

BJMP

Volume 11 Issue 2
December 2018

British Journal of Medical Practitioners

www.bjmp.org

ISSN: 1757-8515

Editorial Staff

Managing Editors

- Dr Javed Lato, UK
- Dr Nadeem Mazi-Kotwal, UK

Associate Editors

- Professor Ken Brummel-Smith, USA
- Dr Nasseer Masoodi, USA

Specialty Editors

- Dr Francis Dunne, Consultant Psychiatrist and Honorary Senior Lecturer, UK
- Dr M Y Lato, Consultant Anaesthetics and Critical Care, UK
- Prof Claudio Puoti, Chief of Internal Medicine and Liver Unit, Marino, Italy
- Dr Mehraj Shah, Consultant Psychiatrist, UK
- Mr Yadu K Shankarappa, Consultant Trauma and Orthopaedic Surgeon, UK
- Dr Daljit Sura, General Practitioner and Family Physician, UK
- Dr Sandeep Tripathi, Assistant Professor of Paediatrics, USA

Editorial Advisors

Editorial Advisors suggest names of other peer reviewers, suggest topics to be covered and provide ongoing advice to the editors. The advisory board members will be reviewed annually. No person, including editors, will be involved in the peer review process of an article in which they have a conflict of interest.

- Prof Raman Bedi, Director of Global Child Dental Health Taskforce, UK
- Prof Rajan Madhok, Medical Director of NHS Manchester, UK
- Prof Elisabeth Paice, Dean Director of Postgraduate Medical & Dental Education for London, UK
- Prof Arnie Purushotham, Professor of Surgery, UK
- Prof Khalid J Qazi, Professor of clinical Medicine, USA
- Dr Abid Rajah, Consultant Anaesthetics and Critical Care Medicine, UK
- Prof A A Riaz, Professor of Surgery, UK
- Prof Robert Thomas, Professor of Oncology, UK

International coordinators

- Dr Ibrahim Masoodi, Associate Professor, Internal Medicine and Gastroenterology, Saudi Arabia

Editorial Board

No person, including editors, will be involved in the peer review process of an article in which they have a conflict of interest. Peer reviewers help editors decide which manuscripts are suitable for our journal and help authors and editors to improve the quality of reporting

Internal Medicine and allied Specialties

- Dr John Ellis Agens, Jr, Associate Professor of Medicine, USA
- Dr Mohammed Azher, Consultant Physician, UK
- Dr Indrajit Gupta, Consultant Physician, UK
- Dr Roop Kaw, Assistant Professor of Internal Medicine, USA
- Prof G V Sherbet, Cancer and Molecular Medicine, UK
- Dr Yili Zhou, Neurologist and Interventional Pain Management Specialist, USA

Surgery and allied Specialties

- Miss Katherine Bevan, Consultant Surgeon, UK
- Mr Habib Charfare, Consultant Surgeon, UK
- Prof Jorg Haier, Professor of Surgery, Germany
- Mr Patrick Omotoso, Consultant Surgeon, Canada
- Mr Harbinder Sharma, Consultant Surgeon and Urologist, UK
- Mr Manoj Sood, Consultant Orthopaedic Surgeon, UK

Anaesthesia and Critical Care Medicine

- Dr Mehmood A Durrani, Vice Chair of Anaesthesia and Chief of Cardiac Anaesthesia, USA
- Dr Faisal Salim, Consultant Anaesthetics, UK
- Dr Asquad Sultan, Consultant Anaesthetist and Pain Specialist, UK

Psychiatry

- Dr Minal Mistry, Consultant Psychiatrist, Canada
- Dr Aadil Jan Shah, Consultant Psychiatrist, UK
- Dr Saoud Sultan, Consultant Psychiatrist and College Tutor, UK
- Dr Ovais Wadoo, Consultant Psychiatrist, UK
- Prof Malcolm Weller, Emeritus Consultant Psychiatrist, UK

Family Medicine

- Dr Anita Sharma, Family Physician, UK

Pediatrics

- Dr Ramesh Mehta, Consultant Pediatrician, UK

Gynaecology & Obstetrics

- Mr Dilip Patil, Consultant Obstetrician & Gynaecologist, UK

Research & Development Advisors

- Dr Sam Tohill, Associate Dean of the Faculty of Medicine & Biosciences Crainfield University, UK
- Dr Mohammed Wasil, Assistant Director of Research & Development & Clinical Fellow Crainfield University, UK

Other Editorial Staff

Peer Reviewers

Members of the Peer Review Board peer review submitted articles in their areas of expertise, suggest names of other reviewers, suggest topics to be covered and provide ongoing advice to the editors. The editorial and peer review board will be reviewed annually. No person, including editors, will be involved in the peer review of an article in which they have a direct or indirect interest or involvement. Further details of Peer Reviews is available at the following link: <http://www.bjmp.org/content/peer-reviewers-board>

Section Editors

- Dr Farida Jan, UK (Clinical Practice section)

Proof Readers

- Dr Syed Ali
- Dr Minal Mistry
- Dr Claire Pocklington
- Dr Natasha Quader
- Dr Maleasha S K Shergill
- Dr Naomi Sarah Kelsey Penman
- Dr Daljit Singh Sura
- Dr Ruth St John

- Dr Farheen Zulfiquer

Legal Advisor

- Fazl Syed, Consultant International law, UK; Attorney at Law, New York, USA; Solicitor-Supreme Court of England & Wales, UK.

Further Information

Instructions to authors

Please visit: <http://bjmp.org/content/guidance-authors>

Submit an article

Please visit: <http://bjmp.org/content/submit-articles>

Contact us

Please visit: <http://www.bjmp.org/contact>

Publishers

JMN Medical Education Ltd
1 Waltham Drive
Elstow
Bedford, United Kingdom
MK429FY

The British Journal of Medical Practitioners (BJMP) is a quarterly peer-reviewed online international medical journal published by JMN Medical Education Ltd UK. The information, opinions and views presented in the British Journal of Medical Practitioners reflect the views of the authors and contributors of the articles and not of the British Journal of Medical Practitioners or the Editorial Board or its publishers. The British Journal of Medical Practitioners and/or its publisher cannot be held responsible for any errors or for any consequences arising from the use of the information contained in this journal.

<http://www.bjmp.org>

BJMP December 2018 Volume 11 Issue 2

Editorial

- Current healthcare challenges in treating the borderline personality disorder “epidemic” 4
Carlo Lazzari, Ahmed Shoka, Basavaraja Papanna & Kapil Kulkarni

Case Reports/Series

- Arrhythmogenic Right Ventricular Dysplasia Diagnosed Through Characterization of Cardiac Tissue in a Deceased Sibling: A Case Report 7
Raja Ezman Faridz Raja Shariff, Rizmy Najme Khir & Sazzli Kasim
- Pneumocephalus after Epidural Anesthesia 10
Murtaza Rashid, Mohammad Al Mogbil, Bader Al Otaibi & Majid Al Johani

Clinical Practice

- Have Crisis & Home Treatment Teams become a Second Opinion or Diagnostic Service? 12
Pearl Ogaku, Annabel McDonald, Sheeba Hakeem & M Aamer Sarfraz
- The use of dermoscopy amongst dermatology trainees in the United Kingdom 16
Claire Reid, Kimberlee Lim & Catriona Henderson

Education and Training

- Can Online Distance Learning improve access to learning in conflict zones? The Oxford Psychiatry in Iraq (OxPIQ) Experience 19
Yasir Hameed, Hasanen Al Taiar, Denis O'Leary & Lucy Kaynge

Viewpoint

- The top 10 things primary care physicians wish every specialist knew 26
Masahiro J Morikawa & Samira H Ghaniwala

Miscellaneous

- The Heart of the Countryside 30
Michael James Leach
- Are The Risk Scales a Useful Tool In Hospital Services? 31
Harold Ibagon, Patrick Tarquino & Juan S. Barajas-Gamboa

Current healthcare challenges in treating the borderline personality disorder “epidemic

Carlo Lazzari, Ahmed Shoka, Basavaraja Papanna & Kapil Kulkarni

Abstract

The recent increase in the number of patients accessing healthcare services with a diagnosis of borderline personality disorder continues to put unprecedented pressure on healthcare professionals. It is likely that considerable national health service resources will have to be allocated to these patients in the future.

Keywords: borderline personality disorder, healthcare leadership, psychiatry, healthcare professions

The recent increase in the number of patients presenting with a borderline personality disorder (BPD) in general adult psychiatry and primary care is creating pressure within the National Health Service (NHS)¹. Currently, BPD is perceived to be like an ‘epidemic’ entity, particularly in areas with a high incidence of socioeconomic deprivation. Similarly, there is a parallel increase in the human and medical resources needed to manage this disorder efficiently. In fact, the authors have found that BPD tends to be comorbid with factitious disorders and depression (Tripolar syndrome) with a tendency to overuse hospital and medical facilities, inclusive of Accident and Emergency (A&E) departments, family doctors and General Practitioner (GP) surgeries².

Consequently, patients with BPD require a constant and unlimited allocation of medical and psychiatric resources, together with targeted care plans. In fact, they might be prone to frequent self-referrals to A&E, seek hospital admissions and augment all their psychotropic medications in order to deal with their on-going crises not solvable in their homes. Also, the skills needed by healthcare personnel to reduce chronic self-harming and suicidal ideation in this vulnerable population are complex and need to be updated on an on-going basis also due to the tendency of these patients to raise allegations towards their healthcarers³. Nonetheless, the provision of treatment is often hindered by various healthcare system limitations, such as the lack of beds on medical and psychiatric units, forced reduction in the length of stay in a hospital and insufficient human resources. This scenario has mostly affected female patients with BPD who seek admission to psychiatric hospitals often for respite from chronic suicidal ideation⁴. Moments of amplified suicidal ideas become evident when internal voices, perceived as auditory hallucinations commanding to self-harm or to commit suicide, become more intense⁵.

As observed by the authors of the current editorial, increased suicidal ideation in persons with BPD also occurs during minor crises in life, when experiencing intensified flashbacks about past abuses, during minor losses, after significant conflicts with

others and after the separation from influential people in their social network. Besides, admissions in psychiatric wards, very commonly, occur when there is an intensification of internal voices commanding BPD patients to take overdoses of the prescribed medication or to jump in front of a train, a car or off a pier to commit suicide. Police is often involved to stop these dramatic plans. At the same time, healthcare professionals are discouraged by the complex management of patients with BPD, which, in combination with their tendency to challenge or make unwarranted allegations against their health carers, results in feelings of sadness, rejection and alarm in the latter. Kanin reported that the reason to produce a false allegation is to create a defence or to get compassion⁶. Nonetheless, it is also likely that some healthcare professionals might have some preconceived ideas about people with Borderline Personality Disorder, which might reduce the depth of health carers’ empathy towards these patients and lead to burnout after prolonged treatment of BPD in hospital or community. Attempts to treat and to reduce suicidal ideation and self-harm in this group of patients are often thwarted as they challenge medical decisions and endeavour to sabotage the proposed care plans. The strain on the doctor-patient relationship is determined by the underlying ‘Mistrust/Abuse’ scheme of patients with BPD who expect from others, and are thus sensitive to, signals of relational wound, treachery and abuse⁷.

Consequently, a chronic feeling of inadequacy in patients with BPD translates itself in enduring dissatisfaction with any therapy and healthcare professionals. Hence, in the authors’ experience, any attempt to establish a long-term therapeutic relationship with BPD patients might have limited outcomes. Frustration in healthcare professionals aiming to create an enduring therapeutic alliance with patients with BPD happens as these patients tend to interpersonal biases and to ascribe undesirable experiences to people (hence to healthcare professionals) as opposed to circumstances⁸. Therefore, social interactions with primary carers result in dissatisfaction of people with BPD about any medical or psychiatric plan is set

up for them. Consequently, community teams, general practitioners and hospital staff feel hopeless due to recurrent readmissions of people with BPD and the lack of definitive treatment for such pathology. Stress caused by difficulties encountered in ensuring that BPD patients comply with the therapy regularly places doctors and nurses at crisis point.

Once in the hospital, discharging patients with BPD can be difficult as they are frequently reluctant to return to the community, leading to recurrent readmissions within a short period. In fact, the period before discharge from a psychiatric hospital is complicated by mounting anxiety and distress in patients with BPD. The authors observed a regular escalation of self-harming behaviours and increased suicidal ideation in these patients just before discharge, possibly indicating their underlying anxiety in going back to the home environment. Many BPD patients suggest that they would rather stay in the hospital instead of returning to the community that is considered by them as unsafe or unstructured. Furthermore, as these patients have an intense vulnerability to social rejection, they rarely feel adequate during social interactions thus developing an enduring sense of solitude⁹. Therefore, any hospital discharge or a visit to the GP will be interpreted by them as disappointing and will lead patients with BPD to confirm their sense of rejection. As a reaction, the authors observed that BPD patients demand endless and unconditional attention from their primary carers. Attempts by patients with BPD to self-harm or commit suicide intensify over weekends or public holidays as their sense of solitude increases during these periods, especially when there is also a shortage of healthcare professionals available for immediate support.

The authors of the current editorial propose possible strategies of intervention both on the psychopharmacological and managerial side. The challenge is that patients with BPD often use overdoses of oral medication in a suicide attempt¹⁰. Hence, the authors recommend the use of long-lasting depot antipsychotic injections (e.g., Zuclopenthixol Decanoate) to stabilise their mood and reduce impulsivity, the risk of overdoses, pseudo-psychotic symptoms and command hallucinations leading to deliberate self-harm. The use of oral lithium to treat mood swings poses an ethical dilemma for doctors as it could be lethal when used as an overdose. Healthcare management is another way of intervention. One point of difficulty is the tendency of patients with BPD to split their teams and to create niches of protectors and opposers within staff with possible conflicts within the team that is treating them. In this case, inter-professional coordination, integrated care and constant information sharing are required¹¹. Furthermore, several healthcare services treating patients with BPD are trying to find an integrated approach for their hospital and community treatment. The authors speculate that the increased number of admissions of patients with BPD is reducing the total capabilities of physical and mental wards to treat patients with other pathologies. Besides, the dramatic presentation of patients with BPD who tend to overuse the

healthcare services poses ethical dilemmas in their management. This scenario has created discrepancies in health care policies about treatments and hospital (re)admissions of patients with BPD reaching an epidemic magnitude in many healthcare trusts. Hence, a new culture is required for the management and treatment of patients with BPD in the community.

Culture is defined as the character of an institution that affects employee gratification and organisational accomplishments¹². What is needed is a frank and constructive dialogue between healthcare managers, leaders and medical staff in the hospital and in the community. Furthermore, clear and regional guidelines should exist to improve the efficacy of care which is offered to BPD patients at home and to reduce the constant risks which patients pose to themselves, their sense of solitude and their tendency to seek hospital admission in order to solve chronic existential difficulties. A model of integrated care comes from Max Weber who differentiated between 'formal rationality', the endorsement by healthcare managers of the most efficient ways of achieving organisational goals (e.g., ensuring more hospital beds by quick discharges of 'bed blockers'), and 'substantive rationality', the expectation by healthcare professionals that values and morals should instead be based on tradition, compassion and dedication¹³; pertinent to the care of BPD patients in our case. The collaboration of all those involved parties is also important to reduce the risk of 'silo management' where confined and regional policies do not embrace a wider perspective for the management of specific problems while responding only within the confines of the own guidelines and procedures¹⁴. In these cases, integrated care in communities can halt self-harming and suicidal attempts of patients with BPD. The organigram sees inter-professional actions, targeted psychopharmacological policies and psychiatric crisis teams in A&E that can reduce the need to hospitalise patients with BPD at any ensuing crisis.

Competing Interests

None declared

Author Details

CARLO LAZZARI, Essex Partnership University NHS Foundation Trust, Colchester, United Kingdom. AHMED SHOKA, Essex Partnership University NHS Foundation Trust and Department of Health and Social Care, University of Essex, United Kingdom. BASAVARAJA PAPANNA, Essex Partnership University NHS Foundation Trust, Colchester, United Kingdom. KAPIL KULKARNI, Essex Partnership University NHS Foundation Trust, Colchester, United Kingdom.

