with the estimated duration of these services, based on experiences of Medical and Diagnostic Center in Siedlce, Poland.

Results. Values projected with the model of the real demand, demonstrate a persistent future shortage of family medicine specialists in Poland. In 2020 there was a shortage of 6,029 family doctors, which resulted in only 64.40% of needs being met. Over the next 25 years, this percentage will only increase to 78.25%, lacking 3352 specialists. The study revealed that the required demand for PHC services exceeds the real demand, indicating a potential gap in healthcare utilization. Enhancing health awareness and preventive care could lead to increased service utilization. However, without adjustments in healthcare workforce capacity, a rise in demand may compromise service availability and accessibility.

Conclusions. Bridging the gap between real and required demand requires strategic workforce planning and health education initiatives. Policymakers should consider optimising PHC capacity to meet the population's actual healthcare needs effectively.

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

The role of AI, telemedicine and digital tools in alleviating the phenomenon of medical deserts

Magdalena Łoś[1,3], Adrian Kuś[1], Marika Guzek[1], Paulina Wójcik[1], Aleksandra Prusaczyk-Świerzewska[1], Piotr Gryza[2], Jakub Magdziarz[3], Łukasz Lasyk[2]

[1] Medical and Diagnostic Center, Siedlce, Poland
[2] DIGITMED, Poland
[3] Medical University of Warsaw, Poland

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Magdalena Łoś
E-mail: mbogdan@wum.edu.pl

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Medical deserts, regions with limited access to healthcare services, pose a significant challenge to global health equity. They result from factors such as geographic isolation, economic constraints, healthcare workforce shortages, and technological barriers. The rise of artificial intelligence (AI), telemedicine, and large language models (LLMs) offers promising solutions to mitigate these disparities by expanding healthcare accessibility and improving efficiency.

Aim of the study. This review explores the role of AI, telemedicine, and digital tools in alleviating the phenomenon of medical deserts. It evaluates their applications, benefits, challenges, and real-world implementations, with a special focus on Poland's healthcare system.

Methodology. A comprehensive literature review was conducted on AI-driven healthcare applications, telemedicine solutions, and LLMs in medical settings. Sources include peer-reviewed studies, governmental reports, and case studies from healthcare systems worldwide.

Results. AI and telemedicine have demonstrated significant potential in increasing healthcare accessibility in rural and remote areas. Telemedicine enables remote consultations, remote patient monitoring (RPM), and teleradiology, reducing travel time and costs for patients in underserved regions. AI-driven tools, such as predictive analytics, automated diagnostics, and intelligent triage systems, help optimise healthcare resources and alleviate workforce shortages. LLMs, including GPT-4, enhance clinical decision-making, automate medical documentation, and provide AI-driven patient education. However, challenges such as digital infrastructure gaps, regulatory limitations, and AI model transparency must be addressed to ensure equitable and ethical implementation.

Conclusions. AI, telemedicine, and LLMs are transformative technologies that can significantly reduce the impact of medical deserts. While they improve healthcare accessibility and efficiency, their integration requires robust infrastructure, regulatory adaptation, and ethical considerations. Further research and policy efforts should focus on expanding digital health initiatives, particularly in low-resource settings, to ensure sustainable and inclusive healthcare solutions.

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Health care in depopulation areas: Contemporary challenges related with population wellbeing and shortage of medical staff

Przemysław Dybciak[1], Dorota Lenarcik[1], Grzegorz Bańka[1], Sabina Karczmarz[1], Artur Prusaczyk[1], Magdalena Łoś[1,2]

[1] Medical and Diagnostic Center, Siedlce, Poland
[2] Medical University of Warsaw, Poland

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Magdalena Łoś
E-mail: mbogdan@wum.edu.pl

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. A noteworthy achievement of modern civilization is increasing life expectancy. However, the paradox results from the presence of a non-linear relationship between life expectancy and its quality. Longer life is relatively more often associated with poorer quality of health, which is reflected by an increasing burden of non-communicable chronic diseases in the population of industrialized countries. Insufficient satisfaction of health needs resulting from limited resources of medical staff, and contemporary age patterns inscribed in epidemiological parameters are the common denominator of current challenges to the health care system, as well as Polish and EU health policy. The above-mentioned challenges have become an inspiration for the research team to develop and implement a conceptual research model in the context of the phenomenon of medical deserts.

Aim of the study. The aim of the study was analysis of the phenomenon of medical deserts from a systemic perspective, with particular consideration of health aspects.

Methodology. Literature review concerning the phenomenon of medical deserts and career plans of future medical staff. Quantitative study using a questionnaire for analysis of the attitudes and career plans of future physicians. Conducting individual in-depth interviews with system experts.

Results. The most important incentive for future medical staff is the perspective of work in the field of science, the opportunity to help others, and a sense of self-agency or belonging to a group with a special social status. As a result of the multi-stage study carried out proposals for system recommendations were developed aimed at reducing the phenomenon of medical deserts and incentives to work in depopulated areas.

Conclusions. Coherent and targeted cooperation between government and local self-government authorities, local and professional communities, can encourage young doctors to work in rural and depopulated areas, and thus help reduce the phenomenon of medical deserts. The presented findings should be considered as preliminary and require further in-depth exploration.

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

The role of pharmaceutical services in rural areas in Poland

Joanna Siennicka[1], Jolanta Pańkowska[1], Damian Chaciak[1], Michał Żuk[1], Paweł Żuk[1], Joanna Oberska[2], Magdalena Łoś[1,2]

[1] Medical and Diagnostic Center, Siedlce, Poland
[2] Medical University in Warsaw, Poland

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Magdalena Łoś
E-mail: mbogdan@wum.edu.pl

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. The scope of pharmaceutical services in Poland remains limited. Despite the legal framework being in place since 2021, the practical application of expanded pharmacists' competencies has not yet been fully realized in the Polish healthcare system. The role of pharmacists cooperating with PCPs could be even more important in depopulation areas.

Aim of the study. The aim of the study was analysis of the role of pharmaceutical services in rural areas in Poland.

Methodology. A national survey was developed to assess attitudes towards increasing pharmacists role in patient care in Poland. The form was administered to pharmacists and primary care physicians. Responses collected between September 2024 and February 2025 were included in the analysis.

Results. Three hundred and five pharmacists' and 118 PCPs' responses were analysed. Pharmacists were more open and interested in fulfilling more roles in patient care and providing additional pharmaceutical care services. Highest support received identifying unnecessary medications (88.9%), patient education about new medications (85.6%) and identifying medication-related issues such as allergies, dosage, drug interactions, and potential for adverse effects (85.6%). In responses of primary care physicians identifying unnecessary medications (68.8%), training patients in the use of medical devices, e.g. inhaler or glucometer (59.3%) and identifying medication-related issues (55.9%) were the most popular. Pharmacists were also open to contribute to various aspects of patient care – performing vaccinations (58.7%), performing screening tests in a pharmacy (50.5%), and scheduling referrals for preventive examinations (44.6%). Notably, 75.1% of pharmacists supported issuing continuation prescriptions, which could significantly improve medication access in rural areas, though only 29.7% of PCPs agreed.

Conclusions. The survey results highlight the potential for expanded pharmacist roles to address healthcare gaps in rural areas. Agreement on certain pharmacist roles provides a foundation for interprofessional collaboration between pharmacists and physicians. Extended pharmacist roles, patient education, issuing continuation prescriptions, could significantly improve medication management and access in rural communities.

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Revisiting management paradigms to enhance clinical practice in the rural setting to meet the healthcare needs of patients with chronic conditions and our ageing population

Carl Nigel Deaney, Scott Glickman

Marsh Medical Practice, LN11 7QU, Louth, North Somercotes, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Carl Nigel Deaney
E-mail: carldeaney@doctors.net.uk

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Primary care in England plays a crucial role in managing long-term care for patients with ongoing medical conditions. The Quality and Outcomes Framework (QoF) encourages healthcare practitioners to meet a minimum standard of care. However, it may not always reflect accepted best practices or a holistic approach, and it does not encompass all medical conditions. Traditionally, healthcare professionals (HCPs) are trained to cure, treat conservatively, or provide palliative care. This focus often follows a restorative paradigm in healthcare management, which may not fully align with the needs of patients suffering from chronic conditions, such as COPD.

Research questions. To provide an alternative paradigm approach to delivering best-practice healthcare in a rural community with a high prevalence of chronic medical conditions.

