

## Training standards for minimizing restraint of distressed patients

The Restraint Reduction Network has published new guidance on how to minimize the use of restraint on distressed individuals (<http://restraintreductionnetwork.org/>).

Commissioned by NHS, the Restraint Reduction Network Training Standards 2019 provide a national and international benchmark for training in supporting people who are distressed in education, health and social care settings.

Chair of the Restraint Reduction Network, Professor Joy Duxbury, Professor of Mental Health at Manchester Metropolitan University, said: 'These standards are a really exciting development. They are vital in our work to reduce the use of restrictive practices and, on those occasions when restraint is unavoidable, to make sure it is safer and dignified.'

## Returning to work after a heart attack is possible if patients want to

A pan-European review for the Secondary Prevention and Rehabilitation Section of the European Association of Preventive Cardiology addresses determinants and legal aspects of reintegration of patients experiencing an acute coronary syndrome (<https://doi.org/10.1177/2047487319839263>). It offers practical advice on reintegration strategies, presents different approaches and scientific findings in the European countries, and serves as a recommendation for action.

Between 67% and 93% of patients with acute coronary syndromes return to work in 2–3 months, but after a year, one in four quit. Among those over 55 years of age, women are less likely to go back to employment than men. The review outlines the reasons and gives practical advice on how to successfully reintegrate into the workplace. The probability of returning to work depends mainly on the patient's choice – do they want to go back or not?

## London study finds that penetrating trauma injuries increased by nearly 20% in 1 year

A new study from maxillofacial surgeons at King's College Hospital, London, indicates that in just 1 year 478 patients with penetrating trauma injuries were treated in the emergency department – the highest number since comparable records began in 2010, when just 172 patients were recorded, and up almost 20% since the year before (Olding et al, 2019).

Of the 478 patients the hospital treated, 65 had penetrating trauma that involved the head or neck, and the majority (82%) were male. The team found that interpersonal violence caused the majority of injuries they treated (54 cases; 83%) – including assault with knives, glass and firearms. The interpersonal violence group had an average age of 25 years, although the ages ranged from 13 to 70 years.

The study highlighted the diverse demographic mix affected by penetrating trauma injuries, and the wide range of



**Ms Carole Olding, Lead Trauma Nurse; Mr James Olding, Maxillofacial Surgery Trainee; Ms Kathy Fan, Consultant Oral and Maxillofacial Surgeon, King's College Hospital, London**

weapons used (this included kitchen knives, nail guns, bottles, and even a samurai sword). While young men made up the vast majority of patients seen in at King's, the report revealed a growing number of young women as well as a number of patients from older age groups, up to the age of 71 years.

Senior author Ms Kathy Fan, Consultant Oral and Maxillofacial

Surgeon at King's College Hospital, London, emphasized: 'It is important to understand the cycle of violence and how to intervene in order to break the cycle, protect children and vulnerable adults, and prevent morbidity and mortality from such crime and violence.'

Olding J, Olding C, Bew D, Fan K. Penetrating head & neck trauma - Epidemiology and injury characteristics in terror-related violence, interpersonal violence and deliberate self-harm at a level 1 trauma centre. Surgeon. 2019 Feb 23. pii: S1479-666X(19)30019-8. <https://doi.org/10.1016/j.surge.2019.01.001>

## New standards for ambulatory emergency care

The Royal College of Physicians of Edinburgh and the Society for Acute Medicine have jointly produced standards for ambulatory emergency care ([https://www.rcpe.ac.uk/sites/default/files/ambulatory\\_care\\_report.pdf](https://www.rcpe.ac.uk/sites/default/files/ambulatory_care_report.pdf)).

Dr Mike Jones, Director of Training at the Royal College of Physicians of Edinburgh and consultant in acute medicine, said: 'Ambulatory emergency care is an important service which provides same day hospital care to patients. Ambulatory emergency care units treat a wide variety of common conditions including headaches, diabetes, deep vein thrombosis and cellulitis.

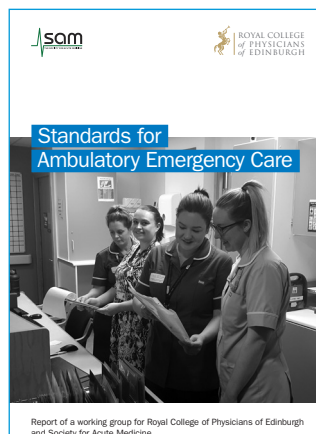
He added: 'These joint standards by the Royal College of Physicians of Edinburgh and the Society for Acute

Medicine aim to define the standards that should be adopted in Ambulatory emergency care units. We think that patients deserve to be seen by a doctor or a nurse promptly, and then to have the best treatment possible.'

Dr Nick Scriven, President of the Society for Acute Medicine, stated: '[There] has been a

real need for standards written by a group of experienced physicians who work in that area and are seen as subject "experts".