CORRESPONDENCE: Dr Carlo Lazzari, Kingswood Centre, Colchester, Turner Road, C04 5JY, Colchester, United Kingdom

Email: carlolazzari2015@gmail.com

References

1. Lazzari C, Shoka A, Papanna B, Rabottini M. The hypothesis of a tripolar syndrome in liaison psychiatry and medicine: Depression comorbid with factitious disorders and borderline personality disorder. *Indian J Med Res Pharm Sci*, 2018; 5(4): 61–68.
2. Lazzari C, Shoka A, Masiello I. Chapter 2. Corporate management of patients with borderline personality disorder through integrated care (pp 17–62). In: Anderson R (Ed.) *Borderline Personality Disorder (BPD): Prevalence, management options and challenges* (1st ed.). New York: Nova Publisher; 2016.
3. Fujita J, Takahashi Y, Nishida A, Okumura Y, Ando S, Kawano M, et al. Auditory verbal hallucinations increase the risk for suicide attempts in adolescents with suicidal ideation. *Schizophr Res*, 2015; 168: 209–212.
4. De Zutter AWEA, Horselenberg, Peter J. van Koppen PJ. Motives for filing a false allegation of rape. *Arch Sex Behav*, 2018; 47:457–464.
5. Bach B, Farrell JM. Schemas and modes in borderline personality disorder: The mistrustful, shameful, angry, impulsive, and unhappy child. *Psychiatry Research*, 2018; 259: 323–329.
6. Anupama V, Bhola P, Thirthalli J, Mehta UM. Pattern of social cognition deficits in individuals with borderline personality disorder. *Asian J Psychiatr*, 2018; 33:105–112.
7. Hauschild S, Winter D, Thome J, Liebke L, Schmahl C, Bohus M, Lis S. Behavioural mimicry and loneliness in borderline personality disorder. *Compr Psychiatry*, 2018; 82:30–36.
8. Lazzari C, Shoka A, Kulkarni K. Are psychiatric hospitals and psychopharmacology the ultimate remedies for social problems? A narrative approach to aid socio-psychopharmacological assessment and treatment. *Int J Med Res Pharm Sci*, 2017; 4(3): 38–44.
9. Lazzari C, Shoka A, and Masiello I. Maladaptive behaviors in inpatients with borderline personality disorder: a behavioral game theory explanation. In: Anderson R, editor. *Borderline personality disorder (BPD): prevalence, management, options and challenges*. New York: Nova Science Publishers, 2016; p. 67–97.
10. Kane-Urrabazo C. Management's role in shaping organizational culture. *J Nurs Manag*, 2006; 14(3): 188-94.
11. Cockerham CW. Max Weber: bureaucracy, formal rationality and the modern hospital. In: Collyer F, editor. *The Palgrave handbook of social theory in health, illness and medicine*. New York: Palgrave Macmillan, 2015; p. 124–141.
12. Benson L. Healthcare systems: an overview of health service provision and service delivery. In: Walshe K, Smith J, editors. *Healthcare management*. Milton Keynes: Open University Press, 2006; p. 53–73.
13. Cockerham CW. Max Weber: bureaucracy, formal rationality and the modern hospital. In: Collyer F, editor. *The Palgrave handbook of social theory in health, illness and medicine*. New York: Palgrave Macmillan, 2015; p. 124–141.
14. Benson L. Healthcare systems: an overview of health service provision and service delivery. In: Walshe K, Smith J, editors. *Healthcare management*. Milton Keynes: Open University Press, 2006; p. 53–73.



This article is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.

Arrhythmogenic Right Ventricular Dysplasia Diagnosed Through Characterization of Cardiac Tissue in a Deceased Sibling: A Case Report

Raja Ezman Faridz Raja Shariff, Rizmy Najme Khir & Sazli Kasim

Abstract

Introduction: Arrhythmogenic Right Ventricular Dysplasia (ARVD) is a rare cause of cardiomyopathy and sudden cardiac death. Often times, diagnosis relies on electrocardiography findings and magnetic resonance imaging of cardiac tissue, when available. Rarely, diagnosis is confirmed via histological evidence from an affected sibling.

Case Report: We present a rare case of ARVD diagnosed via characterization of cardiac tissue of an affected, deceased sibling. A 21-year old gentleman presented to the emergency department following an episode of loss of consciousness. Chest radiography revealed cardiomegaly and electrocardiogram (ECG) revealed deep T-wave inversions in leads V2 to V4, with ventricular ectopic beats. Troponin-I levels were elevated at 480 pg/ml. It was revealed that the patient had a sibling who had died from an unknown cause, 5 years prior. His younger brother, 14 years of age at the time, had collapsed whilst playing basketball in a school compound. Unfortunately, he was pronounced dead on arrival to a medical facility. Autopsy findings revealed epicardial surfaces infiltrated with excessive fat tissue and with nodular fibrosis with cut sections showing diffuse transmural fibrofatty replacement of the right ventricular free wall extending to the endocardium involving right ventricular septum. This knowledge led to our patient having a cardiac MR performed, confirming a diagnosis of ARVD.

Conclusion: The case highlights how having knowledge and confirmation of the inherited condition led to a quicker and more confident decision in managing a patient at high risk of SCD, as our patient was able to obtain an implantable cardiac defibrillator without much hesitation.

Keywords: Case Report, Arrhythmogenic Right Ventricular Dysplasia, Arrhythmogenic Right Ventricular Cardiomyopathy, Cardiomyopathy, Heart Failure

Abbreviations: ARVD: Arrhythmogenic Right Ventricular Dysplasia ECG: Electrocardiogram MRI: Magnetic Resonance Imaging ICD: Implantable Cardiac Defibrillator

Background

Arrhythmogenic Right Ventricular Dysplasia (ARVD) was first described in a case series of 24 patients back in 1982^{1, 2}. Since then, our understanding of its pathophysiology has improved dramatically, with dedicated guidelines and literature being published to help with both diagnosis and management. Prompt diagnosis remains a struggle in majority of developing countries, including Malaysia, where resources and expertise are scarce, and obtaining both cardiac magnetic resonance imaging or endomyocardial biopsies remain a challenge. Furthermore, diagnosis is difficult in most cases as clinical presentation may vary and wide range of clinical mimics exist. We present a unique case of ARVD, diagnosed early through the knowledge of having a deceased sibling, whom had endomyocardial tissue characterization performed in the past confirming the presence of the disease in a first degree relative.

Case Report

A 21-year old gentleman presented to the emergency department following an episode of loss of consciousness, lasting approximately 30 minutes which recovered spontaneously. He denies having any similar episodes in the past. However, he had been suffering from reduced exercise tolerance, with a New York Heart Association (NYHA) Class II, over the past 1 year. He had no known medical illness at the time but smoked 6 cigarettes a day for the past 7 years.

His vital signs were stable on arrival, with a heart rate of 73 beats per minute, regular in rhythm, a blood pressure of 143/84 mmHg, respiratory rate of 19 breaths per minute, temperature of 37 degrees Celcius and oxygen saturation of 98% on room air. Cardio-respiratory examination revealed no murmurs, and normal heart and breath sounds. There were no carotid bruits audible. There was no evidence of any neurological deficits on neurological examination.

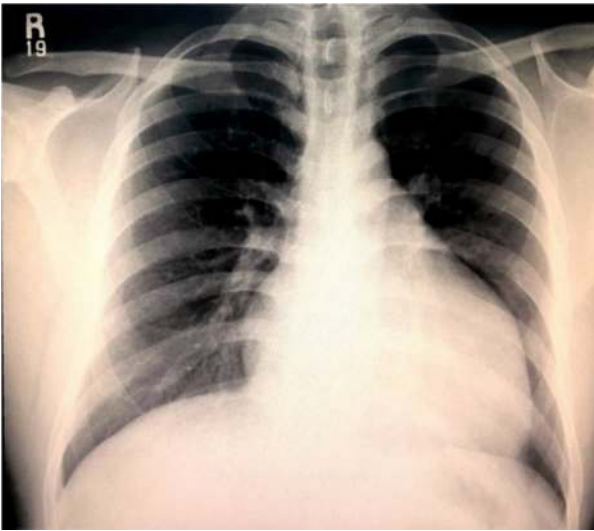


Figure 1 – Chest radiography demonstrative cardiomegaly

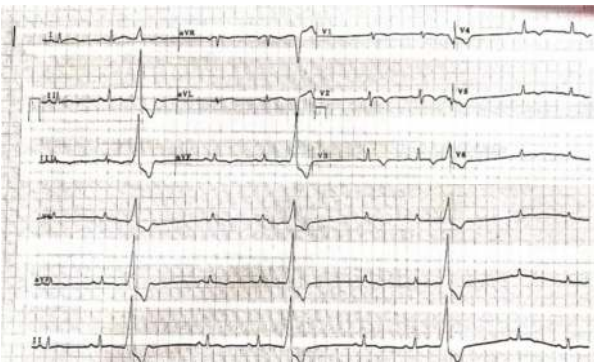


Figure 2 – Electrocardiogram revealing T-wave inversions in leads V2 to V4 with ventricular ectopic beats

Chest radiography revealed cardiomegaly (Figure 1). Electrocardiogram (ECG) revealed deep T-wave inversions in leads V2 to V4, with ventricular ectopic beats (Figure 2). Due to the suspicious-looking ECG, a serum Troponin-I test was performed, which was elevated at 480 pg/ml. The patient was treated for acute coronary syndrome complicated by cardiac syncope, and was later referred to the medical team for further inpatient management.

However, on further history, it was revealed that the patient had a sibling who had died from an unknown cause, 5 years prior. His younger brother, 14 years of age at the time, was brought in after collapsing whilst playing basketball in a school compound. Unfortunately, he was pronounced dead on arrival to the clinic. A post-mortem was performed due to the unexpected nature of the event. Fortunately, our patient was brought into the same hospital as his sibling, allowing us to trace previous autopsy reports and images, with consent.

Macroscopic examination of the right ventricular cavity revealed epicardial surfaces showing infiltration of excessive fat tissue with nodular fibrosis. The right ventricular cavity appeared dilated and cut sections showed diffuse transmural fibro-fatty replacement of the right ventricular free wall, extending into the endocardium and involving the right ventricular septum (Figure 3a).

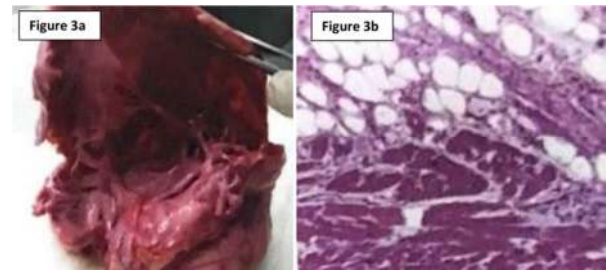


Figure 3a – Macroscopic examination of right ventricular cavity, which was dilated and showing signs of transmural fibrofatty infiltration. Figure 3b – Histological evidence of focal lymphocytic infiltration, myocyte hypertrophy and degenerative cytoplasmic changes.

Histology revealed extensive fatty infiltration with interstitial fibrosis, primarily in the epicardium. There was associated myocyte loss with hypertrophy of cardiac muscle cells remaining (Figure 3b). Both macroscopic and microscopic findings were suggestive of ARVD.

After learning of the autopsy results, changes in clinical management took place, with priorities being shifted towards obtaining an echocardiogram, cardiac Magnetic Resonance Imaging (MRI) and Holter recording, as opposed to diagnostic angiography and coronary evaluation. Echocardiography revealed an ejection fraction of 25 to 30%, with evidence of left ventricular dyssynchrony, a tethered posterior mitral valve leaflet with mild eccentric regurgitation, consistent with dilated cardiomyopathy.

Cardiac MRI revealed both left and right ventricular dilatation, end diastolic dimensions being 5.8 cm and 4.4 cm and end-diastolic volume being 153 ml/m² and 149 ml/m² respectively, with evidence of bi-ventricular dyssynchrony. Left ventricular and right ventricular ejection fraction measured 31% and 8% respectively. There was also bilateral atrial dilatation. Gadolinium study revealed late enhancement in areas of the right ventricular wall (Figure 4).

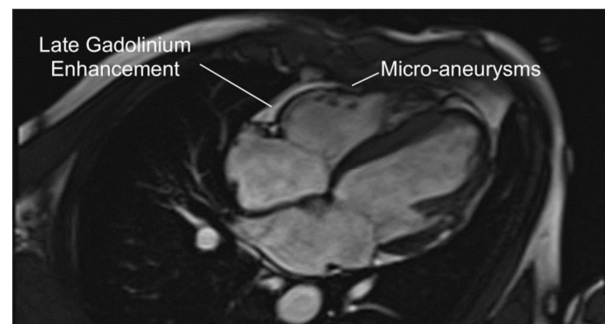


Figure 4 – Four-chamber view of cardiac magnetic resonance imaging revealing evidence of right ventricular enhancement following gadolinium study.

A 24-hours Holter recording revealed up to significant ventricular ectopic burden, many of which were bigeminy and trigeminy in nature. In view of symptoms and the above investigative findings, the patient consented to insertion of an implantable cardiac defibrillator (ICD) 4 weeks later in our centre, and has since recovered well with regular monitoring.

Discussion

ARVD is rare, prevalence ranging between 1 in 2000 to 1 in 5000 (taking into consideration geographical variations) and accounts for 5% of deaths in young adults and 25% of deaths in athletes^{3, 4}. Typical histopathological feature of ARVD is the loss of right ventricular myocardium, replaced heavily by fibrofatty tissue. Less commonly, left ventricle involvement have been reported^{5, 6}. Consequence from such pathological process leads to arrhythmias, heart failure and more importantly sudden cardiac death (SCD), with mortality rate ranging between 4 to 20% and peaking in the fourth decade, equally in both males and females⁵.

Diagnosis is difficult in most cases as clinical presentation may vary and wide range of clinical mimic exist, including myocarditis, sarcoidosis, Brugada syndrome, idiopathic RV outflow tract VT and congenital heart diseases with right chambers overload amongst others⁶. A Diagnostic Criteria was developed in 1994, with further modification in 2010 to assist in the diagnosis of ARVD and although the criterion has been shown to be specific, it lacks sensitivity⁷. Nevertheless, it highlights several key areas, a mix of clinical, radiological, histological and electrophysiological features, that assist in diagnosis⁴.

Despite not having any further evaluation or investigations performed at the time of presentation, in view of circumstances, our patient's deceased sibling had supportive histological features. Therefore, our patient met the major criteria of having a first degree relative affected by the disease. More importantly, the suspicious family history had prompted further evaluation for the disease, allowing the medical team to prioritize investigations performed, specifically the Cardiac MRI and Holter evaluation. This led to early risk stratification and decision to implant an ICD for the patient, as he was deemed at high risk of SCD.

Conclusion

This case highlights the importance of good history taking, including a detailed family history of SCD or cardiac-related diseases, especially in young patients presenting with typical

cardiac-related symptoms. Early identification and appreciation of risk will subsequently affect the outcomes of such patients affected by ARVD. Furthermore, important diagnosis like ARVD will have implications to relatives and future off-springs, further highlighting the need for detailed evaluation of patients similar to ours described in the above case report.

Competing Interests

None declared

Author Details

RAJA EZMAN FARIDZ RAJA SHARIFF (MBCHB, MRCP), Universiti Teknologi Mara, Sungai Buloh, Malaysia. RIZMY NAJME KHIR (MBBCH, MRCP), Universiti Teknologi Mara, Sungai Buloh, Malaysia. SAZZLI KASIM (MBBCh, BAO, BMedSc, MRCPI, CSCST, FNHAM), Universiti Teknologi Mara, Sungai Buloh, Malaysia.
CORRESPONDENCE: RAJA EZMAN FARIDZ RAJA SHARIFF, Universiti Teknologi Mara Sungai Buloh Campus, Jalan Hospital, Sungai Buloh, 47000, Selangor, Malaysia.
Email: rajaezman@gmail.com

References

1. Marcus FI, Fontaine GH, Guiraudon G, et al. Right Ventricular Dysplasia: A Report of 24 Adult Cases. *Circulation*. 1982; 65:384–98.
2. Sosman MC. 'Illustrative Echocardiographic Cases' in *The Disorders of Cardiac Rhythm*. Ed: Schamroth L. Blackwell. Oxford and Edinburgh. 1971; 335.
3. Basso C, Pilichou K, Bauce B, et al. Diagnostic Criteria, Genetics, and Molecular Basis of Arrhythmogenic Cardiomyopathy. *Heart Failure Clin*. 2018; 14:201–213.
4. Rao U, Agarwal S & Gilbert TJ. Arrhythmogenic Right Ventricular Cardiomyopathy (ARVC): Case Report and Review of Literature. *Heart Asia*. 2014; 6:145–149.
5. Hoorntje ET, Rijdt WP, James CA, et al. Arrhythmogenic Cardiomyopathy: Pathology, Genetics, and Concepts in Pathogenesis. *Cardiovascular Research*. 2017; 113:1521–1531.
6. Corrado D, Link MS & Calkins H. Arrhythmogenic Right Ventricular Cardiomyopathy. *N Engl J Med*. 2017; 376:61–72.
7. Wang W, James CA, & Calkins H. Diagnostic and Therapeutic Strategies for Arrhythmogenic Right Ventricular Dysplasia / Cardiomyopathy Patient. *Europace*. 2018; 0:1–13.