Methodology. To co-opt a goal-directed paradigm for enhancing quality of life to reduce processes detrimental to physical, psychological or social wellbeing by addressing health risks, symptoms, complications, function, education and support. It must be acknowledged that there are differences between the restorative paradigm and times when they should be used in conjunction.

Results. According to the Dutch proverb, "An ounce of illness is felt more than a hundredweight of health." Patients need support to ensure their safety, freedom from danger, integrity (both functional and structural), control over their physical and social environments, self-worth, mental well-being, and hope. This framework of health and disability awareness supports an approach that shifts the focus to be patient-oriented, prioritising both outcomes and processes. Appropriate outcome measures can be used as required.

Conclusions. This alternative approach is crucial for managing primary care, especially in rural areas where most healthcare is delivered locally. It is founded on the evaluations of HCPs concerning the issues at hand and the desired outcomes, which are collaboratively determined with the patient. Additionally, this approach can be integrated with a restorative model for addressing reversible events.

Key words: management paradigm, rural healthcare, long term conditions

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Holistic outcomes in real-world secondary prevention: Strategies and treatment for established ASCVD patients in a rural English primary care network

Carl Nigel Deaney, Meredith Donaldson, Agne Meskauskiene

Marsh Medical Practice, LN11 7QU, Louth, North Somercotes, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Carl Nigel Deaney
E-mail: carldeaney@doctors.net.uk

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. ASCVD presents a considerable challenge for the devolved nations of the UK, particularly in rural areas characterised by high levels of health deprivation. In response to this issue, a rural Primary Care Network (PCN) launched a project, serving approx. 39,000 patients, many of whom are at a significantly higher risk of ASCVD events compared to the national average. The PCN rapidly identified an unmet need. Research indicates that even patients with well-controlled low-density lipoprotein cholesterol levels (with a mean LDL-C of 1.73 mmol/L, below current national targets) still face a 35% likelihood of experiencing subsequent events. To address this continued risk, residual risks such as triglycerides (TGs) require review, as their treatment can contribute to an additional 30% reduction in risk. We aimed to realise the potential benefits of decreasing morbidity and mortality associated with ASCVD, as well as reducing the burden on the NHS and wider society.

Aim of the case report. The aim is to mitigate the care gap for patients with ASCVD by identifying eligible individuals and improving their treatment outcomes. The PCN utilised the National Institute for Health and Care Excellence (NICE) criteria to delineate the target population and implemented real-world clinical initiatives across 4 medical practices.

Case report. Each practice utilised different approaches, such as Nurse-Led Clinics and dedicated Patient slots, but all achieved success in optimising TG residual risk. We reviewed and optimised 718 patients, addressing the challenge of non-fasting triglycerides in Primary Care through a pragmatic approach endorsed by our Professors of Cardiology and the ICB. By treating patients as individuals and responding with kindness, we observed increased compliance and improved outcomes, which also enhanced staff morale.

Conclusions. ASCVD is common in older adults, and improving outcomes requires a multi-faceted approach. Achieving better risk reduction requires comprehensive management, enhanced adherence, and a bespoke patient-centric approach for population risk management.

Key words: triglycerides, residual risk, ASCVD, population health

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Rural wellbeing and healthcare needs: A paradigm shift to a holistic approach to dementia to improve clinical practice for our aging population

Natalie Daly, Carl Nigel Deaney

Marsh Medical Practice, LN11 7QU, Louth, North Somercotes, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Natalie Daly
E-mail: natalie.daly3@nhs.net

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Healthcare professionals (HCPs) traditionally focus on curing or providing palliative care, which may not meet the needs of dementia patients. Adopting a goal-directed paradigm allows for person-centred care that addresses the physical, emotional, social, and psychological needs of individuals with dementia. This approach prioritises personalised care, enhancing quality of life while managing symptoms through a combination of medical treatment, therapeutic interventions, and emotional support. However, access to this level of care can be challenging in aging rural communities.

Research questions. We aim to explore this new paradigm of management, setting goals for dementia care, as the principles highlight effective strategies and interventions that employ a multidisciplinary approach, involving caregivers, healthcare professionals, and support networks, while delivering best-practice healthcare, especially for our older patients in rural communities.

Methodology. The objective is to mitigate processes that may adversely affect physical, psychological, or social well-being by addressing various health risks, associated symptoms, complications, and providing education and support. We provide guidance to patients and their families throughout their dementia journey, encompassing initial assessments to determine our outcome goals, the formulation of care and treatment plans, and ongoing monitoring.

Results. Conducting regular reviews beyond QoF requirements with home visits where required enables us to gain insight into the patient's environment and specific needs, thereby allowing us to offer appropriate support and help mitigate risks. It is essential to recognise the distinctions between this and restorative and palliative care paradigms, as their concurrent application may be beneficial in certain circumstances. Where appropriate, suitable outcome measures can be applied. This is illustrated with a case study.

Conclusions. This approach is crucial for rural primary care, emphasising patient evaluations and goal-setting. It emphasises dignity for those with dementia, community involvement, and collaboration with local services, while home visits enhance safety and comfort.

Key words: dementia, rural community, holistic, safe-guarding, goals, best practice

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Enhancing the management of chronic conditions in rural communities through SGLT2i: A collaborative population health initiative

Danielle Reesby, Carl Nigel Deaney

Marsh Medical Practice, LN11 7QU, Louth, North Somercotes, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Danielle Reesby
E-mail: danii.reesby@btinternet.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Sodium-glucose cotransporter 2 inhibitors (SGLT2i) play a crucial role in the management of type 2 diabetes (T2D), chronic kidney disease (CKD), and heart failure (HF) due to their ability to lower blood sugar levels, reduce cardiovascular risks, and support kidney health. Ensuring optimal treatment with SGLT2i is especially important in rural communities, where healthcare access can be limited and effectively managing chronic conditions can be challenging. Proper use of SGLT2i can prevent disease complications and improve disease trajectory, making it essential for healthcare providers in rural areas to offer optimal and consistent care to maximise the benefits of these medications.

Aim of the case report. The purpose of this case series is to focus on a rural primary care network population, emphasising the importance of optimising treatment with SGLT2is for patients with diabetes, CKD, and HF. It is crucial to identify eligible patients and provide them with the appropriate therapy to enhance their health outcomes.

Case report. The review was conducted by 4 general practices, covering a rural population of approx. 39,000 patients. The identification and review process differed slightly between practices that employed various strategies to review patients, including nurse-led clinics, dedicated appointments, ad hoc reviews, and dedicated clinics using the MDT. Seven hundred fifty patients at risk were reviewed, with a 16% increase in the prescribing of SGLT2 Inhibitors across all disease areas.

Conclusions. It is essential to ensure that eligible patients receive SGLT2is to improve outcomes in conditions such as T2D, HF, and CKD. This case series highlights practical strategies for the proactive identification of patients at the population level. It also addresses the barriers to treatment, aiming to make these therapies accessible to all who can benefit from them, including our older patients.

Key words: rural health, chronic conditions, SGLT2i

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

The use of remote screening for CKD detection in at-risk patients with hypertension in a rural population

Danielle Reesby, Carl Nigel Deaney

Marsh Medical Practice, LN11 7QU, Louth, North Somercotes, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Danielle Reesby
E-mail: danii.reesby@btinternet.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Hypertension stands as a primary contributor to chronic kidney disease (CKD), which is identified as the 10th leading cause of death worldwide. Notably, approx. 1 million individuals remain undiagnosed. Screening rates among at-risk hypertensive populations are often insufficient, which impedes the timely detection of this condition. The implementation of remote clinical testing presents a viable solution to enhance access to healthcare and improve detection rates of chronic kidney disease (CKD) among these patients.

Aim of the case report. This case series aims to evaluate the effectiveness of a remote diagnostic service in identifying chronic kidney disease (CKD) early among patients with hypertension residing in a rural community.

Case report. A total of 507 patients participated in the remote testing initiative, achieving an impressive 71% completion rate. The findings indicated that 75% of the patients had normal ACR results, while 86 individuals exhibited abnormal ACR levels, suggesting a potential risk for chronic kidney disease (CKD). Feedback from patients was positive, with over 90% (n = 94) stating that the test was "very easy" to perform. Furthermore, 78% of patients expressed a preference for at-home testing over traditional clinic visits

Conclusions. Adopting a remote clinical testing approach for CKD detection in patients with hypertension proves to be an effective and accessible solution, especially for rural communities. The use of at-home urinary ACR testing kits, paired with a smartphone application, provides a convenient and user-friendly method for early CKD detection. Patient satisfaction and preference for at-home testing suggest that this model could improve healthcare access and outcomes for individuals in underserved areas.