'This is the first time that standards for ambulatory emergency care units have been produced, and it is hoped that all providers, those writing health policy and those commissioning services will adopt them as soon as possible.'



Report of a working group for Royal College of Physicians of Edinburgh and Society for Acute Medicine

## Difficulty in hearing may prevent older patients from participating in their health care

In a cross-sectional study of 13 940 adults aged 65 years and older, nearly half reported difficulty hearing, and those reporting difficulty said that they had lower levels of active participation in their health care (Chang et al, 2019).

The study examined 'patient activation', or the knowledge, skills and confidence that equip patients to participate actively in their health care. Compared with those reporting 'no trouble' hearing, those reporting 'some trouble' hearing had a 42% greater risk of low patient activation. For those with 'a lot of trouble' hearing, the comparable risk increase was 70%.

The study's authors noted that clinicians' awareness of hearing loss, and the use of



**Dr Jan Blustein, Department of Population Health, New York University School of Medicine, New York, New York**

simple steps to improve communication, could allow patients to more actively participate, which could lead to improvements in their health.

'Poor hearing puts patients at risk for poor outcomes', said senior author Dr Jan Blustein, of New York University. 'For example, people with hearing loss may be unable to understand their doctor when she explains medication changes. Attending to hearing loss could pay off in greater patient involvement in care and better health.'

Chang JE, Weinstein BE, Chodosh J, Greene J, Blustein J. Difficulty Hearing Is Associated With Low Levels of Patient Activation. *J Am Geriatr Soc.* 2019 Apr 2. <https://doi.org/10.1111/jgs.15833>

## Reducing hepatitis C transmission from injecting drugs could prevent up to 43% of future infections

Stepping up efforts to prevent transmission of hepatitis C virus among people who inject drugs could reduce future infections by 43% globally, according to a new mathematical modelling study (Trickey et al, 2019).

People who inject drugs are at high risk of becoming infected with the virus through sharing needles, syringes and other injecting drug equipment. While the percentage of people with hepatitis C virus is estimated to be less than 1% in most countries, the percentage of people who inject drugs infected with hepatitis C virus tends to be over 30%. The World Health Organization aims to eliminate the hepatitis C virus as a public health threat by 2030.

The researchers used mathematical modelling to estimate how much the sharing of equipment for injecting drug use contributes to the hepatitis C virus epidemics for 88 countries, which account for 85% of the world's population.

They estimated that if hepatitis C virus transmission resulting from the risk associated with injecting drug use was removed, around

43% of all infections up to 2030 would be prevented globally.

In high-income countries 79% of hepatitis C virus infections could be prevented and 38% of infections in low- and middle-income countries. The estimated reduction was 98% for the UK.

Mr Adam Trickey, from the NIHR Health Protection Research Unit in Evaluation of Interventions at the University of Bristol and lead author of the study, said: 'As blood screening has improved, and there is less use of unsterilised medical equipment, a higher proportion of hepatitis C infections occur among people who inject drugs through the sharing of drug injecting equipment.'

He added: 'This research highlights the importance of combating the hepatitis C epidemic among people who inject drugs, especially for meeting the World Health Organization's 2030 elimination targets.'

Trickey A, Fraser H, Lim AG et al. The contribution of injection drug use to hepatitis C virus transmission globally, regionally, and at country level: a modelling study. *Lancet Gastroenterol Hepatol.* 2019 Apr 9. [https://doi.org/10.1016/S2468-1253\(19\)30085-8](https://doi.org/10.1016/S2468-1253(19)30085-8)

### Up to a third of people with type 2 diabetes not taking prescriptions properly

Researchers took urine samples from 228 patients at their annual diabetes review. The samples were screened for 60 different medicines used to treat type 2 diabetes, heart conditions and hypertension. Of this group 28.1% ( $n=64$ ) had either taken none or only some of their medicines (<https://doi.org/10.2337/dc18-1453>).

### New preventative migraine treatment approved

Fremanezumab (Ajovy) is the only anti-calcitonin gene-related peptide preventive treatment, and has just been approved in Europe. It offers the choice of quarterly or monthly dosing. Fremanezumab is designed to bind to and inhibit calcitonin gene-related peptide activity, which is the cause of pain for most patients.

### Poverty linked to weaker brain activity in children

Children born into poverty show key differences in early brain function (<https://doi.org/10.1111/desc.12822>). Researchers studied the visual working memory (an early marker of cognitive capacity) of children aged between 4 months and 4 years in rural India. They found that children from lower-income backgrounds, where mothers also had a low level of education, had weaker brain activity and were more likely to be distracted.

## Increasing numbers of adults with lower education die from liver cancer in the USA

A new study reveals that rising rates of liver cancer deaths in the United States have largely been confined to individuals who have received less education, especially among men (<https://doi.org/10.1002/cncr.32023>). The findings emphasize the need for enhanced efforts to address the growing burden of liver cancer in lower socioeconomic groups.