This article is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.

Pneumocephalus after Epidural Anesthesia

Murtaza Rashid, Mohammad Al Mogbil, Bader Al Otaibi & Majid Al Johani

Abstract

We present case report of a patient who developed Pneumocephalus after epidural anaesthesia for labor pain. A 39 year old female presented to our Emergency Department with severe headache. Few days prior she had normal vaginal delivery aided by epidural anaesthesia. Brain CT scan showed Pneumocephalus which was treated conservatively. Epidural anaesthesia is commonly used in patients having labor pain. It is one of the safe procedures if performed by expert hands and with proper equipment. One of the very uncommon complication and rarely reported is Pneumocephalus which should alert a physician in case of persistent headache following the procedure.

Keywords: Pneumocephalus, Epidural Anesthesia

Introduction

Epidural anaesthesia is one of the favored and effective treatment options for labour pain. It is usually safe and only a handful situations lead to absolute contraindications to this technique such as patient's refusal, lack of expertise and equipment, severe coagulopathy and infection at the site of puncture (1). However, as with any other technique and procedure, epidural anaesthesia is not flawless. The side effects and complications include hypotension, pruritus, inadequate analgesia, post puncture headache, nerve damage, infection, and epidural haematoma (1,2). Headache is common in one third of the patients after lumbar puncture however, the frequency is less in epidural anaesthesia as the fluid is injected in and not removed in the latter (3). Accidental dural damage and subsequent headache following epidural anaesthesia is uncommon and is an important cause of morbidity which can limit patient severely. Further, in rarest of rare cases Pneumocephalus can develop after epidural anaesthesia which has rarely been reported. We report a patient who developed Pneumocephalus after receiving epidural anaesthesia for labour pain.

Case Report:

A 39 year old female presented to our Emergency Department with severe headache not responsive to analgesics. The headache started developing 10 to 12 hours after she was given an epidural which was attempted three times for labour pain which was four days prior at a nearby medical center . The severity of the headache did not change with lying or the upright position. She had no symptoms of vomiting, no fever and no confusion. Neurological examination and vital signs were unremarkable. The site of the spinal anaesthesia did not reveal any swelling or any signs of infection. An urgent head CT scan was performed which revealed Pneumocephalus denoted by numerous left

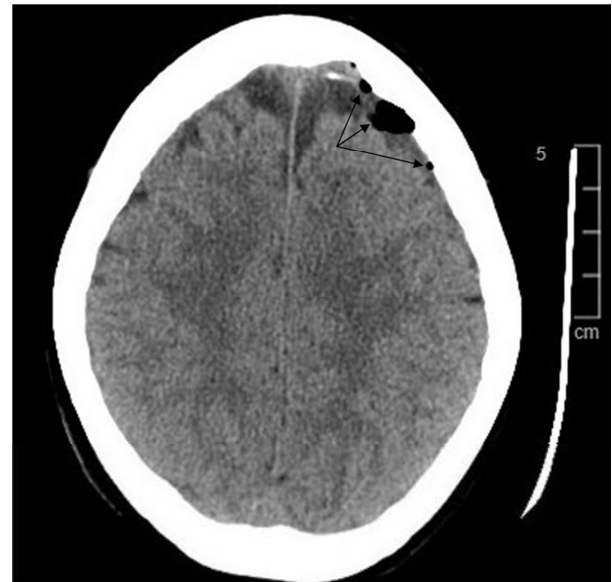


Figure 1: Pneumocephalus seen as locules of air (black color) in the left fronto-parietal region denoted by arrows (Axial section)

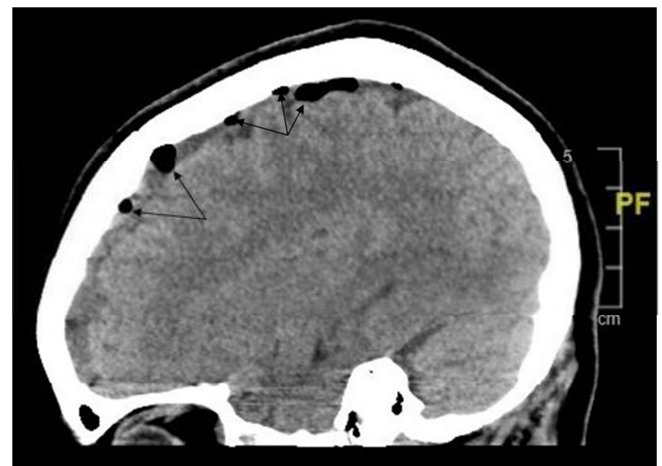


Figure 2: Multiple pockets of air seen in the Saggital section marked by arrows demonstrate the Pneumocephalus.

fronto-parietal extra axial air locules (Figure 1 and Figure 2). MRI spine revealed mild subcutaneous oedema at the site of the needle insertion without any haemorrhage or collection. The patient was admitted and treated conservatively for six days and follow up serial head CT scans showed complete resorption of the Pneumocephalus and the patient's symptoms resolved completely. The patient was discharged and the follow up was uneventful.

Discussion:

Pneumocephalus is the presence of air in the intracranial cavity. It can be acute (less than 72 hours) or delayed (more than 72 hours). The most common site is the frontal region (4). Plain skull x-rays can detect Pneumocephalus of about 2 ml, whereas it requires only 0.5 ml of air to be detected by a CT scan (5). Pneumocephalus is most commonly a result of traumatic brain injury, surgical intervention of the brain or infection (5). Trauma accounts for up to 75% percent of the total cases. Chronic infections of ENT especially otitis media also amounts to a number of significant cases. Surgical procedures of brain, spine and ENT like sinus surgery, nasal polypectomy and nasal septum resection accounts for the causes. The incidence after supratentorial craniotomy has been reported to be 100% (6, 7). However, it is very unusual for pneumocephalus to develop post epidural anaesthesia possibly due to ball valve mechanism in which the air enters the space through the CSF leakage which allows input but not output. Headache post lumbar puncture and epidural anaesthesia is relatively not uncommon but certain situations may demand a more thoughtful approach (3).

In our patient we suspect there was a puncture of the dura during epidural anaesthesia which led to air being trapped and siphoned upwards in an inverted soda bottle fashion. This is supported by the meta-analysis done by Choi et al. which states the incidence of accidental dural puncture in epidural insertion to be 1.5% and among those 52% will have post puncture headaches (8). In another extensive study performed over ten years, the overall incidence of accidental dural puncture and postdural puncture headache were 0.32% and 0.38%, respectively (9). The authors further stressed that if more than one attempt was required to identify the epidural space, the accidental dural puncture rate increased to 0.91%. In our patient we witnessed the same wherein three attempts were made to identify the epidural space which increased the risk of dural injury and subsequent leaking. Pneumocephalus usually gets absorbed without any clinical manifestations. The conservative treatment involves placing the patient at rest, avoiding Valsalva manoeuvre, administering analgesics. With these measures, reabsorption was observed in 85% of cases after

2–3 weeks (5). Use of oxygen mask, nasal catheter, hyperbaric oxygen sessions and good hydration have also been reported. If conservative measures fail to provide the desired results then specific treatment like an epidural blood patch or even surgical closure of the dural gap is indicated (3, 10).

Competing Interests

None declared

Author Details

MURTAZA RASHID, M.D, Emergency Medicine, Royal Commission Hospital, Jubail, Saudi Arabia. MOHAMMAD ALMOGBIL, M.D, FRCPC, Consultant Pediatric Emergency Medicine, Royal Commission Hospital, Jubail, Saudi Arabia. BADER ALOTAOBI, M.D, Consultant Emergency and Disaster Medicine, Royal Commission Hospital, Jubail, Saudi Arabia. MAJID ALJOHANI, M.D, Consultant Emergency Medicine, Royal Commission Hospital, Jubail, Saudi Arabia. CORRESPONDENCE: Dr Murtaza Rashid M.D, Department Of Emergency Medicine, Royal Commission Hospital Jubail, 31961, Saudi Arabia. Email: dr.murtazarashid@gmail.com

References

1. Silva M and Halpern SH. Epidural analgesia for labor: Current techniques. *Local Reg Anesth.* 2010; 3: 143–153
2. Pan PH, Bogard TD, Owen MD. Incidence and characteristics of failures in obstetric neuraxial analgesia and anesthesia: A retrospective analysis of 19,259 deliveries. *Int J Obstet Anesth.* 2004;13:227–233
3. Ahmed SV, Jayawarna C, Jude E. Post lumbar puncture headache: diagnosis and management. *Postgrad Med J.* 2006 Nov; 82(973): 713–716
4. Solomiichuk VO, Lebed VO, Drizhdov KI. Posttraumatic delayed subdural tension pneumocephalus. *Surg Neurol Int.* 2013;4:37
5. Dabdoub CB, Salas G, Silveira Edo N, Dabdoub CF. Review of the management of Pneumocephalus. *Surg Neurol Int* 29-Sep-2015;6:155
6. Satapathy G.C, Dash HH. Tension Pneumocephalus after neurosurgery in the spine position. *Br J Anaes* 2000; 84: 115-17
7. Reasoner DK, Todd MM, Scamman FL, Warner DS. The incidence of Pneumocephalus after supratentorial craniotomy. *Observations on the disappearance of intracranial air.* *Anesthesiology* 1994; 80: 1008-12
8. Choi PT, Galinski SE, Takeuchi L, Lucas S, Tamayo C, Jadad AR. PDPH is a common complication of neuraxial blockade in parturients: A meta-analysis of obstetrical studies. *Can J Anaesth.* 2003;50:460–469
9. van de Velde M, Schepers R, Berends N, Vandermeersch E, de Buck F. Ten years of experience with accidental dural puncture and post-dural puncture headache in a tertiary obstetric anaesthesia department. *Int J Obstet Anesth.* 2008;17:329–335
10. Turnbull D K, Shepherd D B. Post-dural puncture headache: pathogenesis, prevention and treatment. *Br J Anaesth* 2003;91:718–729



This article is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.

Have Crisis & Home Treatment Teams become a Second Opinion or Diagnostic Service?

Pearl Ogaku, Annabel McDonald, Sheeba Hakeem & M Aamer Sarfraz

Abstract

Purpose: To investigate the evolving role of Crisis Resolution and Home Treatment Team (CRHTT) within patient care pathway.

Methods: 100 consecutive referrals to a CRHTT were analysed to establish whether the team was reviewing diagnoses and treatment in the manner of a second opinion service. Referrals from community teams were analysed independently to those relating to early hospital discharges. The effect of medication change prior to referral to another team was also examined to see whether it affected the likelihood or otherwise of a further change.

Results: Whether a patient was seen by a psychiatrist appeared related to both source of referral and length of CRHTT stay. Most patients (76%) referred after early hospital discharge were not seen by a psychiatrist, but the majority (67%) of the community referrals were seen by a psychiatrist. Medications were changed for 69% of patients who received such a psychiatric assessment, and the diagnoses were changed in 28% of this group.

Conclusions: This study indicates that CRHTT is moving into a role where it also offers second opinions on secondary care patients. It suggests that the value of such a role could be extended if there are sufficient resources to also offer psychiatric assessments to short-stay patients.

Keywords: Psychiatrist, psychiatric assessment, second opinion

Introduction

There have been continuing initiatives to transform and improve the National Health Service (NHS) in recent years. Mental health services in England have similarly shown evolution with regards to service provision. There has been a shift away from the perceived “medicalisation” of treatment, with traditional long-stay institutions replaced with more targeted and personalised care in the community.¹ Furthermore, community services themselves have seen much remodelling over the years including decommissioning and integration, as well as increased involvement in outreach and early intervention teams.²

Mental health services are sometimes perceived as relatively well funded from outside but, as with most healthcare sectors, compared to the population requiring this service, these resources are inadequate to support the growing demand. This has been the case for some time, but it has become more evident with a significant reduction in funding observed since 2010/11.¹ In addition, constant governmental pressures to meet key performance targets, as well as unachievable expectations from the public, have further stretched an already resource-depleted mental health service.

The implementation of new National policies³ was supposed to be a shift from large psychiatric hospitals to smaller specialist community centres with a promised reduction in the demand placed on inpatient services. In England, a peak number of 150,000 inpatient psychiatric beds was reported in 1955; this

has since rapidly declined to 22,300 in 2012. Between 2010/11 and 2013/14, a further rapid reduction of 7% of all beds available was seen.⁴

Despite the promise of changes in service delivery within mental health to mitigate the continued reduction in the number of inpatient beds, demand for inpatient beds has not in fact reduced nationally.¹ The recommended level of occupancy, for example, is 85% but 119 wards surveyed⁵ were operating at 91%, with some at 138% level of occupancy. The occupancy levels of over 100% usually occurred when long-stay inpatients were discharged home on short-term leave and their beds got filled during their absence.⁴ Where numbers of inpatient beds fail to meet the demands, or waiting list for their first assessment or review grows, the inadequacy lends these facilities to issues with regard to providing high quality and safe patient care. Examples of this may include inappropriate use of the Mental Health Act for detention of patients as a means of securing an inpatient bed,⁵ incomplete assessments of people detained in places of safety due to time or space constraints,⁶ and an increase in violent incidents on overcrowded inpatient wards.⁷

What is a Crisis Resolution and Home Treatment Team (CRHTT)?

In the late 1980s and 1990s, community mental health teams provided acute crisis support. This posed a number of issues including that these teams usually operated during normal working hours of 9am-5pm (Monday to Friday) and were not

always available to provide support to patients in a crisis, and did not have the desired impact of reducing the number of acute admissions.⁸ This gap in service provision inspired the experimentation with and subsequent development of intensive home treatment services, some of which showed evidence of reduced hospital admissions, and holistic-working often preferred by families who were happy to have their loved ones receive the required support in the home environment.⁹ Over the last two decades, with remodelling of services, increased investment, NHS funding rising from £49 billion in 2000 to £122 billion in 2016, and a migration of mental health professionals, CRHTTs were established and are now available in every mental health trust across the United Kingdom (UK).¹⁰

CRHTT is a team of mental health professionals including psychiatrists, community psychiatric nurses, social workers and support workers, who provide rapid and intensive support at home during a mental health crisis.¹¹ They are a 24-hour service operating seven days a week, and acting as the “gatekeeper” for acute services accepting referrals from various sources including inpatient, community, liaison and from outside the Trust for providing support to patients experiencing crises. These teams risk-assess patients and determine whether they require inpatient or home treatment. In the latter case, CRHTTs provide intensive home treatment by offering up to 2-3 visits a day as well as 24/7 phone support. These teams are also involved in facilitating early discharges from hospitals; in cases where patients are past the initial acute crisis, but may need further input prior to discharge to community mental health teams for longer term support.⁸

Definition of diagnosis and second opinion.

A second opinion is defined as “advice from a second expert (such as a doctor/psychiatrist) to make sure advice from the first such expert is correct” whilst diagnosis is defined as “the art or act of identifying a disease from its signs and symptoms”.¹² Due to increased pressure on inpatient facilities and remodelling of community services, there has been a huge increase in the number of referrals made to CRHTTs. Between 2011/12 and 2013/14, it has been noted that referrals to CRHTTs increased by 16%.¹³ Reduction in inpatient beds and high workloads within community services often result in the formulation of arbitrary diagnoses and treatment plans. With increased pressures on other mental health services, the role of CRHTTs has begun to evolve. In addition to the previously discussed functions, CRHTTs appear to be becoming second opinion services by default enabled by the psychiatrists working in these teams.

We organised a project to establish whether a typical CRHTT is fulfilling the criteria of being a diagnostic or second opinion service provider.