Key words: remote screening, hypertension, CKD, rural health

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

A retrospective analysis of an improved strategy employed by a primary care provider within a rural community aimed to increase participation rates in colorectal cancer screening

Natalie Daly, Carl Nigel Deaney

Marsh Medical Practice, LN11 7QU, Louth, North Somercotes, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Natalie Daly
E-mail: natalie.daly3@nhs.net

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Colorectal cancer (CRC) represents a significant global health challenge, with early detection facilitated by screening programs playing a crucial role in reducing mortality rates. The National Health Service (NHS) administers a national CRC screening program in England. However, rural communities often demonstrate lower participation rates in these screening initiatives than their urban counterparts. This discrepancy warrants further examination and targeted interventions to enhance participation among rural populations.

Research questions. To enhance the effectiveness and accessibility of the national colorectal cancer screening program within our rural community, it is imperative to comprehend the underlying reasons for non-participation, identify existing barriers, and propose solutions to improve participation rates.

Methodology. The practice appointed a Colorectal Cancer (CRC) screening monitoring officer to manage all outcomes related to positive, negative, or non-response results. Utilising a multi-channel approach, the monitor diligently follows up with patients who have not responded through various methods, including telephone calls, text messages, and written correspondence. The officer addresses results during face-to-face consultations and seeks to understand the reasons for non-participation. Additionally, the monitor encourages participation by offering support and pertinent information, actively listens to patients, addresses any concerns, and facilitates test administration within the practice setting.

Results. Data was collected from results over 1 year. One hundred ninety-nine patients were sent Bowel Screening Kits, 92 did not respond. Seventy-eight were contacted by text message, 5 were contacted by telephone, and 9 were reviewed face-to-face. Seventy-five did not answer. Fifteen responded, 3 declined. Twelve 12 Tests were given out, with 10 being returned.

Conclusions. Our review found that implementing these strategies can modestly enhance CRC screening participation in rural communities, improving early detection and helping reduce CRC-associated morbidity and mortality. Bowel screening programmes may be more effective in rural settings by providing tailored interventions, improving accessibility, and giving reassurance.

Key words: colorectal cancer screening, rural cancer prevention programmes

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Meeting wellbeing needs: A retrospective review of a proactive approach to encouraging patients to engage more using exercise programmes

Natalie Daly, Carl Nigel Deaney, Michelle Daff, Sarah Knudsen, Sophie Kirk

Marsh Medical Practice, LN11 7QU, Louth, North Somercotes, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Natalie Daly
E-mail: natalie.daly3@nhs.net

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Integrating exercise into daily life is crucial in meeting and fulfilling physical and psychological well-being needs, especially in rural areas. Regular physical activity enhances cardiovascular health, strengthens muscles, improves flexibility, and reduces the risk of obesity, diabetes, ASCVD and hypertension. As healthcare professionals, we are a key to educating, motivating, and implementing sustainable strategies tailored to the unique well-being needs of many in our rural community, including our ageing population.

Research questions. Physical activity levels across all age groups should be reformed to enhance overall well-being, and awareness of and accessibility to services should be promoted.

Methodology. We initiated a campaign promoting the Move More Service through Notice Boards in Waiting Rooms and organised related events. This is a retrospective review of our initiative to address the importance of enhancing physical activity and disseminating information regarding available services, including health checks, weight management, long-term condition reviews, and general medical appointments. Additionally, we facilitated appropriate referrals as required.

Results. Initial findings indicated that rural patients do less than 150 min of physical activity per week. Over the past year, 105 patients from our practice have been referred to the Move More Service, where they participated in a complimentary 12-week tailored physical activity program. The patient experience was found to be positive. For the past two years, our practice has been recognised as the county's leading provider of referrals to this service.

Conclusions. The implementation of this service allows all age groups, even those with complex health needs, to access tailored activity programmes mindful of their personal preferences, accessibility, and physical capabilities. All age groups welcomed the opportunity, and positive feedback was received. Engagement has fostered social connections and enhanced emotional support while providing a sense of belonging in a rural community. Promoting awareness, motivation, education, and access to physical activity services is possible in rural populations.

Key words: wellbeing, physical activity, rural population, health promotion, exercise, risk reduction

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Using recipes incorporating oral nutritional supplements to enhance engagement and compliance in patients at risk, improving dietary intake beyond food first

Stephanie Koliandris, Danielle Reesby, Carl Nigel Deaney

Marsh Medical Practice, LN11 7QU, Louth, North Somercotes, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Stephanie Koliandris
E-mail: stephanie.koliandris@nhs.net

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Oral nutritional supplement (ONS) drinks are used in rural clinical settings to provide supplemental nutrition to patients at risk of malnutrition or those with difficulty consuming a sufficient amount of food. Notably, the growing elderly population, those with medical conditions, or individuals with low BMI and conditions such as COPD, who find it challenging to meet their recommended nutritional intake through food first. However, maintaining patient compliance with supplements can be difficult due to factors such as the repetitive or unappealing taste. A creative approach, such as incorporating ONS into appealing recipes, may enhance compliance and aid adequate nutrition.

Aim of the case report. The aim is to increase patient compliance with nutritional requirements, with a focus on reaching our ageing population and those with long-term conditions. It also aims to explore and promote the impact of using a "Recipe of the Week" approach, with ONS as the primary focus of the recipes.

Case report. Our accuRx® SMS service is utilised as a means of communicating with patients, encouraging collaboration. A group of patients was selected who are currently prescribed ONS. Over the course of 2 months, a weekly recipe was sent via accuRx to individuals to utilise and encourage creativity. The focus was on ONS as the key ingredient within recipes, such as smoothies, baked goods, and savoury dishes. Two case studies were selected to demonstrate the program's success in improving ONS compliance.

Conclusions. The introduction of a monthly recipe program, with a direct focus on ONS, successfully improved patient compliance with ONS. This approach provides a practical strategy for healthcare providers in rural communities to reach a broad audience and enhance adherence, thereby supporting patients in achieving better dietary outcomes, particularly those who may struggle with traditional oral nutritional supplements (ONS).

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Utilising the weight reduction agent orlistat to manage obesity in at-risk patients with obesity in rural primary care

Stephanie Koliandris, Natalie Daly, Carl Nigel Deaney

Marsh Medical Practice, LN11 7QU, Louth, North Somercotes, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Stephanie Koliandris
E-mail: stephanie.koliandris@nhs.net

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Obesity is a global health concern which is continually increasing and contributing to various comorbidities such as type 2 diabetes, COPD, hypertension, and cardiovascular diseases. Medicines such as orlistat are commonly prescribed within primary care settings to aid weight management by reducing fat absorption. The effectiveness of orlistat was reviewed, with a focus on lowering Body Mass Index (BMI).

Aim of the case report. This case series aims to evaluate the impact of orlistat on BMI reduction and document potential improvements in comorbidities among patients in our rural primary care settings.

Case report. The patient's experience and clinical outcomes were assessed by reviewing their ERS records. A group of patients with a BMI over 35 kg/m^2 were prescribed orlistat in conjunction with dietary modifications and increased physical activity. Weight reviews were performed within the practice every 3 months following the commencement of orlistat, with good compliance being the key requirement. Patients must have achieved at least 5% weight loss to continue orlistat after 3 months. Significant improvements were observed in weight reduction, allowing for better control of comorbidities and potentially enhancing clinical outcomes. Working in collaboration can achieve a healthy BMI. Regular follow-up consultations highlighted the patient's increased motivation, accountability, and adherence to lifestyle changes, which may contribute to health improvement.

Conclusions. The findings presented in this case series suggest that orlistat may be an effective option in primary care settings for facilitating weight management. Additionally, orlistat has a favourable influence on other chronic conditions that can precipitate deterioration. By focusing on reducing BMI and emphasising the importance of weight management strategies, orlistat can improve patient outcomes, particularly in rural primary healthcare settings.