Liver cancer, which can be caused by infection with hepatitis C virus, is the most rapidly rising cause of cancer death in the USA. Researchers analysed mortality data published by the National Vital Statistics System of the National Center for Health Statistics.

From 2000–15, the overall liver cancer death rate (per 100 000 persons) increased from 7.5 to 11.2 in men and from 2.8 to 3.8 in women, with the increase largely confined to individuals with less educational attainment. The educational disparities in liver cancer mortality widened in women until 2006 then levelled off, while they continued to widen in men.

Overall liver cancer mortality trends were largely driven by hepatitis C virus-unrelated liver cancers. Risk factors for these include obesity, diabetes, smoking and excessive alcohol consumption.

## Effect of schizophrenia on major adverse cardiac events following acute coronary syndromes

A Danish register study investigated major adverse cardiac events (all-cause mortality, re-infarction and stroke), length of hospital stay and comorbidities following acute coronary syndrome in patients with schizophrenia (Attar et al, 2019). The study included 726 patients diagnosed with acute coronary syndrome between 1995 and 2013 with a preceding diagnosis of schizophrenia, who were matched to controls.

Patients with schizophrenia had an increased risk of major adverse cardiac events, all-cause mortality and stroke. No differences were found in re-infarction rates and length of hospital stays between the populations. Patients with schizophrenia had higher prevalences of diabetes, anaemia, heart failure, cardiomyopathy, chronic obstructive lung disease and stroke, but had lower prevalences of hypertension and hyperlipidaemia.

The authors concluded that schizophrenia is associated with an increased risk of major adverse cardiac events despite a lower prevalence of some diagnosed traditional



**Dr Rubina Attar, MD/PhD Student, Department of Cardiology, Aalborg & Lund University Hospitals, Aalborg, Denmark**

cardiac risk factors which may indicate underdiagnosing of these factors. Awareness of treatment bias may improve this increased risk.

Commenting on the findings, Dr Rubina Attar, MD/PhD Student, Department of Cardiology, Aalborg & Lund University Hospitals, Aalborg, Denmark, said: ‘Cardiovascular mortality is a leading cause of death worldwide and some populations are at a higher risk, such as patients with schizophrenia. Having schizophrenia increases the major adverse cardiac events following discharge for a

myocardial infarction. The care in hospitals today is suboptimal for patients with mental illness and improvement in terms of better understanding of mental illness, patient education and awareness of bias is needed in order to optimize the outcomes for these patients.’

Attar R, Valentin JB, Freeman P, Andell P, Aagaard J, Jensen SE. The effect of schizophrenia on major adverse cardiac events, length of hospital stay, and prevalence of somatic comorbidities following acute coronary syndrome. *Eur Heart J Qual Care Clin Outcomes*. 2019 Apr 1;5(2):121–126. <https://doi.org/10.1093/ehjqcco/qcy055>

## Continuous subcutaneous insulin not cost effective vs multiple daily injection regimens in children and young people with type 1 diabetes

A pragmatic, multicentre, open label, parallel group, randomized controlled trial and economic evaluation was performed to compare the efficacy, safety and cost utility of continuous subcutaneous insulin infusion with multiple daily injection regimens during the first year following diagnosis of type 1 diabetes in children and young people (Blair et al, 2019).

Patients aged between 7 months and 15 years, with a new diagnosis of type 1 diabetes were eligible to participate. They were randomized, stratified by age and

treating centre, to start treatment with continuous subcutaneous insulin infusion or multiple daily injection within 14 days of diagnosis. Starting doses were calculated according to weight and age, and titrated according to blood glucose measurements and according to local clinical practice. Primary outcome was glycaemic control (as measured by glycated haemoglobin) at 12 months.

During the first year following type 1 diabetes diagnosis, no clinical benefit of continuous subcutaneous insulin infusion

over multiple daily injection was identified in children and young people in the UK setting, and treatment with either regimen was suboptimal in achieving glycated haemoglobin thresholds. Continuous subcutaneous insulin infusion was not cost effective.

Blair JC, McKay A, Ridyard C et al; SCIP1 investigators. Continuous subcutaneous insulin infusion versus multiple daily injection regimens in children and young people at diagnosis of type 1 diabetes: pragmatic randomised controlled trial and economic evaluation. *BMJ*. 2019 Apr 3;365:l1226. <https://doi.org/10.1136/bmj.l1226>

## When diabetes therapies do not lower glycated haemoglobin enough: add, switch or continue?

New research updates guidance to clinicians on how best to treat patients with type 2 diabetes who do not respond to glucose-lowering medication (McGovern et al, 2019). A retrospective cohort analysis using the UK Clinical Practice Research Datalink assessed the outcome of 55 530 patients with type 2 diabetes.