Method

We examined 100 consecutively accepted referrals to a CRHTT from 1st December 2016. The patients were divided into three

groups: those being discharged/referred from hospital (HR), those referred from the community (CR), and those who were not open to secondary mental health services at the time of referral (NR). The age range and gender of the groups were noted. Thereafter, the NR group was excluded from analysis for the obvious reason that the CRHTT was not providing a second opinion in their case. The HR and CR groups were further reduced by excluding patients who were not seen by a CRHTT psychiatrist. The remaining patients in both groups were scrutinised regarding a change in medication; this was also recorded for the previous and next care occasions. The likelihood of medication change at the next treatment event was analysed to establish whether it was affected by the previous event. The numbers of patients with CRHTT diagnosis change were also recorded for both groups.

Results

There was little difference in age between the three groups (average ages were: CR=37.8, HR=39.0, NR=36.0). There was a lower proportion of men in the CR group than were present in the HR and NR groups (36% as against 48% and 47%). Whether a psychiatrist saw a patient appeared to be related to both the referral source and the length of CRHTT stay. Most (n=16, 76%) patients in the hospital-referred group (HR) were not seen by a psychiatrist while most (n=24, 67%) of those referred from the community (CR) did receive such an outcome. No community-referred patient was seen by a psychiatrist if they were with the CRHTT for less than a week. These short-stay patients accounted for 7 out of the 12 community-referred patients who were not seen. This suggests that a psychiatric assessment should be scheduled more quickly after community referrals so as to offer patients a more comprehensive service.

Psychiatric assessment led to changed diagnoses for 28% (8/29) of patients. This figure was 40% (2/5) for the HR group and 25% (6/24) for the CR group.

Medications were changed for 69% (20/29) of patients seen by a psychiatrist. In the subgroups; 60% (3/5) of HR psychiatric assessments resulted in a change of medication while 71% (17/24) of CR psychiatric assessments led to medication changes.

The chi-square statistic was used to evaluate whether a recent medication change, during the inpatient stay or at the most recent outpatient appointment, made the CRHTT less likely to adjust medication. This indicated that there was no relationship between the two events. A similar analysis indicated that the likelihood of a medication change at the patient's next community appointment was increased by seeing a CRHTT psychiatrist but unrelated to whether that assessment had resulted in a change of medication.

Figure 1: Project Flowchart

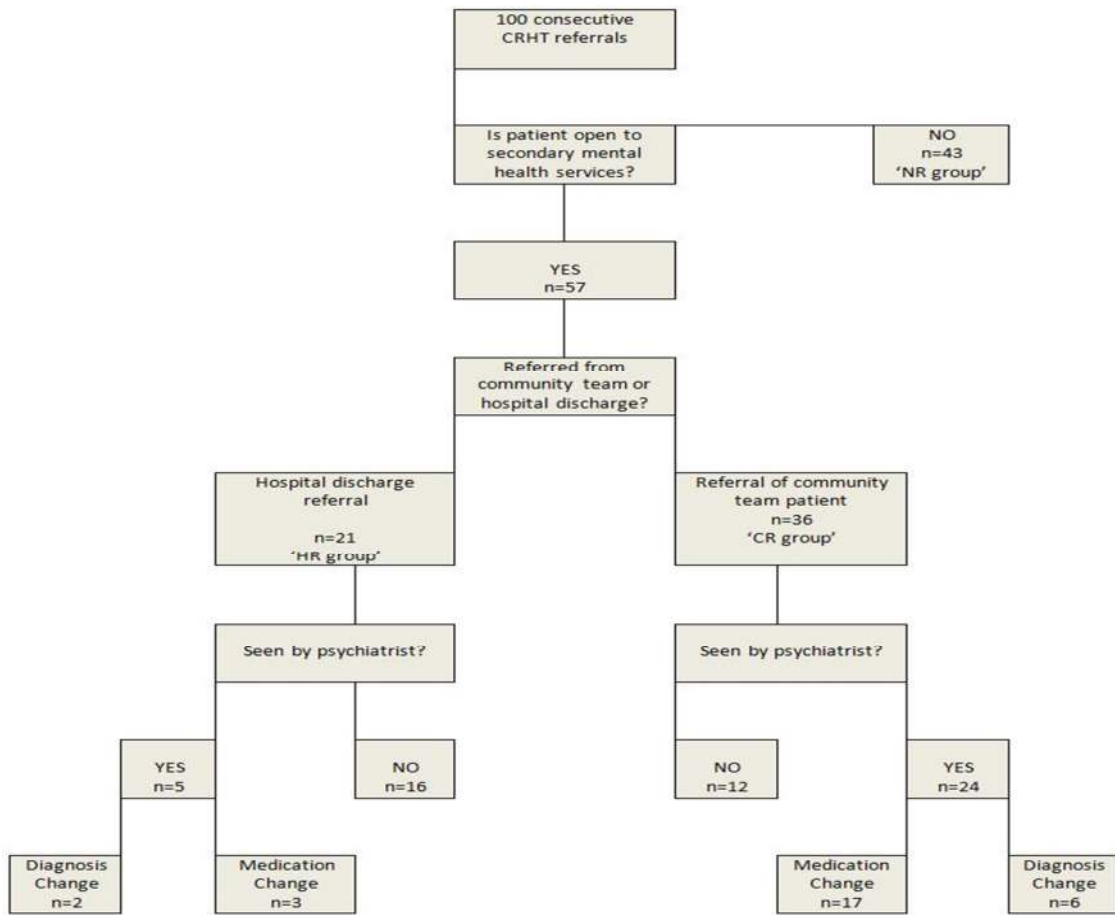


Figure 2: Group Demographics

	n	Patient Gender		Patient Age		Time with CRHTT	
		Male	Female	Average	Range	1-7 days	> 7 days
No prior referral open (NR)	43	20 (47%)	23 (53%)	36.0	19-60	5 (12%)	38 (88%)
Community referral (CR)	36	13 (36%)	23(64%)	37.8	19-66	7 (19%)	29 (81%)
Hospital referral (HR)	21	10 (48%)	11 (52%)	39.0	19-63	6 (29%)	15 (71%)

Discussion

We have demonstrated in this study that a typical CRHTT is providing a diagnostic and second opinion service. Changes in medication were more than twice as frequent as changes in diagnosis – this is perhaps unsurprising as diagnostic changes would be likely to require a different prescription.

Most community referrals were actively evaluated in terms of both diagnosis and treatment. This is a significant change to the original function of the CRHTT where a psychiatric assessment was not a standard aspect of care when very few of the original CRHTTs included a psychiatrist. This may also reflect the current pressures on community teams, which are frequently short-staffed, leading to more competition for the available clinic appointments. Consequently, patients may not have seen a psychiatrist for some time and their requirements may have changed. It is, however, also known¹ that community patients

who have not been reviewed recently or who have a long wait before their first assessment are more likely to present in crisis.

The diagnostic and second opinion function of the CRHTT is more prevalent when patients have been referred by the community team (67% reviewed, 47% medication changed) rather than on discharge from hospital (24% reviewed, 14% medication changed). This appears to largely reflect the fact that relatively few discharges were seen by the CRHTT psychiatrist because these patients had just received a full consultant-led discharge treatment plan. This may be another example of community service pressures leading to patient crises and thus engagement with alternative services – in this case inpatient care may be offering a second opinion service. The current separation of community and inpatient services will augment this effect as previously the patient would have been more likely to receive continuous care from the same consultant. This is an interesting view of current service configuration. The reduced continuity of care is often seen as a disadvantage but it does

present an opportunity for a fresh evaluation of a patient's diagnosis and medication by a different psychiatrist.

Longer lengths of stay with the CRHTT made psychiatric assessments more likely. It was particularly clear that discharge within a week made a psychiatric review unlikely. The proportion of community-referrals seen by a CRHTT psychiatrist could be increased to 83% if patients were to be seen within 24 hours. This figure is derived from the assumption that psychiatrists would then see the same proportion of both long and short stay patients. The residue would include those patients who refuse to engage with such an appointment.

It is interesting that chi-square statistical analysis suggests that the only influence on prescription change at the next appointment is whether the patient was seen by a CRHTT psychiatrist. It is not related to whether or not the CRHTT psychiatrist changed the medication. It is difficult to see why this should be the case unless the community psychiatrists consider the patients' needs in more detail or are tempted to regain control after the referral to another psychiatrist.

In conclusion, the addition of psychiatric care to CRHTTs may be a valuable adjunct to the current pressures on community teams. The current trend to separate community, inpatient and CRHTT care is often cited as a disadvantage due to reduced continuity of care for patients. This project has drawn attention to the fact that it also offers opportunities for new teams to re-evaluate both diagnosis and treatment which offers patients the advantage of an internal second-opinion service. This advantage could be offered to more community-referred patients, albeit with more resources, by ensuring that they are assessed by the CRHTT psychiatrist within 24 hours.

Limitations

This is a small study conducted in a single CRHTT. It does, however, offer an indication of the evolving role of the CRHTT and its relationship to other services.

Competing Interests

None

Author Details

PEARL OGAKU MBBS (FY2), Elizabeth Raybould Centre, Dartford, Kent DA2 6PB. ANNABEL MCDONALD MRCPsych (ST6), Elizabeth Raybould Centre, Dartford, Kent DA2 6PB. SHEEBA HAKEEM MRCPsych (ST6), Elizabeth Raybould Centre, Dartford, Kent DA2 6PB. M AAMER

SARFRAZ PhD, Elizabeth Raybould Centre, Dartford, Kent DA2 6PB.

CORRESPONDENCE: Dr. M Aamer Sarfraz, Consultant Psychiatrist & Director of Medical Education, Elizabeth Raybould Centre, Dartford, Kent DA2 6PB.

Email: Aamer.Sarfraz@nhs.net

References

1. Gilbert H. Mental Health Under Pressure. Kings Fund Briefing 2015. [Online] Available at: https://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/mental-health-under-pressure-nov15_0.pdf
2. National Confidential Inquiry into Suicide and Homicide by People with Mental Illness. Healthy services and safer patients: links between patient suicide and features of mental health care providers. University of Manchester 2015. [Online] Available at: <http://research.bmh.manchester.ac.uk/cmhs/research/centreforsuicideprevention/nci>
3. Imison C, Sonola L, Honeyman M, et al. The reconfiguration of clinical services: what is the evidence? Kings Fund 2014. [Online] Available at: https://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/mental-health-under-pressure-nov15_0.pdf
4. The Commission on Acute Adult Psychiatric Care. Improving acute inpatient psychiatric care for adults in England. Interim report. London: The Commission on Acute Adult Psychiatric Care. 2015. [Online] Available at: www.caapc.info/
5. Royal College of Psychiatrists. 'Trainee psychiatrist survey reveals mental health beds crisis'. 2014 [Online] Available at: www.rcpsych.ac.uk/mediacentre/pressreleases2014/traineesurvey.aspx
6. Quirk A, Lelliot P. 'What do we know about life on acute psychiatric wards in the UK? A review of the research evidence'. *Social Science and Medicine* 2001; 53: 1565-1574.
7. Virtanen M, Vahtera J, Battey JB, et al. 'Overcrowding in psychiatric wards and physical assaults on staff: data-linked longitudinal study'. *British Journal of Psychiatry* 2015; 198: 149-155.
8. Johnson S. Crisis resolution and home treatment teams: an evolving model. *Advances in Psychiatric Treatment* 2013; 19(2): 115-123.
9. Dean C, Phillips J, Gadd E, et al. Comparison of community based service with hospital based service for people with acute, severe psychiatric illness. *BMJ* 1993; 307: 473-476.
10. The 2010/11 National survey of Investment in Mental Health Services, s.l.: Department of Health. 2011.
11. Mind. Crisis Services. 2013 [Online] Available at: <http://mind.org.uk/information-support/guides-to-support-and-services/crisis-services/crht-crisis-teams/#.WHDwNoXXLIU>
12. Merriam-Webster, 2017. Merriam-Webster Inc., P.O. Box 281, Springfield, MA 01102.
13. Funds cut for mental health trust in England. BBC, 2013. [Online] Available at: www.bbc.co.uk/news/health-25331644



This article is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.

The use of dermoscopy amongst dermatology trainees in the United Kingdom

Claire Reid, Kimberlee Lim & Catriona Henderson

A dermatoscope is a hand-held device for examining the appearance of the skin. Dermoscopy has become an increasingly used and valued tool in the assessment of various skin lesions, and more recently, inflammatory rashes. It is quick, cheap and when used correctly, dermoscopy is an essential tool in helping clinicians detect early stage skin cancer. Various national and international guidelines recommend routine use of dermoscopy in the assessment of pigmented lesions^{1,2} because it enhances melanoma detection rates^{3,4} and can help confirm the diagnosis of benign lesions such as haemangiomas and seborrhoeic keratoses. As with any skill, competency takes time to develop and a combination of various learning and assessment methods is best. The dermatology specialist training curriculum in the United Kingdom (UK) states that trainees should be competent in using a dermatoscope and interpreting findings, while recognizing the limitations of this tool⁵. Assessment of these clinical skill and behavioural competencies using direct observation of procedural skills (DOPS), case-based discussion (CBD), mini clinical examination (mini-CEX), and/or multisource feedback (MSF) is suggested. There is no specific guidance on what resources a trainee should use to achieve these competencies, nor on what is the minimum expected dermoscopy skillset at completion of specialist training.

The aim of this survey was to explore dermoscopy use amongst dermatology specialist trainee registrars in the UK including frequency of use, how it is being taught and whether trainees feel their dermoscopy training has been adequate.

An online survey was designed and distributed to dermatology trainees in the United Kingdom using an email link and hard copies were distributed at a national dermoscopy course. Respondents who did not identify themselves as dermatology trainees were removed from the analysis. Responses were collected anonymously, then collated and analysed using SurveyMonkey[®] computer software.

Twenty-five percent (59/238) of dermatology trainees completed the survey. On average, 92% (54/59) use dermoscopy more than once daily. Eighty-five percent (50/59) always use dermoscopy when assessing pigmented lesions while 34% (20/59) always and 59% (35/59) sometimes use it to assess non-pigmented lesions. When asked about specific tools used to

learn dermoscopy, 41% (24/59) have been on a previous course, 42% (25/59) reported attendance at a lecture or seminar, 46% (27/59) have used a dermoscopy text book, 14% (8/59) have attended a conference, 19% (11/59) have used online resources. Seventeen percent (10/59) have never used any of the above learning methods. (Figure 1a). Amongst those who have attended a formal dermoscopy course (n=24), 92% (22/24) of these were ≤ 1 day in duration. When questioned about informal teaching in clinical practice, 12% (7/59) frequently, 56% (33/59) sometimes, 31% (18/59) rarely and 2% (1/59) never receive teaching from their supervising dermatology consultant. (Figure 1b). Fifty-four percent (32/59) feel they have received adequate training in dermoscopy while the remaining 46% (27/59) feel their dermoscopy training is inadequate for their training stage (Figure 1c). Seventy-three percent (43/59) have access to dermoscopic photography within their local dermatology department.

These results of this survey highlight the need for dermoscopy training to be reviewed within the UK national training curriculum for dermatology. Despite daily use by the vast majority, dermoscopy training is largely self-directed and highly variable amongst individual trainees. Of concern, a significant proportion of those who responded feel their dermoscopy skills are inadequate for their training stage. Of note, the 25% response rate means that the results of this survey may not be representative of dermatology trainees in the United Kingdom as a whole.

This is the first time that dermoscopy use has been explored through a national survey of dermatology trainees in the UK, to the best of our knowledge. A survey on dermoscopy use was carried out by The British Association of Dermatologists (BAD) in 2012⁶ but the majority of responses were from dermatology consultants. This confirmed that 98.5% of respondents regularly used dermoscopy, while 81% had received any training. The most frequent source of training was UK based courses, which 62% of respondents reported attending. Of note, 39% of all respondents lacked confidence when making a diagnosis based on their interpretation of dermoscopy findings. It is not clear how many of those lacking in confidence were consultants, trainees or specialty doctors. Although the situation

may have improved since 2012, these results do suggest that dermoscopy training needs have not been met for a proportion of doctors across the dermatology community.

Fig 1a - Have you undertaken any formal study in dermoscopy? 49% of trainees have attended a lecture, 2% a seminar, 14% a conference, 41% a course, 19% have used an online resource, 46% have used a book, 17% have not used any resource.