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Utilising the prostate cancer UK risk assessment tool to improve patient outcomes in rural primary care

Stephanie Koliandris, Michelle Daff, Sophie Kirk, Sarah Knudsen, Natalie Daly, Carl Nigel Deaney

Marsh Medical Practice, LN11 7QU, Louth, North Somercotes, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Stephanie Koliandris
E-mail: stephanie.koliandris@nhs.net

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Prostate cancer is the most common cancer among men, with 1 in 8 men being diagnosed at some point in their lives. While early detection is essential, the UK currently lacks a national screening program, and PSA testing has limitations that do not guarantee accurate results. The Prostate Cancer UK Risk Assessment Tool (PCUK-RAT) facilitates personalised risk assessment and leverages new digital technologies, particularly in rural areas. Informed decision-making about screening can help reduce unnecessary tests for healthcare professionals, decrease burnout, and identify higher-risk patients who may benefit from earlier intervention.

Aim of the case report. This case series aims to identify individuals most at risk for prostate cancer using a tailored text that incorporates the PCUK-RAT, an accessible digital tool for men over 50. We utilised the accuRx SMS messaging tool to reach a broad group of at-risk patients. Our goal was to adopt a proactive, patient-centred approach that facilitates the early detection of prostate cancer while demonstrating the effectiveness of the tool and improving outcomes in our rural setting.

Case report. A group of males aged 50 and above was selected to evaluate the effectiveness of the PCUK-RAT. The PCUK-RAT enables clinicians to assess various risk factors, including age, family history, and prostate-specific antigen (PSA) levels. It facilitates the review of patient risk factors and identifies individuals at high risk. This process leads to referrals for further diagnostic testing or differential diagnosis.

Conclusions. The use of the PCUK-RAT in rural primary care has improved the early detection and diagnosis of prostate cancer. This tool can significantly enhance patient outcomes by identifying individuals at risk and facilitating referrals for diagnostic procedures. Regular implementation of the PCUK-RAT highlights the potential to improve screening protocols in primary care, leading to better patient outcomes and fostering collaboration among healthcare professionals.

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

HPV vaccine myths: Perspectives from Romanian family doctors in clinical practice

Maria Catalina Popescu, Roxana Surugiu, Carmen-Adriana Dogaru, Gindrovel Dumitra, Alexandra-Aurora Dumitra, Loredana-Maria Nicolae, Andreea-Maria Diaconu, Gabriel-Cristian Vacaru

University of Medicine and Pharmacy of Craiova, 200128 Craiova, Romania

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Maria Catalina Popescu
E-mail: catalinaamariia@gmail.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Romania reports the highest rates of cervical cancer incidence and mortality in the European Union, highlighting the urgent need for effective HPV vaccination strategies. Despite the vaccine's introduction in 2008, coverage remains low due to misinformation and vaccine hesitancy, particularly in rural areas with limited resources and access.

Aim of the study. This study explores Romanian family doctors' perceptions of persistent myths surrounding the HPV vaccine. It seeks to categorise these myths by age group and compare their prevalence across rural and urban settings, thereby highlighting geographic disparities in vaccine perceptions among Romanian family doctors.

Methodology. A cross-sectional online survey was conducted among 466 family doctors from urban and rural settings. The 17-item questionnaire was based on input from Romania's National Society of Family Medicine and focused on common HPV myths. Data were analyzed using Kruskal–Wallis tests with Dunn's post hoc comparisons and χ^2 tests to examine demographic associations.

Results. The most commonly endorsed myths were: "M2 – The HPV vaccine is only for girls" (mean ±SD: 2.91 ±1.27), „M4 – The HPV vaccine causes severe and long-term side effects" (2.83 ±1.27), and "M7 – There are too many new vaccines" (2.77 ±1.30). Respondents from rural areas showed significantly higher agreement with myths related to vaccine safety, efficacy, the growing number of vaccines, its necessity in monogamous individuals, fear of injections, and beliefs linking vaccination to promiscuity – particularly when referring to parents of adolescent girls.

Conclusions. The study highlights the need to strengthen research capacity and communication skills among rural GPs to effectively address HPV vaccine myths. Targeted, evidence-based interventions are crucial for increasing vaccine uptake in underserved areas, where family doctors are key public health advocates.

Key words: HPV vaccination, vaccine myths, vaccine hesitancy, rural healthcare, health communication, public health

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Understanding vaccine hesitancy: Insights into influenza vaccine refusal in Romania

Maria Loredana Nicolae, Maria Catalina Popescu, Alexandra Aurora Dumitra, Gabriel Cristian Vacaru, Andreea Maria Diaconu, Roxana Surugiu, Gheorghe Gindrovel Dumitra

University of Medicine and Pharmacy of Craiova, 110339 Pitești, Romania

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Maria Loredana Nicolae
E-mail: loredanamaria_21@yahoo.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Influenza remains a significant cause of severe respiratory illness, despite advancements in vaccinology. Vaccine hesitancy poses a significant challenge, particularly among rural populations, who face barriers such as limited healthcare access and lower health literacy.

Aim of the study. This study aims to investigate vaccine hesitancy using a 13-item questionnaire distributed to family doctors.

Methodology. The study was conducted in Romania between October 4 and October 30, 2024, involving 16 family medicine practices, 7 of which were located in rural areas. Physicians documented the reasons for influenza vaccine refusal and collected anamnestic data, with a particular emphasis on rural–urban disparities. A 13-item questionnaire explored factors contributing to vaccine hesitancy, highlighting common barriers such as distrust, fear of side effects, and exposure to misinformation among 272 respondents. Latent Class Analysis (LCA) was used to identify distinct hesitancy profiles, while χ^2 and odds ratio analyses were used to evaluate geographic variations.

Results. Among 272 patients refusing influenza vaccination, refusal rates were significantly higher in rural areas, despite a greater number of consultations in urban settings. Latent Class Analysis identified 3 hesitancy subgroups: Class 1 displayed a low-hesitancy and fear-driven profile, class 2 showcased a high-hesitancy and distrust-driven profile, while class 3 displayed intermediate hesitancy and focused more on questioning the necessity of vaccines. Key predictors of refusal included fear (higher in females and parents), distrust (higher in unmarried individuals), and distorted risk perception.

Conclusions. This study provides valuable insights into the key reasons behind vaccine refusal in Romania, revealing distinct patterns of hesitancy, with a clear discrepancy between rural and urban populations. Targeted public health interventions are essential to bridge this gap, enhance vaccine education, and build trust in rural communities.

Key words: influenza vaccination, vaccine hesitancy, vaccine refusal, risk perception, rural vs urban disparities

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Empowering medical students and young doctors to drive equity and community engagement in medical education and rural general practice

Gabriel-Cristian Vacaru, Roxana Surugiu, Alexandra-Aurora Dumitra, Popescu Maria-Cătalina, Maria Loredana Nicolae, Gheorghe Gindrovel Dumitra

University of Medicine and Pharmacy of Craiova, Craiova, Romania

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Gabriel-Cristian Vacaru
E-mail: gabrielcvacaru@gmail.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Justification. Medical education, both undergraduate and postgraduate, is evolving to address healthcare access inequities, particularly among ethnic minorities and populations in rural or isolated communities. Social accountability serves as a bridge between medical training – both undergraduate and postgraduate – and the diverse health needs of the population. Students and young physicians are proposing reforms that promote community integration in medical curricula, using peer-to-peer education and grassroots advocacy as key strategies. Their role is crucial in influencing universities and policymakers to develop more inclusive health and education policies. This workshop highlights the impact of learner-led initiatives on education and policy aimed at addressing inequities in primary healthcare access and rural general practice.

Objectives. Participants will: 1) Gain skills to support vulnerable communities by addressing individual and contextual characteristics; 2) Develop leadership capacity to promote culturally responsive, community-centred, and socially accountable medical education tools; 3) Learn to design and implement effective policy-making and advocacy strategies.

Organisation. Through interactive group activities, case presentations, and reflective exercises, the workshop will explore strategies for integrating community engagement – particularly with underrepresented, vulnerable, and rural populations – into the medical curriculum. Peer-to-peer education will be used to build sustainable leadership, while sessions will focus on practical advocacy approaches within academic institutions, communities, and health policy models.

Participation. Designed for educators, students, (young) health professionals and physicians involved in medical education, this session encourages dialogue. Participants will develop strategies to integrate community needs in medical education and advocate for improved healthcare access by analyzing cultural diversity, geographic contexts and the needs of vulnerable populations.