These patients were starting their second or third non-insulin glucose-lowering medication, with a baseline glycated haemoglobin (HbA<sub>1c</sub>) >58 mmol/mol (7.5%) between 2004 and 2017. For those with no HbA<sub>1c</sub> improvement or a limited response at 6 months (over 20% of patients), the authors compared HbA<sub>1c</sub> 12 months later in those who continued their treatment unchanged, switched to a new treatment, or added a new treatment.

The authors found almost no difference in effectiveness of switching to a different glucose-lowering medication or continuing the



**Dr Andy McGovern, NIHR Academic Clinical Fellow, University of Exeter Medical School, The Institute of Clinical and Biological Sciences, University of Exeter, Exeter**

same medication unchanged. The only way to effectively improve blood glucose levels in this situation was to add another therapy.

Lead author Dr Andy McGovern, NIHR Academic Clinical Fellow from the University of Exeter Medical School, said: 'Our study is the first to examine the impact of treatment changes in people with an initially limited response to a new glucose lowering therapy. It is common to have a limited response 6 months after starting a new glucose-lowering medication, but this is likely to represent

blood glucose variation that is unrelated to the treatment, rather than lack of biological response to a therapy.'

McGovern AP, Dennis JM, Shields BM, Hattersley AT, Pearson ER, Jones AG, on behalf of the MASTERMIND Consortium. What to do with diabetes therapies when HbA1c lowering is inadequate: add, switch, or continue? A MASTERMIND study. *BMC Medicine*. 2019 Apr 12. <https://doi.org/10.1186/s12916-019-1307-8>

## Antithrombotic therapy after acute coronary syndrome or PCI in patients with atrial fibrillation

An international trial randomly assigned patients with atrial fibrillation who had an acute coronary syndrome or had undergone percutaneous coronary intervention (PCI), and were planning to take a P2Y12 inhibitor, to receive apixaban or a vitamin K antagonist and to receive aspirin or matching placebo for 6 months. The primary outcome was major or clinically relevant non-major bleeding. Secondary outcomes included death or hospitalization and a composite of ischaemic events (Lopes et al, 2019).

Major or clinically relevant non-major bleeding was noted in 10.5% of patients receiving apixaban *vs* 14.7% of those receiving a vitamin K antagonist, and in 16.1% of patients receiving aspirin *vs* 9.0% of those receiving placebo. Patients in the apixaban

group had a lower incidence of death or hospitalization than those in the vitamin K antagonist group and a similar incidence of ischaemic events.

The authors concluded that in patients with atrial fibrillation and a recent acute coronary syndrome or PCI treated with a P2Y12 inhibitor, an antithrombotic regimen that included apixaban, without aspirin, resulted in less bleeding and fewer hospitalizations without significant differences in the incidence of ischaemic events than regimens that included a vitamin K antagonist, aspirin, or both.

Lopes RD, Heizer G, Aronson R et al; AUGUSTUS Investigators. Antithrombotic Therapy after Acute Coronary Syndrome or PCI in Atrial Fibrillation. *N Engl J Med*. 2019 Mar 17. <https://doi.org/10.1056/NEJMoa1817083>

## Statins safe and likely effective in preventing cardiovascular events in patients with rheumatoid arthritis

Patients with rheumatoid arthritis have an approximately 50% higher risk of experiencing cardiovascular events such as heart attack and stroke than the general population. To investigate the potential risks and benefits of statins in moderate risk patients with rheumatoid arthritis, researchers designed the Trial of Atorvastatin for the Primary Prevention of Cardiovascular Events in Patients with Rheumatoid Arthritis (TRACE RA), a multicentre, randomized, double-blind trial comparing atorvastatin with placebo (<https://doi.org/10.1002/art.40892>).

The trial included 3002 patients with rheumatoid arthritis who were aged over 50 years or had rheumatoid arthritis for more than 10 years, without clinical atherosclerosis, diabetes or myopathy. Patients were randomized to receive atorvastatin 40 mg daily or placebo.

During a median follow up of 2.5 years, 1.6% of patients who received atorvastatin and 2.4% of patients receiving placebo experienced cardiovascular death, heart attack, stroke, transient ischemic attack or any arterial revascularization. After adjustments, there was a 40% lower risk of cardiovascular events for patients taking atorvastatin, although the difference was not statistically significant because the overall rate of events was low.

At the end of the trial, patients taking atorvastatin had significantly lower levels of low-density lipoprotein cholesterol and C-reactive protein compared with patients taking placebo. Adverse events were similar in the two groups.

'The results show that it is as safe for patients with rheumatoid arthritis to take statins as for the general population,' said co-senior author Professor Deborah Symmons of the Arthritis Research UK Centre for Epidemiology, University of Manchester, Manchester.