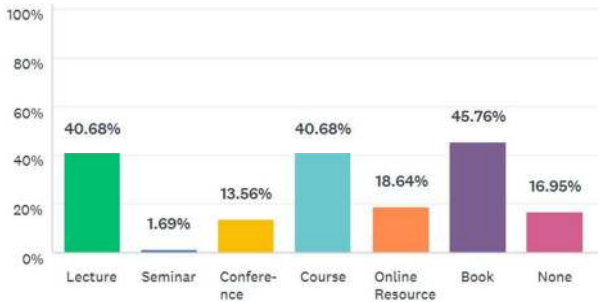


Fig 1b- Do you receive dermoscopy training from your supervisor in clinic? 56% of trainees sometimes, 31% rarely, 12% frequently, and 2% have never received training from their seniors in clinic.

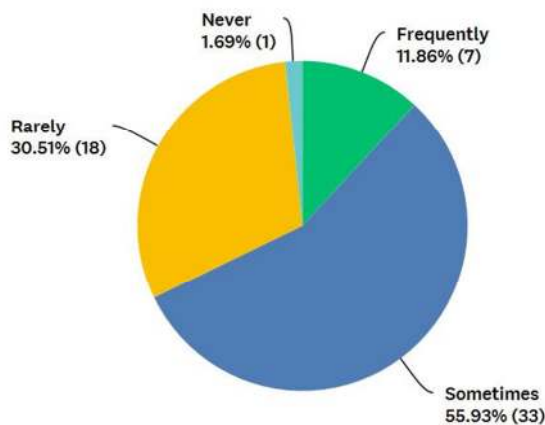
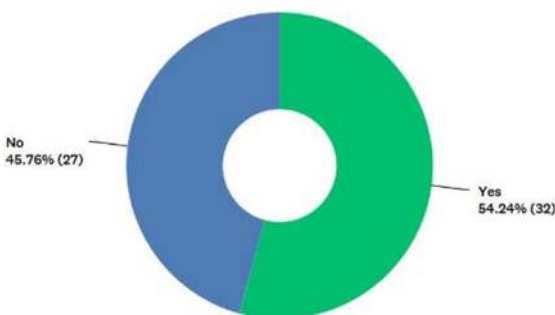


Fig 1c- Do you believe that you have received adequate training in the use of a dermoscopy for your training grade?



Dermoscopy training is an important issue to address for several reasons. The volume of cutaneous lesions being referred to dermatology is increasing, and skin cancer referrals and treatment now account for 50% of a UK dermatologists' workload⁷. For every melanoma diagnosed, a dermatologist may

expect to see 20–40 benign lesions referred from general practitioners (GPs)⁷. These facts highlight the importance of maximising diagnostic skills which frequently include using dermoscopy as part of clinical assessment. Lack of adequate training is a common self-reported reason for dermatologists not using dermoscopy⁸. Both trainees and their supervising bodies have a responsibility to maximize training opportunities and embed the use of dermoscopy in routine practice.

In conclusion, we feel UK dermatology trainees and indeed any clinician who utilizes this tool, would benefit from a more standardized and integrated approach to dermoscopy teaching to ensure safe practice of this skill and deliver high quality evidence-based patient care.

Competing Interests

Dr Catriona Henderson teaches at a dermoscopy course which is ran by the British Association of Dermatology

Author Details

CLAIRE REID, Medical Doctor, Dermatology Department, University Hospital Southampton NHS Foundation Trust, SO140YG England. KIMBERLEE LIM, Medical Doctor, Dermatology Department, University Hospital Southampton NHS Foundation Trust, SO140YG England. CATRIONA HENDERSON, Medical Doctor, Dermatology Department, University Hospital Southampton NHS Foundation Trust SO140YG England.

CORRESPONDENCE: CLAIRE REID, Medical Doctor, Dermatology Department, University Hospital Southampton NHS Foundation Trust, SO140YG England
Email: clairereid85@gmail.com

References

1. European Dermatology Forum; update of the guideline on the diagnosis and treatment of melanoma, developed by the guideline sub-committee 'Melanoma' of the European Dermatology Forum, 2012. Accessed at <http://www.euroderm.org/edf/index.php/edf-guidelines/category/5-guidelines-miscellaneous>
2. Melanoma; assessment and management. National Institute for Health and Care Excellence. NICE guideline [NG-14], July 2015. Accessed at <https://www.nice.org.uk/guidance/ng14/chapter/1-recommendations#assessing-melanoma-2>
3. Watts C.G., Dieng M., Morton R.L., Mann G.J., Menzies S.W., Cust A.E. Clinical practice guidelines for the identification, screening and follow-up of individuals at high risk of primary cutaneous melanoma: a systematic review. *British Journal of Dermatology* 2015;172;1:33-47
4. Vestergaard M.E., Macaskill P., Holt P.E., Menzies S.W. Dermoscopy compared with naked eye examination for the diagnosis of primary melanoma: a meta-analysis of studies performed in a clinical setting. *British Journal of Dermatology* 2008;159:3;669-676
5. Specialty Training Curriculum for Dermatology August 2010 (amended August 2012) Joint Royal Colleges of Physicians Training Board. Accessed at <https://www.jrcptb.org.uk/sites/default/files/2010%20Dermatology%20%28amendment%202012%29.pdf>
6. Butler T, Martin R, Affleck A, Fleming C, Bowling J. Trends in dermoscopy use in the UK: results from surveys in 2003 and 2013. *Dermatology Practical and Conceptual* 2015;5;(2);4:29-38

7. Eedy D. Dermatology: a specialty in crisis. *Clinical Medicine* 2015;15;6 509–10
8. Engasser H.C., Warshaw E.M. Dermatoscopy use by US dermatologists: A cross-sectional survey. *Journal of the American Academy of Dermatology*. 2010 Sep 1;63(3). Available from, DOI: 10.1016/j.jaad.2009.09.050



This article is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.

Can Online Distance Learning improve access to learning in conflict zones? The Oxford Psychiatry in Iraq (OxPIQ) Experience

Yasir Hameed, Hasanen Al Taiar, Denis O'Leary & Lucy Kaynge

Abstract

Psychiatry trainees in Iraq face many challenges that limit their immediate access to training opportunities. These include limited opportunities to attend international conferences due to visa restrictions, reduced access to evidence-based practice and guidelines and less experience in conducting quality improvement projects and audits.

There are also issues related to their training programmes, including lack of regular meetings with supervisors and fewer opportunities for case-based discussions. Clinical Psychiatry is thus a potential key affected clinical domain due to the above factors.

Technological advances in the field of e-learning created concepts such as Technology-enhanced or Web-based learning (TEL or WBL). These developments enabled the formation of “virtual teams” using an online platform. These teams overcome logistical geographical and other barriers to enable professionals to connect and learn from each other.

This paper includes an appraisal of the TEL, looking at its advantages and challenges in meeting the needs of learners and educators. Also, we describe how we incorporated evidence-based and good practice guidelines on TEL use in these circumstances to the design, delivery and early evaluation of the distance learning programme.

In our conclusion, we add to these and draw attention to the use of established online platforms (Medicine Africa in this case) and the importance of involving Iraqi Training leads, trainees and institutions in identifying trainee learning needs and supporting existing training provisions.

Keywords: Online learning, virtual learning teams, case-based discussion, learning theories.

Abbreviations: Technology-enhanced or Web-based learning

Background and rationale

Psychiatric trainees in Iraq face many challenges that limit their immediate access to improved training opportunities. These include limited access to classroom teaching, regular clinical supervision meetings and fewer opportunities to attend international conferences and placements. These challenges are more acute in those specialities with the greatest shortage of consultants (for example, forensic and child and adolescent psychiatry).

Furthermore, the fragile security situation in the capital and larger cities and the post-conflict disruption to educational institutions consequent to these difficulties makes it difficult for those in the UK and elsewhere to visit the country and support educators and training on the ground.

Against this background and as a medical educational team in the UK (Oxford University Medical Education Fellows, OUMEF) with an interest in developing training opportunities for peers and colleagues in Iraq, we set up the Oxford Psychiatry in Iraq (OxPIQ) Project, beginning with a project development team that included Medicine Africa, an experienced online distance learning platform.

So what is the role of TEL in the delivery of online distance learning targeted at medical professionals in these circumstances?

Meeting the Challenge – the role of TEL

The concept of Technology-enhanced Learning (TEL), or Web-based learning (WBL), defined as the use of information and communication technologies in teaching and learning¹, is a relatively new phenomenon. Nevertheless, there is a considerable body of evidence supporting the use of TEL in various clinical and non-clinical settings.

Mccutcheon et al.² systematically reviewed thirteen studies and found that ten of these studies concluded that online learning is as effective as traditional or classroom teaching, despite the limitations of some of these studies.

In a large meta-analysis, Means and colleagues³ concluded that students using online teaching performed modestly better compared to students learning similar material using face-to-face teaching. Combining face-to-face and online teaching resulted in larger benefit compared to the use of face to face methods only.

TEL can address the learning limitations in classroom settings due to expanding curriculum coverage and limits on contact time between students and lecturers/trainers alike. It can contribute to better use of such face-to-face classroom contact through the facilitation of the flipped classroom approach.⁴ In this approach (also called inverted instruction and upside-down teaching), students acquire the basic information of the lesson outside the class (usually using online materials) and then develop their knowledge further in the class by sharing their learning, interacting with other classmates and teacher, and discussing various aspects of the study topic. These advantages have enabled TEL to revolutionise distance learning at many levels – enabling greater access to education by overcoming geographical and time-zone boundaries.

An allied concept within distance TEL is the concept of virtual teams⁵ where health professionals come together to teach and learn from each other independent of location. Of itself, this offers some advantages. These include the possibility of addressing speciality-specific training gaps through the incorporation of the relevant expertise within the team - and to the creation of what is termed “connectivism”. This term refers to the use of internet technologies to enhance learning through online peer networks⁶ and the development of communities of practice.⁷ The latter allows for workplace-based learning with trainees learning from more experienced practitioners and moving towards the same through greater competency acquisition.

In a similar vein, creating networks of professionals may help to establish more longer-lasting relationships of mutual benefit between the UK and Iraqi professionals (e.g. through collaboration on training programmes, conferences, etc.). Also, cross-cultural online learning has been shown to be very useful in improving language skills and cultural awareness of learners and educators.⁸ With language translation technology, any language difficulties can also be overcome, especially if the educator can observe the learners’ responses to the translated text and offered the opportunity to give further explanations and clarifications when necessary.⁹ Finally, as well as sharing knowledge and experience within groups, TEL enables opportunities for mentoring and coaching individuals.¹⁰

For our purposes, these findings and opinions support the use of online learning as a suitable distance learning “add-on” to existing training opportunities in Iraq.

TEL and Learning Theories

Learning theorists suggest that experiential and constructive learning theories are most appropriate to learning in the clinical context. Both are possible with TEL (as well as being facilitative of behaviourist and cognitivist approaches).

For example, the virtual classroom environment can enhance the learning experience of the participants by improving their analytical skills by thinking through case formulation and management plans.¹¹ Participants in online learning could be

assessed and receive the feedback immediately. Ideas can be shared, and there is no passive acquisition or transfer of knowledge as is the case with traditional lectures. These aspects have implications for the design of the educational sessions and are discussed below in the learning methods section.

Challenges of Online Distance Learning

There are many challenges associated with online distance learning. Firstly, there is the potential lack of the required technologies (internet access, laptops or desktop computers), the expenses of subscribing to these online learning templates, the need to have technical support, and similar technical and logistic issues.¹² These technical problems may impair access to and functioning of the virtual team. The choice of an experienced online platform must, therefore, be considered carefully.

Secondly, there may be ethical issues about the protection of patients’ confidentiality in these sessions, especially when there are different laws of privacy that are applied in the UK and Iraq. This will require knowledge of the relevant professional requirements by the tutor team for example.

Furthermore, the student-teacher relationship has traditionally been underpinned by direct face-to-face contact and being present at the same time and place.¹¹ Therefore, learners and educators might be less satisfied with online learning. For these reasons, the concept of blended learning (careful integration of online learning with face to face learning experience) has been developed to overcome the limitations of a standalone online or face to face learning and has been found effective and applicable in various settings.¹³

Thirdly, any distance online learning programme must understand and support existing “local” training provision and arrangements, in the classroom and the workplace. This requires liaison and cooperation with the training providers and institutions on the ground.

For clinical training to be relevant, it needs to reflect the learning needs of trainees in the workplace – in keeping with adult learning principles and cognitive apprenticeship models of learning.¹⁴ The latter includes the importance of clinical decision-making underscored by the higher levels of Bloom’s (1956) cognitive domain.¹⁵ To this end, then appropriate learning and assessment methods are needed to enable effecting learning.

In other words, while necessary, TEL may be insufficient in enhancing learning outcomes if allied learning methods are not chosen appropriately. Also, in our view, TEL is not a substitute for bedside teaching.

Table 1 summarises this appraisal of online distance learning (using the online platform provided by MedicineAfrica).

Table 1 Strengths and limitation of using MedicineAfrica (web-based virtual classroom environment)

Strengths	Limitations
Better use of the participants time and resources	Limited or lack of internet access
Overcome geographical barriers between two countries	Technical and logistic issues
Improve critical thinking and communication skills	Subscription expenses Appropriate choice of learning methods
Form long-standing professional networks	Ethical and legal issues (e.g., confidentiality)
Interactivity	Lack of direct face to face contact

OxPIQ & Project Development Team

OxPIQ is a partnership between Medicine Africa and psychiatrist members of the Oxford University Medical Education Fellows, with experience of working in Iraq. The Oxford University Medical Education Fellows (<http://OUMEF.org>) is a group of trainees from across medical and surgical specialities with interest in medical education and training.

Medicine Africa (<http://medicineafrica.com>) is an innovative clinically targeted online platform developed in collaboration with King's College London's Centre for Global Health, within the King's Somaliland Partnership. Built at low bandwidth, it enables collaboration between medical professionals in the UK and those in remote or fragile states to enhance education in various clinical specialities using online sessions (live courses and mentoring sessions). Please see Appendix 3 for a screenshot of one of the active sessions of OxPIQ.

Following the development of a project team, additional team members were added from the Subcommittee on Iraq of the Royal College of Psychiatrists (<http://www.rcpsych.ac.uk/workinpsychiatry/internationalaffair/sunit/iraqs...>), thus completing the UK dimension.

The next step was to invite representation and support from the Iraqi Board of Psychiatry and the Medical Education Unit in Baghdad. These developments led to the formal launch of OxPIQ Partnership in March 2016. Later on, the many UK and Iraqi doctors joined the Partnership as tutors and learners.

The Virtual Learning Team: Trainees, Specialty Consultants & Tutors

Iraqi psychiatry trainees were then recruited, and their more pressing learning needs to be appraised based on their views and those of the Iraqi Board of Psychiatry supervisors. Learning needs to emerge included the management of older patients with dementia and functional disorders, assessment and management of children and adolescents (with autism and ADHD for example), forensic patients and those with drug and alcohol addiction. The team thus formed was composed of up to ten psychiatry trainees from Iraq and five senior psychiatrists/tutors each, from Iraq and the UK respectively. A

schedule of fortnightly seminars was agreed and published on the learning platform. Case-based discussions were used as the main educational activity during these seminars.

Learning Methods and Processes

As noted earlier, the importance of experiential and constructivist learning methods are key to clinical education. Our literature appraisal revealed that they are essential elements of successful TEL in this context too.^{16, 17} To these must be added learner engagement.¹⁸

Virtual or online (anonymised) case-based discussions (CBDs) are valid and reliable learning tools.¹⁶ They are interactive and centred around the students and their learning needs while a facilitator guides the process of learning. Learners are engaged through discussion of actual clinical cases, so preparing learners for real-life experience.¹⁹ Also, expert facilitation and peer feedback to trainees promotes clinical knowledge and skills' development.^{20, 21}

Effective small group teaching is characterised by four main strengths: flexibility, interaction, reflexivity and engagement.²² Flexibility is when the teacher responds to the needs and learning of the students dynamically and helps them to explore wider pedagogic spaces. A higher degree of interactivity is usually seen in small group teaching compared to a larger group. Teachers are better able to continually engage in self-reflection and listen sensitively to students in a small group and observe the dynamics between the members of the group, leading therefore to better reflexivity. Engagement refers to encouraging the students to develop their academic identity and engage in lively debate about the various aspects of the topic discussed.