Expected outcomes. 1) Understand how social accountability enables equity and community integration in medical education; 2) Explore peer-to-peer education as a leadership mechanism; 3) Learn advocacy techniques to influence curriculum design, institutional leadership, and national policy; 4) Identify culturally sensitive strategies to address ethnic minorities and rural populations; 5) Gain tools to build and evaluate partnerships between universities, communities, and policymakers.

Key words: advocacy, ethnic minorities, social accountability, policymakers, medical education

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

How successful are we at meeting the challenge of providing an integrated cardiorenal–metabolic approach to primary care in our rural area?

Carl Nigel Deaney, Danielle Reesby

Marsh Medical Practice, LN11 7QU, Louth, North Somercotes, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Carl Nigel Deaney
E-mail: carldeaney@doctors.net.uk

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. It is increasingly important in clinical medicine to consider the interplay between heart failure (HF), chronic kidney disease (CKD), and type 2 diabetes mellitus (T2DM) due to their frequent coexistence and shared mechanisms that worsen morbidity and mortality. This triad requires an integrated, multidisciplinary approach. Clinical interdependence refers to the phenomenon where the presence of one condition significantly increases the risk of developing the others. This bidirectional relationship creates a vicious cycle, wherein the presence of multiple conditions compounds patient risk and complicates management. HF, CKD, and T2DM are interconnected through shared risk factors, including hypertension, obesity, dyslipidaemia, and systemic inflammation, as well as endothelial dysfunction and neurohormonal activation. The RAAS and sympathetic nervous system play significant roles in the progression of these conditions. T2DM accelerates atherosclerosis, promotes glomerular hyperfiltration, and induces myocardial fibrosis, complicating the progression of CKD and HF.

Aim of the study. The aim is to evaluate the progress of our rural clinic and Primary Care Network in addressing Cardiovascular Renal Metabolic (CVRM) as a single therapeutic challenge.

Methodology. Retrospective analysis of national data from 2022 to 2024 to establish our clinic's and PCN's CVRM performance and compare it with national averages, where possible.

Results. T2DM prevalence: Clinic 8.2% (national: 5.66%), CKD: PCN 4th highest nationally, Clinic HF prevalence: 5.58% (national: 1.06%). Clinic T2DM:CKD ratio: 1.57 (national: 0.78), T2DM:HF ratio: 0.68 (national: 0.19). PCN SGLT2i prescriptions up 58%. PCN DM care processes outperform the national average, with significant improvements in PCN CKD blood pressure (10%) and ACR levels (67%) compared with national data.

Conclusions. An integrated approach to treating T2DM, CKD, and heart failure is crucial. Sodium–glucose cotransporter 2 (SGLT2) inhibitors (SGLT2) and Aldosterone receptor antagonists offer benefits across conditions, supporting individualised therapy and reducing polypharmacy. The clinical overlap of HF, CKD, and T2DM requires a unified approach for detection and treatment, leading to improved patient outcomes. Future chronic disease management should treat CVRM as a single therapeutic challenge.

Key words: cardiorenal–metabolic, type 2 diabetes, CKD, heart failure, integrated care, single therapeutic challenge

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

How one European transformed the landscape of America's rural healthcare: Lessons learned

Douglas Dyer

Riga Stradina Universitate, LV-1011 Riga, Latvia

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Douglas Dyer
E-mail: 057339@rsu.edu.lv

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Rural regions in both the United States and Latvia face significant healthcare disparities due to limited access to medical services. Stan Brock's work with Remote Area Medical (RAM) demonstrates the potential of volunteer-driven models to mitigate these gaps, offering insights relevant to similarly underserved areas in Latvia.

Aim of the case report. This case report analyses the effectiveness of Remote Area Medical and comparable volunteer initiatives in improving healthcare access and outcomes in rural Latvia, highlighting the transformative potential of volunteerism in healthcare.

Case report. The study examines the implementation of Remote Area Medical's services in isolated communities and compares them to Latvia's less developed but essential volunteer healthcare efforts. The setting provides valuable insight into the role of healthcare volunteers in improving service delivery, particularly in underserved areas. Key findings reveal significant enhancements in patient access to dental and vision care, largely attributable to volunteer involvement.

Conclusions. Volunteer healthcare services, as demonstrated by Remote Area Medical in the USA and emerging initiatives in Latvia, are vital in addressing rural healthcare disparities. Evidence indicates that scaling volunteer-driven models can sustainably improve healthcare access and outcomes. Future strategies should focus on increasing volunteer engagement and expanding service reach, particularly in remote areas.

Key words: rural healthcare, volunteer health services, health disparities, Remote Area Medical, Latvia, community-based health initiatives

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Medication management in rural primary care: The role of AI-based decision support with ChatGPT

Nurmuhammed Arynov, Markus Herrmann, Martin Berwig

Institut für Allgemeinmedizin, 39120 Magdeburg, Germany

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Nurmuhammed Arynov
E-mail: nurmukhammed.arynov@med.ovgu.de

Funding sources
None declared

Conflict of interest
None declared

Abstract

Justification. Polypharmacy presents a growing challenge in primary care, as general practitioners manage complex regimens for multimorbid patients with limited specialist support. Artificial intelligence (AI) offers potential solutions by supporting medication reviews, identifying potentially inappropriate medications (PIMs) and optimising prescribing practices. This workshop aims to explore the feasibility, potential benefits and challenges of integrating AI-based decision support into rural primary care and promote interactive discussion among practitioners and researchers.

Objectives. 1) Introduce participants to the application of AI-based language models in the context of polypharmacy. 2) Examine practical, ethical, and implementation challenges of AI in rural primary care. 3) Encourage critical discussion on how such tools can be responsibly integrated into clinical workflows in rural primary care. 4) Identify possible barriers and facilitators for AI implementation in rural healthcare settings.

Organisation. The workshop will feature a short evidence-based presentation, live demonstration using anonymised case vignettes, and facilitated breakout sessions. Participants will engage in vignette-based patient case simulations and use ChatGPT to analyse complex medication regimes and make informed prescribing decisions. Furthermore, participants will engage in a group discussion to share insights on the clinical applicability, barriers, limitations, and ethical concerns of this medication management approach.

Participation. The session will include general practitioners, other healthcare professionals, researchers, educators, and decision-makers. No prior experience with AI tools is required. Active participation is encouraged through interactive case analysis and moderated group discussion.

Expected outcomes. Participants will identify challenges and strategies for adopting AI-assisted medication management in primary care. They will enhance their understanding of using AI tools and algorithms for medication management, gaining practical insights into how ChatGPT can support clinical decision-making and assessing its potential role in future healthcare models.

Key words: medication management, polypharmacy, artificial intelligence, primary care

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Rural health communities and access to care: The realities of medicine in 'crisis management' mode

Faustine Marcourt Baldinot[1], Alice Rochette[2], Charlotte De Fontgalland[2], Laetitia Thoyer[1], William Meeus[1]

[1] CPTS Val de Creuse, France
[2] URPS ML, 45000 Orléans, France

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Charlotte De Fontgalland
E-mail: charlotte.defontgalland@urpsml-cvdl.org

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. The Centre-Val de Loire region, France is experiencing a medical demographic crisis. Its density of general practitioners is the lowest in France (101.6 practitioners per 100,000 inhabitants, compared to 125.6 nationally). The Indre department is particularly affected, with 97% of municipalities classified as sparsely populated, rural, and very low-density. Between 2010 and 2024, the density of general practitioners decreased by 32.7% (from 120.3 to 80.9 doctors per 100,000 inhabitants), while the population of people over 60 increased by 11.2%. The department ranks as the 6th least equipped in France for general practitioners, with 44.2% over the age of 60, indicating a worsening situation

Aim of the study. To assess the influence of Territorial Health Professional Communities (CPTS) as a response to the healthcare access crisis in rural areas of Indre.

Methodology. The study is based on the analysis of the medical demographic situation in Indre and the deployment of the 6 CPTSs in the department. It examines local initiatives, such as the medical bus project and the enhancement of the 'Access to Care Service,' and evaluates the shift toward a 'treating circle' model of professional practice.

Results. Despite the deployment of CPTS, their effectiveness is hindered by a shortage of 29 general practitioners (19% of the region's needs). Healthcare organization is shifting toward a 'treating circle' model, marked by increased task delegation and a declining standard of care. Palliative initiatives are framed within a crisis management logic rather than a structural reform approach.