We aimed to replicate these characteristics. For example, a small group discussion allowed better interaction with each participant (interactivity); the presence of chat windows enables the facilitator to self-reflect on the process, monitor engagement and respond reflexively using questions and answers to stimulate interest and respond flexibly to individual trainee knowledge gaps. Tutors are encouraged to identify trainees' learning needs and facilitate interactivity, and timely feedback as these are highly valued by the participants and help to keep them motivated and engaged.¹⁸

For further reading in this area, we recommend Brindly and colleagues' ²³ten strategies to increase students' motivation towards and engagement with online learning (see table 2).

Table 2- Strategies to increase engagement in online teaching (modified from Brindly and colleagues, 2009)²³

1. Transparency of expectations: Making the learning objectives very clear and relevant to the participants learning needs. The teachers must be open to the learners' suggestions and must be willing to discuss the process and purpose of the educational activities.
2. Clear instructions: The educational activity, its timing, duration, and the technical aspects are described in detail to the participants. They should not be left to 'try out things' and

must be guided explicitly.

3. Appropriateness of task for group work: For the online activity to succeed, individual versus group tasks should be differentiated. In our example, this may be done by asking the participants to do a particular task before the session (e.g., read about severe and enduring mental illness), and then to work together on producing a formulation for the case discussed. This will increase their motivation to be involved in various tasks.

4. Meaning-making/relevance: The case-based discussions (and any online activity) should have relevance for the participants and aim to enrich their experience in their clinical work.

5. The motivation for participation embedded in course design: It is essential that participants in the online activity understand that the success of the group and the course depend on the individual effort of each participant.

6. The readiness of learners for group work: This aspect describes the development of a sense of community through a professional relationship which leads to better collaborative work.

7. The timing of group formation: Before the participants join in the educational activity, it is preferable to have some discussions before the tutorial on their learning needs to allow a time for rapport to develop to enable better group activities.

8. Respect for the autonomy of learners: Joining and leaving the educational activity (and the whole online course) should be voluntary. No penalties should be attached to leaving the course. Learners should have the freedom to choose what aspects of the online course is relevant to them.

9. Monitoring and feedback: The tutor should monitor the progress of the participants, and timely feedback is given respectfully to enhance the engagement and motivation of the participants. Please see Appendix 1 (lesson plan) for more details on feedback and evaluation.

10. Sufficient time for the task: Participants should be given time to be actively involved in the session. This is particularly important in a distant learning session when issues related to sound quality or speed of internet connection may prevent some participants from engagement.

The focus of the Lesson Plan Design

To these ends, the focus on the lesson design was on using problem-based learning methods (e.g. CBDs) within a small group setting (between 4-12 members) and a format that promoted learner engagement. A sample lesson plan is provided in Appendix 1.

In practical terms, tutorials were held fortnightly in term-time. All participants received an email notification to inform them of the session topic, and the tutor uploaded the slides from the session to the website beforehand. Participants logged-in to the site (<http://medicineafrica.com>) and interact with the tutor by voice (requiring only simple microphone equipment) and by writing in a chat window.

Evaluation and feedback gathering

The evaluation of the effectiveness of these sessions was reliant originally on trainees' immediate reaction (table 3, level 1 evaluation, Kirkpatrick²⁴) using formal feedback tools provided online by *MedicineAfrica*. This feedback was shared with tutors

and the Project Team. Please see Appendix 2 for the template used in collecting feedback after each session.

Subsequently, members of the project team approached trainee representatives, tutors and Iraqi Psychiatry Board leads separately for further feedback and appraisal of learning needs. Furthermore, some months after a tutorial we have asked trainees for evidence of learning across the higher levels of Kirkpatrick's evaluation model.

Regular feedback from the Iraqi and UK participants has been positive. The sessions have been associated with improved clinical knowledge and skills of the Iraqi Psychiatry Trainees. Requests for certificates of tutorial participation have been agreed upon and provided by the project team addition, so supporting learners' (and tutors) portfolio development.

Table 3 Kirkpatrick's (1996) Levels of Training Assessment

Level	How to assess
Level 1: Reaction (the participants feeling about the training)	Feedback during and after the tutorial using the feedback questionnaire
Level 2: Learning (improving the participants' knowledge)	Post-tutorial questionnaire and interviews
Level 3: Behaviour-also called Transfer (improving the participant's performance)	Direct or indirect observation and assessment of the skills and competencies of the trainees
Level 4: Results (cost-effectiveness, engagement, sustainability, adherence to evidence-based practices)	regular meetings between the participants, tutors, and stakeholders.

Further cooperation

A surprising (and very welcome) outcome of the project was, through the facilitation and support of the Iraqi Board of Psychiatry, the introduction of educational workshops in Baghdad. These workshops were held in Medical City, Baghdad, in May 2017 and April 2018 and were facilitated by tutors (YH & H Al-T) from the OxPIQ Partnership. They covered targeted topics such as old age psychiatry, addiction, organic and forensic psychiatry. Trainees and senior psychiatrists from Iraq attended; their feedback showed how they valued the interactive nature of the teaching and use of CBDs as learning methods, resulting in high levels of engagement.

Conclusions

This paper describes the process of designing, delivering, and the early evaluation of an online distance TEL programme for mental health professionals based in the UK and Iraq.

TEL has had an important role in overcoming the geographical barriers and other challenges to developing training opportunities in Iraq and other developing countries. We are of the view that it could be used more often to connect professionals working in similar circumstances and with other disadvantaged groups, including refugee and asylum seekers. It

is a flexible way of providing training to professionals working with those groups in relatively remote and resource-deprived environments.

Greenhalgh²⁵ suggests that three factors are needed for the success of online educational activity: ease of access, perceived usefulness of the activity to the learning requirements of the students, and the interactivity of the session. In our experience, these are important. Also, we believe that additional consideration should be given to (i) working with an experienced online platform provider; (ii) working with local educational institutions, trainers and learners to identify unmet learning needs and support existing learning opportunities/programmes; and (iii) adopting an iterative approach to feedback and evaluation.

Acknowledgements

The authors would like to acknowledge the contribution of Dr Nesif Al Hemiary, Head of the Iraqi Board of Psychiatry, Consultant Psychiatrist and Professor of Psychiatry, University of Baghdad for his invaluable support in organising the training workshops in Baghdad. The members of the Subcommittee on Iraq of the Royal College of Psychiatrists (<https://www.rcpsych.ac.uk/members/internationalaffairsunit/iraqsubcom.aspx>) and its chair, Dr Saleh Dhumad, also provided helpful advice and supported the OxPIQ activities.

Competing Interests

None declared

Author Details

YASIR HAMEED; MB ChB, MRCPsych, PgDip Clin Edu, FHEA; Honorary Senior Lecturer, Norwich Medical School University of East Anglia. UK. Consultant Psychiatrist, Norfolk and Suffolk NHS Foundation Trust. UK. HASANEN AL TAIAR; MRCPsych, SFHEA; Consultant Forensic Psychiatrist, Oxford, UK. DENIS O'LEARY; MRCPsych, MD, MED, SFHEA; Honorary Clinical Tutor (Postgraduate Medicine), Medical Science Division, University of Oxford, UK. LUCY KYNGE, Project Manager, Medicine Africa.

CORRESPONDENCE: YASIR HAMEED, Consultant Psychiatrist, Norfolk and Suffolk NHS Foundation Trust, UK. Email: yasirmhm@yahoo.com

References

- Kirkwood A, Price L. Technology-enhanced learning and teaching in higher education: what is 'enhanced' and how do we know? A critical literature review. *Learning, Media & Technology*. 2014; 39(1): 6-36.
- McCutcheon K, Lohan M, Traynor M, et al. A systematic review evaluating the impact of online or blended learning vs. face-to-face learning of clinical skills in undergraduate nurse education. *Journal Of Advanced Nursing* 2015; (2): 255-270.
- Means B, Toyama Y, Murphy R, et al. Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies. US Department Of Education in 2009.
- Crews T, Butterfield J. Data for Flipped Classroom Design: Using Student Feedback to Identify the Best Components from Online and Face-to-Face Classes. *Higher Education Studies* 2014; 4(3): 38-47.
- Malhotra A, Majchrzak A, Rosen B. Leading Virtual Teams. *Academy Of Management Perspectives* 2007; 21(1): 60-70.
- Siemens, G. Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning* 2005; 2(1): 3-10.
- Wenger, E. *Communities of practice: Learning, meaning and identity*. Cambridge, UK: Cambridge University Press, 1998.
- Cifuentes, L. and Shih, Y. Teaching and Learning Online. *Journal of Research on Computing in Education* 2001; 33(4): 456-474.
- Bruce, T., Byrne, F. and Kemp, L. Using Skype to support remote clinical supervision for health professionals delivering a sustained maternal early childhood programme: a phenomenographical study. *Contemporary Nurse* 2018; 54(1):4-12.
- Ensher, E., Heun, C. and Blanchard, A. Online mentoring and computer-mediated communication: New directions in research. *Journal of Vocational Behavior* 2003; 63(2): 264-288.
- Riley JB, Austin JW, Holt DW, et al. Internet-based virtual classroom, and educational management software enhances students' didactic and clinical experiences in perfusion education experiences. *Journal of Extra-corporeal Technology* 2004; 36:235-239.
- Chudoba, K. M., Wynn, E., Lu, M., & Watson-Manheim, M. B. How virtual are we? Measuring virtuality and understanding its impact in a global organisation. *Information Systems Journal* 2005; 15(4): 279-306
- Garrison, D. and Kanuka, H. Blended learning: Uncovering its transformative potential in higher education. *The Internet and Higher Education* 2004; 7(2): 95-105.
- Knowles MS and Associates. *Andragogy in action: applying modern principles of adult learning*. San Francisco: Jossey-Bass, 1984.
- Bloom BS, Engelhart MD, Furst EJ, et al. Taxonomy of educational objectives: the classification of educational goals. Handbook I: Cognitive domain. New York: David McKay, 1956.
- Bullock, A., & Webb, K. Technology in postgraduate medical education: a dynamic influence on learning? *Postgraduate Medical Journal* 2015; 91(1081): 646-650.
- Flynn, L., Jalali, A., & Moreau, K. A. Learning theory and its application to the use of social media in medical education. *Postgraduate Medical Journal* 2015; 91(1080): 556-560.
- Boston, W., Diaz, S. R., Gibson, A. M., Ice, P., Richardson, J., & Swan, K. An Exploration of the Relationship between Indicators of the Community of Inquiry Framework and Retention in Online Programs. *Journal of Asynchronous Learning Networks* 2009; 13(3): 67-83.
- Yasin I., T. The Impact of Small Group Case-based Learning on Traditional Pharmacology Teaching. *Sultan Qaboos University Medical Journal: SQUMJ* 2013; 13 (1): 115-120.
- Thistlethwaite J, Davies D, Ekeocha S, et al. The effectiveness of case-based learning in health professional education. A BEME systematic review: BEME Guide No. 23. *Medical Teacher* 2012; 34(6): e421-e444.
- Williamson, J. L., & Osborne, A. J. Critical Analysis of Case-Based Discussions. *British Journal Of Medical Practitioners* 2012; 5(2): 1-4.
- Mills, D. & Alexander, P. Small group teaching: a toolkit for learning. *The Higher Education Academy*, 2013. [Accessed on 09 September 2018] https://www.heacademy.ac.uk/system/files/resources/small_group_teaching_1.pdf
- Brindly, J. E., Walti, C., Blaschke, L. M. Creating Effective Collaborative Learning Groups in an Online Environment, 2009. [Accessed on 09 September 2018] <http://www.irrodl.org/index.php/irrodl/article/view/675/1271>
- Kirkpatrick, D. Great Ideas Revisited. Techniques for Evaluating Training Programs. Revisiting Kirkpatrick's Four-Level Model. *Training And Development* 1996; 50(1): 54-59.
- Greenhalgh T, Wong G, Pawson R. Internet-based medical education: a realist review of what works, for whom and in what circumstances. *BMC Medical Education* 2010; 10 (1): 12.
- Kopp, V., Stark, R., & Fischer, M. R. Fostering diagnostic knowledge through computer-supported, case-based worked examples: effects of erroneous examples and feedback. *Medical Education* 2008; 42(8): 823-829.

Appendix 1: Example of a Lesson Plan

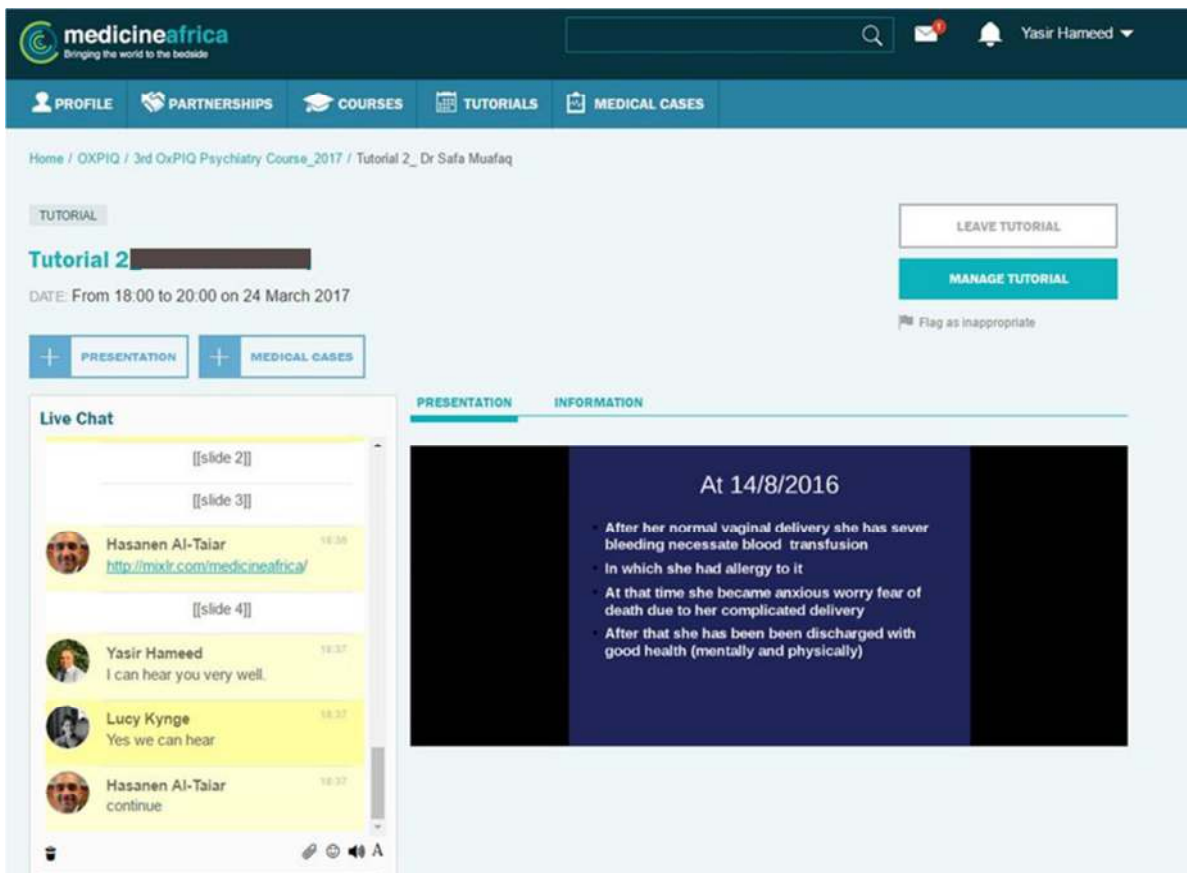
Session title	Case-based discussion on management of severe and enduring mental illness.
Duration of session	60 minutes
Tutor	A UK-based Psychiatrist
Learner group	Psychiatry Board Trainees and Senior Psychiatrists in Iraq and UK
Step 1 – Learning outcomes	<p>a) Describe the various stages in the management of the cases discussed during the session.</p> <p>b) Enhance the participants learning using case-based discussion with peers and seniors in the UK and Iraq.</p> <p>c) Improve the presentation and discussion skills of the participants and their communication skills.</p> <p>d) Explore ethical, cultural, and social issues related to the management of mental disorders and improve cultural competency and awareness.</p>
Step 2 – Learning Plan	<p><u>Introduction to the online tutorial -10 minutes</u></p> <p>a) Highlight the learning objectives of the tutorial</p> <p>b) Stimulate the thinking of the participants by asking about their current knowledge of the subject, whether they managed similar cases in their clinical work, and what are their learning needs.</p> <p>c) Outline the tutorial structure and further engage the participants by informing them about other details (e.g., if they can ask the question during or after the case presentation)</p> <p>2. <u>The tutorial in a case with severe and enduring mental disorder – 30 minutes</u></p> <p>a) Participants are encouraged to interact with the tutor who should be invited to keep the tutorial interactive.</p> <p>b) The case presented will provide an overview of the patient’s journey from the initial presentation, followed by the investigation, then treatment plans. Discussions of the differential diagnosis are important.</p> <p>c) The tutor will assess the knowledge of the participants by asking questions on the various aspects of the case presentation (e.g., what is your differential diagnosis for a patient presenting with auditory and visual hallucination? What investigations would you request?).</p> <p>3. <u>Recap and Q&A time- 20 minutes</u></p> <p>a) Tutor to give a summary of the main learning points from the tutorial and linking these to the learning outcomes presented at the beginning.</p> <p>b) Participants are given enough time to ask questions and to participate actively in the session.</p>
Step 3 – Assessment	<p><i>Before Lesson</i></p> <p>Before the tutorial, the tutor should know the current educational curriculum of the participants and their learning outcomes in that subject. UK and Iraqi Psychiatry curriculum are different, and therefore knowing what is relevant is important.</p> <p>Stating the learning outcomes at the beginning of the tutorial will also help in the baseline assessment of the knowledge and skills of the participants.</p> <p>Pre-session questionnaires could be used as well (for example, asking questions on the prognosis of various mental disorders and comparing the participant’s knowledge before and after the session).</p> <p><i>After the lesson</i></p> <ul style="list-style-type: none"> · Ongoing assessment during the tutorial using questions on various aspects related to the case presented. · Questions in the recap section at the end of the tutorial. · Post tutorial feedback forms will allow the participants to give their views about their learning needs and if they feel the tutorial was relevant to their learning outcomes. <p>It is important to provide personalised feedback to the participants about their performance on these assessment tools as this will help them to identify gaps in their knowledge and improve their learning.²⁶</p>
Step 4 – Resources required	<p>MedicineAfrica is free to join and designed to work well even with low bandwidth. Hence it won’t be affected by slow internet connections which are likely to be the case in developing countries.</p> <p>Trainees and Tutors will need a computer (desktop or laptop) with an internet connection. No other resources are needed. Recommended readings could be disseminated by email to the trainees after the session.</p>
Step 5 – Evaluation	<p><i>Student evaluation</i></p> <p>Gathering feedback is an essential step to influence the learning outcomes favourable and continue to improve the structure and content of the tutorials (After the tutorial, the participants will be asked to fill an electronic feedback form (please see Appendix 2).</p> <p>The form contains various questions with rating (from 1-5, ranging from strongly disagree to strongly agree) on various aspects of the tutorial. These include structure, organisation, the range of aids used and meeting of the learning outcomes.</p> <p>Also, direct feedback from the trainees, tutors, facilitators, and the stakeholders responsible for running the online learning platform is gathered to assess the effectiveness of these tutorials.</p> <p><i>Teacher evaluation</i></p> <p>Professionals invest a significant amount of time and efforts in these lessons, and it is imperative to assess how the tutorials could be improved to meet the needs of the trainees and keep them and the tutors motivated and interested. Tutors in these tutorials meet regularly using Skype to reflect on their teaching sessions and discuss ways of improving the delivery and quality of the tutorials.</p>

	Mutual learning is another aspect that needs to be assessed (is the tutor also benefitting from these lessons, for example, by improving their cultural competencies or their teaching skills).
--	---

Appendix 2: Feedback form to be completed by the participants after the session

Session title	Case-based discussion on management of severe and enduring mental illness.
Speaker	
Date	
Content	<u>The session was relevant to my training needs</u> Strongly disagree 1 2 3 4 5 Strongly agree
Organisation	<u>Sufficient time was allowed for the session</u> Strongly disagree 1 2 3 4 5 Strongly agree
Presentation	<u>The session was well presented</u> Strongly disagree 1 2 3 4 5 Strongly agree <u>The session was delivered at the right pace</u> Strongly disagree 1 2 3 4 5 Strongly agree <u>The session was interactive and encouraged discussion/questions</u> Strongly disagree 1 2 3 4 5 Strongly agree
Structure	<u>The session was well organised and structured</u> Strongly disagree 1 2 3 4 5 Strongly agree <u>The aims and objectives of the session were clear</u> Strongly disagree 1 2 3 4 5 Strongly agree <u>The aims and objectives of the session were met</u> Strongly disagree 1 2 3 4 5 Strongly agree
Overall evaluation	<u>Overall, I would rate this session as</u> Extremely poor 1 2 3 4 5 Extremely good

Appendix 3: MedicineAfrica screenshot during an active session



This article is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.

The top 10 things primary care physicians wish every specialist knew

Masahiro J Morikawa & Samira H Ghaniwala

Abstract

Primary care physicians often find the differences in approaches and priorities with specialists in caring patients. This article argues 10-things that generalist physicians wish every specialist knew. These are; 1) Organ-systems work together, not independently; 2) Mortality is not the only outcome measure; 3) ADL is one of the most critical prognostic indicators; 4) Effectiveness, not efficacy, matters in the real-world; 5) Mental wellness is essential to physical wellness; 6) Pay heed to illness trajectory; 7) Care for the care-givers; 8) 'Exercise and diet' trumps 'medicine and surgery'; 9) Whose definition of health matters?; And 10) Empower healthcare recipients.

Transition of care is one of the most important steps connecting hospital care to primary care. Those problems currently labelled as miscommunication might be stemming from a difference in priorities and varied interpretations of patients' problems by these two groups of providers. This article advances the discussion on the altering role of generalist physicians and the advice of their specialist colleagues, as together they face more and more changes within the practice of medicine.

Keywords: primary care, hospital medicine, specialist care,

In a contemporary medical practice caring for complex patients with utmost efficiency, primary care physicians and specialists are expected to work together to organize a seamless transfer from acute to chronic care. The job of the generalist is to sort out and integrate different recommendations from numerous specialists and apply those strategies in the care of the patient long after the index admission. During such interactions with specialists, primary care physicians often realize the impact of differing viewpoints on the overall patient care well beyond the anticipated time frame, whether acute or chronic. To that end, and to better inform such recommendations, this paper proposes the top 10 things primary care physicians wish every specialist knew when addressing problems on the busy hospital ward.

1. Organ-systems work together, not independently

As we see in examples such as the cardio-renal syndrome, hepato-renal syndrome, or hepato-pulmonary syndrome, as the patient gets sicker, the interaction of organ-systems begins to dominate. Indeed, predicting the outcome in comorbid conditions depends not only on understanding the culprit organ, but rather quantifying a complicated interaction of multiple organ-systems. For example, the ADHERE registry algorithm shows the most important predictor for in-hospital death in heart failure patients is not the cardiac function per se, but rather creatinine clearance and BUN^[1]. In other words, the commonly used comments from a specialist asked to evaluate their system of expertise, 'such and such organ is fine', might soon become irrelevant and obsolete in the context of multiple complex systems.

Moreover, recent research revealed that genotype, endotype and phenotype are quite different in COPD and asthma^[2]. Therefore, even though a disease may manifest in a single system, the pathophysiological process from which it arose may have been triggered in different organs.

2. Mortality is not the only outcome measure

Specialists seem to treat all-cause mortality as the most important outcome measure in most cases. Or, they choose strategies based on organ specific survival as an alternative, such as MACE (major adverse cardiac events) or creatinine-doubling time^[3]. Life is far more than just being alive. Subsequently, the quality of life (QOL) measures, which capture patient-centred outcomes, provide insight into the effectiveness of interventions but also their meaningfulness to patients, and such measures are gauging previously uncaptured positive aspects of interventions^[4]. The difficulty of defining well-being remains a challenge for researchers and arises from the differences brought about by cultural and societal elements which are context-bound and unique to each community.

3. ADL is one of the most critical prognostic indicators

New biological markers are numerous around here - new renal injury markers, such as NGAL or KIM, to name a few. But a quick, old-fashioned, bedside assessment can easily reveal impairments in Activities of Daily Living (ADL) at each patient visit; and ADLs by Functional Assessment Measures have been consistently shown as strong outcome predictors in acute and chronic illnesses, especially within elderly populations^[5]. In fact, functional measures were deemed to be as important as other

objective measures in some prognoses^[6]; for instance, in the BODE score for COPD survival prediction, the ADL measure carries the same weight as the PFT (Pulmonary Function Test). In the management of elderly patients, hospitalization^[7] and initiation of haemodialysis^[8] significantly influence the worsening of ADLs. In the development of a 1-year mortality index after hospital admissions among elderly patients, ADL was of pivotal importance^[9].

Functional impairment is also a strong indicator for readmission: there is a dose-response correlation of severity of impairment and the risk of readmissions^[10]. Intensifying the in-hospital post-ICU physical and nutritional therapy has been shown to improve many aspects of recovery^[11]. In patients with numerous chronic illnesses, the number of comorbidities strongly correlates with the decline of ADL^[12]. Interventions to maintain pre-hospitalization ADL is important in facilitating recovery from hospitalization, and in one study in-hospital mobility programs helped patients to maintain pre-hospitalization ADL while the usual care group experienced significant decline^[13].

4. Effectiveness, not efficacy, matters most in the real-world

“Doctor, I cannot afford the medicine prescribed to me when I was discharged!” This is oft-repeated in offices of generalist physicians. If a patient cannot afford medication and therefore does not take it, the treatment lacks efficacy. In the inpatient setting, efficacy of intervention determines the outcome since patients are most likely to receive the prescribed intervention. This is not the case in the outpatient setting, and the effectiveness of an intervention depends on many other elements, such as the accuracy of diagnosis, patient compliance to the proven intervention, prescription drug coverage, access to care, and finally, efficacy of the intervention^[14].

5. Mental wellness is essential to physical wellness

Health is not limited to the physical body; it also involves mental wellness. In fact, mental and physical health are inseparable. Naturally, serious illnesses affect mood and cognition: therefore, it is important to acknowledge that mental health issues lie squarely within the spectrum of physical disease management. Generalists can help patients with multiple comorbidities manage depressive symptoms through brief psychological interventions; such symptoms related to cognition and mood are expected consequences of any serious illnesses.

Studies have shown that among elderly patients without dementia at baseline, noncritical hospitalization is associated with the development of cognitive dysfunction^[15]. Among elderly patients, the prevalence of cognitive dysfunction is significantly higher in ADHF (acute decompensated heart failure) admissions^[16] or survivors of severe sepsis^[17]. Depression and depressed mood are prevalent in patients suffering serious illnesses^[18]. New models are emerging to integrate psychotherapy in multiple comorbid patients and have been proven to be effective^[19].

6. Pay heed to illness trajectory

“My grandma has never been the same after her hip surgery. Please fix her!”

Primary care physicians often note a decline in the general function and cognition of their patients after index admissions to the hospital. As noted earlier, acute hospital admissions have a strong independent effect on the severity of disability amongst elderly persons^[20]. The multidimensional frailty score, which incorporates ADL and cognitive function, predicts one-year mortality based on a simple scoring system^[21]. Poor functional status attributes to frailty and has led to poor surgical outcomes in the elderly^[22]. The prevalence of functional impairment steadily increases from 28% in the 2 years prior to death to 56% in the last month of life^[23]. Studies demonstrate that gait speed is an important predictor for survival amongst the elderly^[24] ^[25] as well as grip strength^[26] ^[27].

Furthermore, elderly patients sustain significant impairments long after the index hospitalization^[28]. Amongst elderly patients discharged from the ICU, more than 50% die within a month^[29]. At one-year follow-up, critical ADL capacity, such as taking medications or shopping, was impaired in more than 70% of ICU survivors who remained ventilated for longer than 48 hours^[30]. Delirium sustains a long-lasting effect even after patients are discharged from the hospital, the longer the duration of delirium, the more sustained is the cognitive impairment^[31].

7. Care for the care-givers

There is increasing evidence that caregivers sustain long lasting effects from patient illnesses. Depressive symptoms increase overall for surviving spouses regardless of hospice use^[32]. The RECOVER study^[33] demonstrated that caregivers suffered from high levels of depressive symptoms up to 1 year after a loved one's ICU admission. In the era of chronic illnesses, it is essential to be mindful of the contributions made by caregivers in disease management. Tools are widely available for the clinician to assess caregiver burden^[34]. This is important because family-support interventions have been shown to improve the quality of communication and decrease the patient's length of stay in ICU^[35].

8. ‘Exercise and diet’ trumps ‘medicine and surgery’

The COURAGE trial demonstrated that after 7 years, there is no difference between medical management and percutaneous intervention (PCI) in managing coronary disease^[36]. As time progresses after the initial event, the benefits of surgical intervention become less apparent. Similarly, in the long run, intensive statin therapy has not proven to be of greater clinical significance compared to those receiving moderate levels of statin^[37]. As the saying goes, in the long run, “we are what we eat.” Innumerable studies have shown that diet and physical habits have a lasting effect on the health of individuals^[38]. Bariatric surgery has been demonstrating dramatic and long-lasting effects on diabetes control, while the DiRECT study

demonstrated that intensive exercise and diet successfully achieved remission in nearly half of the intervention group, compared to only 4% of controls^[39]. Despite the substantial increase in chronic illnesses that are closely tied to our lifestyle and eating habits, physicians of all specialties are poorly trained to provide nutritional counselling to patients^[40].

9. Whose definition of health matters?

If health is defined, as defined by the WHO, is not simply the lack of illness, but “a state of complete physical, mental and social well-being,” it must incorporate many other elements dictated by societal, cultural, moral and philosophical norms and values. Furthermore, the definition of health and the path to attain it should come from the society and community it reflects, since neither healthcare personnel nor the healthcare industry own health. Therefore, the definition should emerge from community interventions and multidisciplinary groups filled with varied stakeholders, rather than from the ivory tower of healthcare researchers. Therefore, medical decision-making processes are rapidly moving away from the paternalistic approach to consensus-based, collegial decisions. Shared decision-making, informed consent, discussions of different treatment options and acquiring second opinions have become standard practice and reflect the empowerment of patients, and communities, to define their own healthcare. Ultimately, as long as patients are competent, they decide their treatment after consulting with physicians, who advocate for the patients’ goals in care and advise them accordingly.

10. Empower healthcare recipients

In the long-term management of chronic illness, participation of the patient is essential. And transparent communication is pivotal for better participation and shared decision-making^[41]. In the new model of health, healthcare providers must play an active role in advocating for patients and promoting well-being while acknowledging that health is a dynamic concept^[42]; these physicians do not simply “coordinate care.” This shift from the physician-centred to the patient-centred approach, in and of itself, will be empowering for patients.

CONCLUSION

Transition of care is one of the most important steps connecting hospital care to primary care. Those problems currently labelled as miscommunication might be more than just a lack of handoff tools or timely messaging; they rather stem from a difference in priorities and varied interpretations of patients’ problems by these two groups of providers. Many questions remain unanswered when facing the future of collaborative healthcare: what kind of doctors are most suited to address the complex interaction of illnesses involving multiple organs? Who can develop a new framework to capture this dynamic and complex interaction of systems, covering many organs in a single patient? Moreover, the next generation of healthcare providers will need to be trained to bear in mind this fundamental concept of patient management. As the twenty-

first century progresses, discoveries within medical science will continue to advance the field further away from the current organ-based specialization to pathophysiology-based specialization. This article advances the discussion on the altering role of generalist physicians and the advice of their specialist colleagues, as together they face more and more changes within the practice of medicine.

Acknowledgements

Authors thank Dr. Grant Potter for his editorial support and valuable comments.

Competing Interests

None declared

Author Details

MASAHIRO J MORIKAWA, MD, MPH, Department of Family Medicine & Community Health, Case Western Reserve University, US. SAMIRA H GHANIWALA, MD, Department of Family Medicine & Community Health, Case Western Reserve University, US.

CORRESPONDENCE: MASAHIRO J MORIKAWA, MD, MPH, Department of Family Medicine & Community Health, Case Western Reserve University, US.