Conclusions. The case of Indre illustrates the challenges of rural medicine operating in "survival mode." Without a restructuring of healthcare organization and practice models, access to primary care will remain unequal and erratic. While current measures are necessary, they are insufficient to address the crisis. A sustainable response demands comprehensive, long-term strategies to transform rural healthcare delivery.

Key words: medical desertification, rural medicine, Territorial Professional Health Communities (CPTS), access to healthcare, medical demographics, Indre, Centre-Val de Loire, crisis management, primary care

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Individual Task Card for medical and non-medical staff: A tool for optimal resource utilisation

Sabina Karczmarz, Paweł Żuk, Marika Guzek, Anna Kordowska, Małgorzata Kalisz

Medical and Diagnostic Centre (MDC), 08-110 Siedlce, Poland

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Sabina Karczmarz
E-mail: sabina.karczmarz@centrum.med.pl

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. An optimal medical service provision plan relies on parameterising work through real-time or near-real-time data collection on medical and organisational tasks, alongside analysis of value creation – evaluating currently unavailable key process costs, life expectancy impact, and costs of redundant processes. This process has been implemented for years at the Medical and Diagnostic Centre (MDC) in Poland, supported by data from hundreds of thousands of incidents and measurements of their quantifiable outcomes.

Aim of the Individual Task Cards. Enhanced Quality and Safety of Services. Enables detailed control of time spent on individual tasks, categorised by type and priority. Supports fulfilment of individual working time allocations, promoting accountability and efficiency. Prioritization of services-focus attention on key services by giving high priority (including higher financial rate) which encourages performance. Optimised Competency Utilisation. Performance-based incentives: Monthly bonuses are calculated based on completed tasks, linking remuneration to measurable output

Case report. Each service within the ITC system is assigned a defined time, priority, and monetary value. Procedures are further prioritized using a color-coded scheme, with red denoting services of highest importance. Employees are given monthly performance thresholds for red-priority procedures. Currently, 70–80% of services are recorded via ITCs. Full coverage (100%) applies to non-medical personnel, encompassing 331 staff members.

The service catalogue includes 618 procedures. On average, 500,000 procedures are recorded monthly, serving 100,000 primary healthcare (PHC) patients annually, alongside 30,000 preventive contacts and 160,000 secondary healthcare (SHC) patients. As 70% of PHC services are documented by name in the system, it is possible to verify precisely who provided each service, to whom, and when

Conclusions. The use of ITCs can be implemented in other medical institutions, provided there is a commitment to improving service quality, patient safety, and staff remuneration.

Key words: primary health care, secondary health care, coordinated care, optimal resource utilisation

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Impact of socioeconomic deprivation and rurality on mortality in cardiovascular patients

T.h. An Dang[1], Kathrin Gödde[1], Susanne Haucke[1], Philipp Jaehn[1], Christine Holmberg[1], Stefanie Schmitz[2], Martin Christ[3], Oliver Ritter[4], Benjamin Sasko[5]

[1] Institute for Social Medicine and Epidemiology, 14770 Brandenburg an der Havel, Germany
[2] Institute for Health Services Research of Knappschaft, Knappschaft, Bochum, Germany
[3] Department of Internal Medicine IV – Cardiology, Intensive Care and Emergency Medicine, Knappschaft Hospital Bottrop GmbH, Bottrop, Germany
[4] Department of Internal Medicine and Cardiology, Brandenburg Medical School & University Hospital Brandenburg, Brandenburg an der Havel, Germany
[5] Medical Clinic II – Cardiology/Angiology, Marien Hospital Herne, Ruhr University Bochum, Germany

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
T.h. An Dang
E-mail: thihoaian.dang@mhb-fontane.de

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Research shows that areas with high socioeconomic deprivation and rural characteristics are linked to higher mortality rates of age associated cardiovascular diseases like heart failure (HF), acute myocardial infarction (AMI) or stroke. However, few studies have examined these characteristics in combination, particularly at the community level.

Aim of the study. This study aims to examine the impact of regional socioeconomic deprivation and rurality on mortality rates, specifically 1-year survival in patients with cardiovascular disease.

Methodology. This secondary data analysis utilises health insurance data (Knappschaft Bahn-See) to assess 1-year survival in patients hospitalised for HF, AMI, or stroke. Patient data were linked to the German socioeconomic deprivation index (GISD, RKI) and rurality data (proxy: population density, INKAR) and anonymised. After providing a descriptive summary of the outcome (1-year survival) and covariates, Kaplan–Meier analysis and Cox proportional hazards regression models were applied. Additional to the analyses of the whole sample (overall and separately for HI, AMI and stroke), propensity score matched analysis (high vs low GISD) was performed.

Results. Between 2012 and 2020, a total of 114,119 cases, corresponding to 107,271 patients, were included in this analysis. In the Cox regression analysis, after adjusting for covariates such as age, gender, family status and living situation (model 2), no associations were found in the whole population, nor in the HF and stroke subgroups. A high spatial socioeconomic deprivation was associated with increased 1-year survival in patients with AMI (HR = 1.11, 95% CI: 1.03–1.19). The effect was stable after considering rurality in the model (model 3). These findings were consistent after propensity score matching

Conclusions. Although all 3 cardiovascular diseases were considered, the in-depth analysis will focus specifically on AMI. Future analyses will further investigate the role of GISD and rural infrastructure-related parameters.

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Experiences of collaboration between the Lincolnshire Living with Cancer Programme and Primary Care within a rural and coastal setting in England

Kathie Mcpeake[1], Ellie Sadler[1], Samuel Cooke[2], David Nelson[2], Ros Kane[3], Peter Selby[4]

[1] Lincolnshire Integrated Care Board, NG34 8GG Sleaford, UK
[2] Lincoln Institute for Rural and Coastal Health, University of Lincoln, UK
[3] School of Health and Care Sciences, University of Lincoln, UK
[4] Faculty of Medicine and Health, University of Leeds, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Kathie Mcpeake
E-mail: kathie.mcpeake@nhs.net

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Lincolnshire is a large county in England characterised by rural and coastal communities. Eighty-one primary care practices are responsible for the primary health care for their local populations. There are ~37,000 people living with cancer (LWC) in Lincolnshire. The Lincolnshire Living with Cancer Programme is implementing personalised care and support for people LWC in the county.

Aim of the case report. Cancer patients who receive personalised support for their psychosocial needs can experience better quality of life than those who do not, but those living in Lincolnshire's rural and coastal communities face challenges in access to appropriate information, advice and psychosocial support and integrated services. A collaborative approach between the LWC Programme and Primary Care practices can facilitate effective support for patients in these communities.

Case report. Practices are supported to deliver high quality personalised support to patients, including Cancer Care Reviews when patients can discuss their experiences, treatment effects and other wellbeing issues. Primary Care teams are supported with a co-produced review protocol, invitation templates, key questions to consider and information about local support services. A secure email address is provided by the Programme team for specialist cancer support queries. The team is supporting practices to use Electronic Health Needs Assessments which provide a framework for understanding patients' needs and mutually agreed actions. Practice cancer care co-ordinators have been trained and supported to integrate with local neighbourhood networks and embed robust connections between organisations to enable effective multi-disciplinary working.

Conclusions. Briefly, 62/81 Primary Care Practices have had Cancer Care Review training, 8 Cancer Care Co-ordinators have completed training to effectively support their patients, 60 primary care, community health and hospice staff have completed brief intervention training for psychosocial assessment and support. Collaborative working can enhance Primary Care teams' skills, knowledge, confidence and networking required to effectively support rural and coastal cancer patients.

Key words: cancer, living with cancer

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Strategic policy mechanisms to address general practitioner shortages in Latvia's primary healthcare system: A qualitative analysis of national-level documents (2017–2024)

Beate Livdanska, Ieva Griķe, Ilze Grope, Matiss Kore, Arita Kohva, Cindy Lisa Heaster, Michael Frank Harris

Rīga Stradiņš University, LV-1007 Riga, Latvia

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Beate Lidvanska
E-mail: beate.livdanska@rsu.lv

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Latvia faces a growing shortage of general practitioners (GPs), with about 1/3 of the workforce at or beyond retirement age. This is exacerbated by a limited influx of new professionals and unequal regional distribution, undermining the sustainability and accessibility of primary healthcare, particularly in rural areas. Addressing this challenge requires targeted policy measures to support GP recruitment and retention.