Email: mjmkoobe@gmail.com

References

1. Fonarow G, Adams K, Abraham W. Risk stratification for in-hospital mortality in acutely decompensated heart failure. Classification and regression tree analysis. *JAMA*. 2005;293:572-580.
2. Agusti A, Celli B, Faner R. Chronic obstructive pulmonary disease 1. What does endotyping mean for treatment in chronic obstructive pulmonary disease? *Lancet*. 2017;390:980-987.
3. Casas J, Chua W. Effect of inhibitors of the renin-angiotensin system and other antihypertensive drugs on renal outcomes: systematic review and meta-analysis. *Lancet*. 2005;366:2026-2033.
4. Gierisch J, Myers E, Schmit K, et al. Prioritization of patient-centered comparative effectiveness research for osteoarthritis. *Ann Intern Med*. 2014;160:836-841.
5. Inouye S, Peduzzi P, Robison J, Hughes J, Horwitz R, Concato J. Importance of functional measures in predicting mortality among older hospitalized patients. *JAMA*. 1998;279:1187-1193.
6. Ong K, Earnest A. A multidimensional grading system (BODE Index) as predictor of hospitalization for COPD. *Chest*. 2005;128:3810-3816.
7. Gill T, Allore H, Gahbauer E, Murphy T. Change in disability after hospitalization or restricted activity in older persons. *JAMA*. 2010;304(17):1919-1928.
8. Tamura M, Covinsky K, Chertow G, Yaffe K, Landefeld C, McCulloch C. Functional status of elderly adults before and after initiation of dialysis. *N Engl J Med*. 2009;361:1539-1547.
9. Walter L, Brand R, Counsell S, et al. Development and validation of a prognostic index for 1-year mortality in older adults after hospitalization. *JAMA*. 2001;285:2987-2994.
10. Greysen S, Cenzer I, Auerbach A, Covinsky K. Functional impairment and hospital readmission in Medicare seniors. *JAMA Intern Med*. 2015;175(4):559-565.
11. Walsh T, Salisbury L, Merriweather J, et al. Increased hospital-based physical rehabilitation and information provision after intensive care unit discharge. The RECOVER randomized clinical trial. *Ibid*.(6):901-910.
12. Kriegsman D, Deeg D, Stalman W. Comorbidity of somatic chronic diseases and decline in physical functioning: the

- Longitudinal Aging Study Amsterdam. *J Clin Epidemiol.* 2004;57:55-65.
13. Brown C, Foley K, Lowman J, et al. Comparison of posthospitalization function and community mobility in hospital mobility program and usual care patients. A randomized clinical trial. *JAMA Intern Med.* 2016;176(7):921-927.
 14. Tugwell P, Bennett K, Sackett D, Haynes R. The measurement iterative loop: A framework for the critical appraisal of need, benefits and costs of health interventions. *J Chron Dis.* 1985;38:339-351.
 15. Ehlenbach W, Hough C, Crane P, et al. Association between acute care and critical illness hospitalization and cognitive function in older adults. *JAMA.* 2010;303:763-770.
 16. Levin S, Hajduk A, McManus D, et al. Cognitive status in patients hospitalized with acute decompensated heart failure. *Am Heart J.* 2014;168:917-923.
 17. Iwashyna T, Ely E, Smith D, Langa K. Long-term cognitive impairment and functional disability among survivors of severe sepsis. *JAMA.* 2010;304:1787-1794.
 18. Grace S, Abbey S. Effect of depression on five-year mortality after an acute coronary syndrome. *Am J Cardiol.* 2005;96:1179-1185.
 19. Coventry P, Lovell K, Dickens C, et al. Integrated primary care for patients with mental and physical multimorbidity: cluster randomised controlled trial of collaborative care for patients with depression comorbid with diabetes or cardiovascular disease. *BMJ.* 2015;350:h638.
 20. Gill T, Gahbauer E, Han L, Allore H. The role of intervening hospital admissions on trajectories of disability in the last year of life: prospective cohort study of older people. *Ibid.*:h2361.
 21. Kim S, Han H, Jung H, et al. Multidimensional frailty score for the prediction of postoperative mortality risk *JAMA Surg.* 2014;149(7):633-640.
 22. Wahl T, Graham L, Hawn M, et al. Association of the modified frailty index with 30-day surgical readmission. *Ibid.*2017;152(8):749-757.
 23. Smith A, Walter L, Miao Y, Boscardin W, Covinsky K. Disability during the last two years of life. *JAMA Intern Med.* 2013;173(16):1506-1513.
 24. Taekema D, Gussekloo J, Westendorp R, de Craen A, Maier A. Predicting survival in oldest old people. *Am J Med.* 2012;125:1188-1194.
 25. Studenski S, Perera S, Patel K, et al. Gait speed and survival in older adults. *JAMA.* 2011;305(1):50-58.
 26. Leong D, Teo K, Rangarajan S, et al. Prognostic value of grip strength: findings from the prospective urban rural epidemiology (PURE) study. *Lancet.* 2015;386:266-273.
 27. Savino E, Martini E, Lauretani F, et al. Handgrip strength predicts persistent walking recovery after hip fracture surgery. *Am J Med.* 2013;126:1068-1075.
 28. Dharmarajan K, Hsieh A, Kulkarni V, et al. Trajectories of risk after hospitalization for heart failure, acute myocardial infarction, or pneumonia: retrospective cohort study. *BMJ.* 2015;350:h411.
 29. Ferrante L, Pisani M, Murphy T, Gahbauer E, Leo-Summers L, Gill T. Functional trajectories among older persons before and after critical illness. *JAMA Intern Med.* 2015;175(4):523-529.
 30. Desai S, Law T, Needham D. Long-term complications of critical care. *Crit Care Med.* 2011;39:371-379.
 31. Pandharipande P, Jackson G, Thompson M, et al. Long-term cognitive impairment after critical illness. *N Engl J Med.* 2013;369:1306-1316.
 32. Ornstein K, Aldridge M, Garrido M, Gorges R, Meier D, Kelley A. Association between hospice use and depressive symptoms in surviving spouses. *JAMA Intern Med.* 2015;175(7):1138-1146.
 33. Cameron J, Chu L, Matte A, et al. One-year outcomes in caregivers of critically ill patients. *N Engl J Med.* 2016;374:1831-1841.
 34. Adelman R, Tranova L, Delgado D, Dion S, Lachs M. Caregiver burden. A clinical review. *JAMA.* 2014;311(10):1052-1059.
 35. White D, Angus D, Shields A, et al. A randomized trial of a family-support intervention in intensive care units. *N Engl J Med.* 2018;378:2365-2375.
 36. Boden W, O'Rourke R, Teo K, et al. Optimal medical therapy with or without PCI for stable coronary disease. *N Engl J Med.* 2007;356:1503-1516.
 37. Cannon C, Braunwald E, McCabe C, et al. Intensive versus moderate lipid lowering with statins after acute coronary syndromes. *Ibid.*2004;350:1495-1504.
 38. Dixon J, le Roux C, Rubino F, Zimmet P. Diabetes 3 Bariatric surgery for type 2 diabetes. *Lancet.* 2012.
 39. Lean M, Leslie W, Barnes A, et al. Primary care-led weight management for remission of type 2 diabetes (DiRECT): an open-label, cluster-randomised trial. *Ibid.*2018;391:541-551.
 40. Aggarwal M, Devries S, Freeman A, et al. The deficit of nutrition education of physicians. *Am J Med.* 2018;131:339-345.
 41. Seaburg L, Hess E, Coylewright M, Ting H, McLeod C, Montori V. Shared decision making in atrial fibrillation. *Circulation.* 2014;129:704-710.
 42. Huber M, van Vliet M, Giezenberg M, et al. Towards a 'patient-centred' operationalisation of the new dynamic concept of health: a mixed methods study *BMJ Open.* 2016;5:e010091.



This article is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.

BJMP 2018;11(2):a1116

The heart of the countryside

Michael James Leach

My countryside
home is where the heart is
at its gladdest and lightest,
like a hot air balloon
floating gently over
emerald green fields
and golden dirt tracks.

My rustic
home is where the heart is
far from health services,
far from those specialists –
like cardiologists –
who can stop diseases in
their concrete-covered tracks.

My bucolic
home is where the heart is
more likely to fail –
liable to stop beating
earlier than all those
hearts that thump out their
rhythms in the city.

My rural
home is where the heart is
woven into the patterned fabric
of a vibrant community,
whose median age
keeps rising and rising
as fond memories fade.

My countryside
home is where the heart is
destined to be
till its last beat.

Competing Interests

None declared

Author Details

MICHAEL JAMES LEACH, BPharm GradCertSc(Appl Stat)
Mbiostat PhD GStat CHIA, Adjunct Research Associate,
School of Rural Health, Monash University, PO Box 666,
Bendigo, Victoria 3552, Australia

CORRESPONDENCE: MICHAEL JAMES LEACH, Adjunct
Research Associate, School of Rural Health, Monash
University, PO Box 666, Bendigo, Victoria 3552, Australia
Email: michael.leach@monash.edu



This article is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.

Are The Risk Scales a Useful Tool In Hospital Services?

Harold Ibagon, Patrick Tarquino & Juan S. Barajas-Gamboa

Abstract

In the last decade, clinicians and practitioners have developed risk scales to improve clinical outcomes in patients during the hospital stay. Reduction of complications and mortality rates are priorities in any healthcare institution. In this manuscript, we propose the use of risk scales and highlight the benefits to daily clinical practice.

Keywords: Clinical Care, risk scales, patient, healthcare, mortality and complications

Physicians pursue the interest that during the hospital stay the best patient care needs to be provided; and achieving that in a short time - as a result the patient is expected to recover from illness and return to normal life.

The ability to prevent possible complications that the patients are exposed to, has always generated ambiguity in the current medical practice, since it is assumed, that the relief of the patients once the treatment is established, should always be the same¹. However, it is the awareness and proper care of comorbidities and the baseline condition of the patients that determine the success rate of the treatment, without requiring additional interventions beyond the ones proposed at the beginning of the treatment^{2,3}.

This important factor has generated in practitioners the need to be able to monitor the clinical evolution of the patients. Laboratory tests are an important basis of medical diagnosis, and are frequently used to monitor the clinical progress of the hospitalised patient. The patient clinical state sometimes changes suddenly or continuously; requiring the surveillance of the basic variables such as vital signs. Vital signs monitoring activate a warning signal for the immediate reassessment of the patient and reorient the medical decisions at any moment during the hospitalisation, with the goal of avoiding further deterioration or adequately treating any new disease state that the patient may develop^{3,4}.

From that point of view and long time ago the medical community has observed the need to generate a code that could be universal and that could be used as an early warning of the patient worsening. As a result of this situation, in different countries around the world, researchers and clinicians have developed scales, scores, algorithms and others tools to identify early patients in risks to be in critical conditions. Those tools are based on the ability of easy data collection and simple clinical interpretations allowing the clinical personnel to make

objective and early assessment of the overall clinical state of the patients⁴.

These scales or scores are not ideal, since there is no perfect scale, and all have statistical weaknesses either in their sensitivity or specificity. The clinical judgment and the physician experience, added to a score from any of these scales, may guide the path to follow according to the particular scenario to treat the patient illness⁵.

Selecting the ideal scale to be adopted is one of the controversial topics in which a practitioners and institutions can be involved in. Occasionally other services in the hospital such as clinical laboratory and clinical imaging values play an important role in the process of diagnosis of the disease and are counted in the risk scales making easier to have good standard of care. Scientific studies assess the statistical performance of these scales yield controversial results that sometimes distort or endorse these results⁵. This is why the decision of the ideal scale is based first on the target population that physicians in charge will care of and select the appropriate scale or score that will be applied, to know the implications of the most representative age group of patients that will be attended and to use scales which data acquisition be a simple and quick task to perform⁶.

Based on that, the Royal College of Physicians of the United Kingdom headed by Bryan Williams and collaborators, and many other researchers worldwide have analysed a significant number of scales on the basis that the scale should use systems (track and trigger warning systems protocol) divided into three types - single parameter systems, multi-parameter systems, total weighted scoring systems and combined systems⁶.

The researchers came to the conclusion that the performance of these scales was better than those that conserve the third type of system, since not only the parameters are categorized but also those who develop the scale proposed management to be carried out in an easy, orderly scheme and logical within a framework of independent work or in addition to more robust strategies

that involve management schemes within a hospital institutions - the so-called (Rapid Response Systems RRS) ⁷.

For Williams et al, the MEWS changed its name after being accepted by the Royal College of Physicians of the United Kingdom as the NEWS scale with its variables defined as (respiratory rate, oxygen saturation, systolic blood pressure, heart rate, consciousness or new confusion and temperature). This score has been recognized and quickly adopted worldwide. The NEWS has an immediate applicability as a parameter of high sensitivity in the detection of clinical deterioration, despite its known low specificity. Thus inviting the attending physician to approach and reassess the state of the patient. The score makes changes in medical decisions according to the new conditions found during the patient's assessment⁷.

This kind of scales must be endorsed internationally and be easily replicable by all practitioners who wish to adopt them. This allows other physicians to obtain results when implementing actions, reaching better clinical outcomes similar to clinical studies previously published. In the daily practice and clinical application we find different scenarios to use the scales, where the main problem of its application represent extra costs in lab test or clinical images and the time invested by the practitioners and medical personnel ⁷.

For this reason, the scales for clinical assessment should be easy and flexible to be implemented by any person, ideally for any member of the healthcare team to avoid barriers during the process of data acquisition. From this perspective, the scales that are based on easily collected parameters are the most appropriate, but they are often the scales that suffer the rigors of the biases when they are undervalued or overvalued, just the operability can be affected by personnel knowledge and skill.

The interesting thing about this exercise is to see that the people who have the most continuous contact with the patient, such as the nursing staff, physicians with the practice have the ability to use them in their practice and this would make the scales a valuable resource to perform clinical assessments and achieve the goal proposed.

In this new era where the reincorporation of a patient into daily life in a short time is ideal scenario, the medical and nurse staffs and also service providers seek to alleviate the patient's health breakdown. It is here from the hospital point of view where the proper care not only in the quality of care but also in the prevention of complications plays an important role in the applicability of these early detection scales. This is an invitation to success from its inception and to tend to patients being hospitalized for the minimum time required.

Competing Interests

None declared

Author Details

HAROLD IBAGON, Department of Medicine, Clinica Colsanitas SA, Fundacion Universitaria Sanitas, Bogotá DC, Colombia. PATRICK TARQUINO, Department of Medicine, Clinica Colsanitas SA, Fundacion Universitaria Sanitas, Bogotá DC, Colombia. JUAN S. BARAJAS-GAMBOA,, Department of Medicine, Clinica Colsanitas SA, Fundacion Universitaria Sanitas, Bogotá DC, Colombia.

CORRESPONDENCE: Harold Ibagon MD, Department of Medicine, Clinica Colsanitas SA, Fundacion Universitaria Sanitas, Bogotá DC, Colombia.

Email: haibagon@colsanitas.com

References

1. Bartkowiak B, Snyder AM, Benjamin A, et al. Validating the Electronic Cardiac Arrest Risk Triage (eCART) Score for Risk Stratification of Surgical Inpatients in the Postoperative Setting: Retrospective Cohort Study. *Ann Surg.* 2018 Jan 12. doi: 10.1097/SLA.0000000000002665. [Epub ahead of print]
2. Faisal M, Scally A, Elgaali MA, et al. The National Early Warning Score and its subcomponents recorded within ± 24 h of emergency medical admission are poor predictors of hospital-acquired acute kidney injury. *Clin Med (Lond).* 2018 Feb; 18(1):47-53. doi: 10.7861/clinmedicine.18-1-47.
3. Churpek MM, Yuen TC, Edelson DP. Risk stratification of hospitalized patients on the wards. *Chest.* 2013 Jun; 143(6): 1758-1765. doi: 10.1378/chest.12-1605.
4. Goulden R, Hoyle MC, Monis J, Railton D, et al. qSOFA, SIRS and NEWS for predicting inhospital mortality and ICU admission in emergency admissions treated as sepsis. *Emerg Med J.* 2018 Feb 21. pii: emermed-2017-207120. doi: 10.1136/emermed-2017-207120. [Epub ahead of print]
5. Green M, Lander H, Snyder A, et al Comparison of the Between the Flags calling criteria to the MEWS, NEWS and the electronic Cardiac Arrest Risk Triage (eCART) score for the identification of deteriorating ward patients. *Resuscitation.* 2018 Feb; 123:86-91. doi: 10.1016/j.resuscitation.2017.10.028. Epub 2017 Nov 21.
6. National Clinical Effectiveness Committee, Department of Health "An Roinn Slainte", Royal College of Physicians and the Royal College of Surgeons in Ireland. National Early Warning Score. February 2013.
7. National Early Warnig Score (NEWS) 2. Standardising the Assessment of Acute-illness severity in the NHS. Royal College of Physicians. December 2017.



This article is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.