Aim of the study. To assess how Latvia's national policy documents from 2017 to 2024 address mechanisms for recruiting and retaining GPs, especially in rural and remote regions.

Methodology. A qualitative analysis was conducted on 4 key national-level policy documents: 1. The Conceptual Report on Healthcare System Reform (2017); 2. Public Health Guidelines 2021–2027; 3. Health Workforce Development Strategy 2025–2029; 4. Informative Report on Strengthening Primary Healthcare (2024). Each document was reviewed for problem identification, proposed mechanisms, financial provisions, and institutional responsibilities.

Results. All documents recognise GP shortages and propose measures such as: incentivising rural practice for residents, municipal support (e.g., housing, workspaces), expanding residency capacity, prioritising GP roles, and leveraging EU funds for workforce development. However, only the 2024 Informative Report presents a coordinated, multi-dimensional action plan. Earlier documents emphasise strategic direction but lack financial commitments, implementation details, and timelines.

Conclusions. Although GP shortages are acknowledged across all documents, only the 2024 policy outlines a cohesive response. The absence of sustainable funding, particularly in earlier plans, threatens the success of long-term goals. Notably, no documents include measures to attract medical students to general practice, highlighting a critical gap. Without early-stage interventions, efforts to strengthen the GP workforce may fall short.

Key words: rural general practitioner shortage, primary care policy, Latvia, general practitioner recruitment and retention

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Adherence to the chronic obstructive pulmonary disease guidelines between rural and urban areas in primary care: The Greek COPD COCARE study

Ioanna Tsiligianni, Stavroula Papageorgakopoulou, Antonios Christodoulakis, Izolde Bouloukaki

University of Crete, Heraklion, Greece

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Ioanna Tsiligianni
E-mail: i.tsiligianni@uoc.gr

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Evidence suggests that adherence to COPD guidelines is lacking in rural areas, however this issue is underreported.

Aim of the study. Our study aimed to evaluate adherence to COPD guidelines in rural and urban primary care areas in Greece and explore opportunities for improvement.

Methodology. This cross-sectional study was conducted in 8 primary care practices in Crete, Greece with 10 GPs participating. Patients identified by GPs with COPD were included. Clinical performance vs current guidelines were categorised into levels of appropriateness: excellent (>80%), good (60–80%), adequate (40–59%), inadequate (20–39%), and very inadequate (<20%). Two hundred and fifty-three clinical records were reviewed.

Results. Adherence to guideline statements presented an excellent/good adherence for smoking (94%), vaccination (93–96%), exacerbations (72%) and co-morbidities recording (87%) and further workup with chest X-ray or CT (71%). The most outstanding areas for improvement included evaluating COPD risk factors beyond smoking (14%), measuring alpha1-antitrypsin levels (2%), monitoring treatment adherence (12%), referring patients to pulmonary rehabilitation (8%), considering eosinophil counts for treatment initiation (10%), developing written self-management plans (10%), and assessing non-prescribed medications (19%). Guideline adherence varied substantially between rural and urban settings across several key areas: symptom assessment (33 vs 12%), smoking (90 vs 97%) and other risk factor assessment (23 vs 8%), COPD classification (44 vs 30%), DTP/DTaP (22 vs 78%) and VZV (29 vs 75%) vaccination records, initial treatment selection criteria, specifically ABE classification (64 vs 45%) and eosinophils count (21 vs 3%), patient self-management plans (23 vs 2%), inhalation technique (20 vs 6%), treatment adherence (23 vs 5%), use of TAI (10 vs 1%), cognitive function assessment (24 vs 39%), and pulmonary rehabilitation referrals (13 vs 5%).

Conclusions. In conclusion, our results show that adherence to COPD guidelines among GPs is suboptimal and varies between rural and urban settings. Health care professionals and administrators in primary care could utilise targeted strategies to improve clinical practice.

Key words: chronic obstructive pulmonary disease, adherence, Greece

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Optimising diabetic kidney disease (DKD) management in a rural setting to optimise patient outcomes

Danielle Reesby, Carl Nigel Deaney

Marsh Medical Practice, LN11 7QU, Louth, North Somercotes, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Danielle Reesby
E-mail: danii.reesby@btinternet.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Diabetic Kidney Disease (DKD) is a common long-term macrovascular complication associated with diabetes, with around 30% of individuals with diabetes experiencing some degree of DKD during their lifetime. The standard approach to managing DKD includes a combination of RAAS blockade and SGLT2 inhibitors. However, the persistence of residual risk has led to the recent endorsement of Finerenone, a non-steroidal mineralocorticoid receptor antagonist, as a valuable third option in the treatment of DKD. Finerenone enhances outcomes for DKD patients by attenuating inflammation and fibrosis in both the kidneys and heart, resulting in a slower progression of kidney disease, decreased albuminuria, and a reduction in cardiovascular events. It presents a safer alternative compared to traditional MRAs and has now been integrated into guideline-based therapy for patients with DKD and albuminuria.

Aim of the case report. The case series aims to optimise the management of DKD in patients in a rural primary care setting by following a 3-pillared approach.

Case report. 117 out of our 602-patient diabetes register were found to have a degree of chronic kidney disease. Of these 117 patients, 38 were eligible for initiation with Finerenone following its licensing indication. Through the review process, 28 out of the eligible 38 patients were initiated with Finerenone (73.6%), 71.4% of these being male.

Conclusions. Finerenone plays a crucial role in the management of diabetic kidney disease (DKD), providing significant benefits in slowing the progression of kidney damage. Its use alongside other therapies, such as ACEi/ARBs, SGLT2 inhibitors, combined with lifestyle modifications, is essential for optimising patient care, potentially increasing renal longevity. In rural settings, where access to renal replacement therapy is limited, ensuring that patients receive timely and effective treatments is crucial for improving long-term disease outcomes.

Key words: DKD, rural health

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Severe anaemia identified in chronic disease monitoring

Kübra Efe[1], Turgay Polat[2]

[1] Ankara Etlik Şehir Hastanesi, 06100 Yenimahalle, Turkey
[2] Dr. Sacit Yazıcı Health Center, Turkey

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Kübra Efe
E-mail: kbrefe1991@gmail.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Iron deficiency anaemia (IDA) is a common condition in elderly patients and often progresses silently. In rural healthcare settings, limited access to specialised services makes early detection in primary care even more crucial. Routine follow-ups for chronic diseases provide valuable opportunities to identify such conditions before complications arise.

Aim of the case report. This report aims to highlight the importance of early detection through systematic chronic disease monitoring, especially in rural primary care. It presents a case of severe anaemia diagnosed during a routine visit and underlines the proactive role of primary care physicians in underserved settings.

Case report. A 75-year-old female patient living in a rural area was invited to her local family health centre for routine chronic disease follow-up. Although she had no specific complaints, detailed questioning revealed persistent fatigue, muscle weakness, and shortness of breath on exertion. Physical examination showed pallor of the skin and mucous membranes. Her blood pressure was 90/70 mm Hg. Laboratory findings revealed Hb: 6.5 g/dL, Hct: 22%, and Fe: 20 µg/dL, confirming severe IDA. Further tests, including ferritin and TIBC, were ordered to explore underlying causes. Due to the severity of the findings, the patient was referred for further evaluation and treatment. A follow-up plan including nutritional advice, lab monitoring, and regular check-ups was initiated after discharge.

Conclusions. This case illustrates how routine chronic disease management in rural primary care can lead to early diagnosis of life-threatening conditions. Strengthening systematic follow-up in these areas can reduce health disparities, improve patient outcomes, and empower primary care as a frontline defence in rural healthcare systems.

Key words: chronic disease management, geriatric patient monitoring, iron deficiency anaemia, rural healthcare

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Diagnosis of acute rheumatic carditis in an asymptomatic child during a sports examination: The role of family physicians in early diagnosis

Kübra Efe[1], Turgay Polat[2]

[1] Ankara Etlik Şehir Hastanesi, 06100 Yenimahalle, Turkey
[2] Dr.Sacit Yazıcı Health Center, Turkey

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Kübra Efe
E-mail: kbrefe1991@gmail.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Early detection of hidden cardiac conditions in children is a critical challenge in primary care, especially in areas with limited access to specialist services. Acute rheumatic fever (ARF) may develop silently after streptococcal infections and can cause serious cardiac damage if left undiagnosed. Primary care physicians, including those working in rural settings, play a vital role in identifying these cases during routine check-ups such as pre-participation sports examinations.

Aim of the case report. To demonstrate the importance of primary care physicians in detecting silent rheumatic carditis during routine sports fitness evaluations and to highlight the impact of early referral on patient outcomes.

Case report. A previously healthy child presented to a family physician for a routine sports clearance evaluation. The child was asymptomatic, with a normal physical examination and no recent history of illness. The family mentioned a past pattern of frequent upper respiratory infections that were not evaluated medically. Given the clinical context and history, the physician referred the child to paediatric cardiology for further evaluation. Investigations revealed elevated ASO levels and mitral valve prolapse (MVP), consistent with a previous silent episode of ARF. Treatment and secondary prophylaxis were initiated.

Conclusions. This case highlights how early suspicion and referral by a family physician led to the detection of a significant but clinically silent cardiac condition. Identifying such cases during routine evaluations is especially important in rural or underserved areas, where specialist access is often delayed. This case underlines the preventive role of primary care in reducing long-term complications from undiagnosed rheumatic carditis.

Key words: acute rheumatic fever, silent rheumatic carditis, mitral valve prolapse, pre-participation sports examination, paediatric cardiology, family medicine, asymptomatic heart disease, cardiac risk assessment, early diagnosis, primary care referral

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Nurturing our professional identities to enable engagement with the challenges we face

Ralph Hammond

Somerset Clinical School, TA15DA Taunton, UK

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Ralph Hammond
E-mail: ralph.hammond@somersetft.nhs.uk

Funding sources
None declared

Conflict of interest
None declared

Abstract

Justification. The delivery of health and care services in rural and coastal areas presents different challenges to our urban counterparts, although services are not frequently established to accommodate this. Identifying primary and community services in a rural or coastal area as a rural or coastal service is one step towards re-thinking how services might be delivered. The requirement to innovate is one more challenge to over-burdened services. How might we engage practitioners in making real life changes? Perhaps we can reflect on the very attributes, beliefs, values, and motivations that brought them to primary/community services in the first place. How do health and care professionals construct their self-image? What are the attributes, beliefs, motivations and values that HCPs in rural and coastal healthcare hold? How can these be embraced to address the challenges for service delivery in a post-Covid19 world? In doing so, might we nurture a self-belief that piloting or trying digital and AI technologies in ways that re-imagine ways of working, smooth out pathways, improve the experience of the service, and lead to enhanced outcomes?

Objectives. To discuss how we can stimulate practitioners to re-imagine their identity, role and responsibilities in ways that can accomplish step-changes to primary and community service delivery in rural or coastal areas. To consider what attributes rural HCPs have, what beliefs and motivations they hold, and how these can be used to provide innovations to service delivery.

Organisation. Somerset NHS Foundation Trust.

Participation. Primary care physicians, nurses, occupational therapists and physiotherapists, social care professionals.

Expected outcomes. Through greater self-awareness of our professional identities, generate practical actions to challenges faced by rural healthcare systems. Develop considerations on how health and care professionals can collaborate and innovate to deliver clinical excellence in an uncertain world.

Key words: identity, rural, coastal, innovation, primary and community care

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

"Let's walk together for health": A way to build a healthy community

Ľubomír Molčan[1], Jana Bendová[2]

[1] VINMED, s.r.o., 08221 Terňa, Slovakia
[2] BENMEDIKA, s.r.o., Slovakia

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Ľubomír Molčan
E-mail: doktorlubik18@gmail.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Background. Starting in Slovakia in 2019, at the 24th WONCA European Conference in Bratislava, doctors took a walk for health with our Olympic gold medallist Matej Tóth. This event is held annually to celebrate World Family Doctors Day on 19 May. Krokovačka is a community-based health promotion event in Slovakia, organized by general practitioners with a simple but powerful idea: "let's take steps for our health" – together. The word "krokovačka" is derived from the Slovak word "krok" (step) and embodies the event's core philosophy: movement as medicine, and connection as prevention. What makes Krokovačka unique is its local authenticity, low cost, replicability and the emotional impact it leaves on participants. There are only a few such events around the world on World Family Doctors Day and they were mentioned in President's messages (July 2024) by WONCA President Assoc. Prof. Karen Flegg.

Aims of the study. The aims of the study were to:
- Encourage physical activity among all age groups, especially in areas where sedentary lifestyle is common.
- Strengthen relationships between general practitioners and their patients outside of the clinical setting.
- Raise awareness about cardiovascular, metabolic and mental health prevention.
- Celebrate the role of rural doctors in health education and lifestyle medicine.
- Positioning the doctor as a leader in his/her patient community
- Share our experience in organising this event, ease of preparation, replicability and the low cost of this event.

Methodology. Photo documentation, report.

Results. Study results demonstrate benefits of the initiative such as:
1. Promotion of a healthy lifestyle;
2. Building good community relations, a spirit of belonging;
3. Building the physician's position as a leader in their patient community;
4. Low cost, short preparation time;
5. Local authenticity, replicability.

Conclusions. We warmly invite all physicians and their patients to join and do something good for their community – from the region to the whole country, from the country to Europe, from Europe to the world.

Key words: Krokovačka, movement as medicine, community

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

The country doctors with a lifelong patient–doctor relation: Extinct species? Or the best job one can have!

Anna Falk[1], Beata Blahova[2], Manuela Castanheira[3], David Halata[4], Kateřina Javorská[5], Mateja Kokalj Kokot[6], Victoria Tkachenko[7], Ferdinando Petrazzuoli[8]

[1] Primary Care organisation Region of Vasternorrland Sweden, 84131 Ange, Sweden
[2] Dep of Public Health, Slovak Medical University, Bratislava, Slovakia
[3] Local Health unit of Trás-os-Montes and Alto Douro/Municipality of Vila Puoca de Aguiar
[4] Working group on Rural Practice, Prague, Czech Republic, Department of Preventive Medicine, Charles University, Faculty of Medicine in Hradec Kralove, Hradec Kralove, Czech Republic
[5] Czech GP Society, Department of Social Medicine, Faculty of Medicine, Charles University, Hradec Králové, Czech Republic
[6] HC Centre Grosuplje, Grosuplje, Slovenia, Dep of Family Medicine, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenian Society of Family Medicine
[7] Dep of Family Medicine, Shupyk National Healthcare University of Ukraine, Kyiv, Ukraine
[8] Dep of Clinical Sciences, Center for Primary Health Care Research, Lund University, Malmö, Sweden

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online) *Adv Clin Exp Med*. 2025;34(Special Issue 1)

Address for correspondence
Anna Falk
E-mail: anna.falk.ange@telia.com

Funding sources
None declared

Conflict of interest
None declared

Abstract

Justification. The country doctors with a lifelong patient–doctor relation – extinct species? Or the best job one can have! Exploring different solutions across Europe to attract and retain doctors that can provide future primary care in rural and isolated areas.

Objectives. Continuity of care, in rural areas often represented by a local general practitioner, can lead to fewer misdiagnoses, better trust in health advice, fewer hospitalisations and even longer life expectancy. Continuity of care is cost-effective. Continuity of care is good for the patient but also for the doctor. Knowledge of your patients, their families and their environment makes a person-centred way of working more easily and in the long run makes the doctor calm and effective. We want to encourage young doctors to experience that! There is a shortage of doctors in rural primary care and many are ageing. There are different ways that nations and regions try to meet the future needs of health care for their rural populations. What is needed? Small, single-handed practices or team-based health care centres? We will share our experiences from different parts of Europe's rural/isolated areas.

Organisation. The authors will do short presentations from different European countries. In smaller groups we will explore how we can contribute to our authorities' decisions, help with rural proofing by giving them facts, support goal formulation and propose means to achieve them. We also want to highlight good examples.

Participation. Rural practitioners and trainees, and other health professionals working far from the urban areas.

Expected outcomes. A summary will take place at the end of the workshop. From the workshop findings the authors will produce a paper that can serve as a guide for follow-on work and influence future research developments in this field.

Key words: continuity of care, rural practice

Copyright
Copyright by Author(s)
This is an article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) (https://creativecommons.org/licenses/by/3.0/)

Advances
in Clinical and Experimental
Medicine