RESEARCH

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JIM VARNEY/SPL

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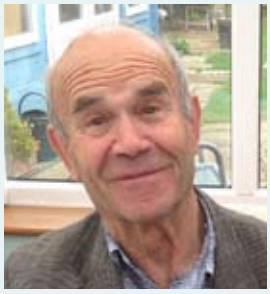

Lifestyle, social factors, and survival after age 75

In this cohort study including 1810 adults aged 75 or older, lifestyle behaviours such as not smoking and physical activity were associated with longer survival. These associations, although attenuated, were also present among people older than 85 and in those with chronic conditions, say the authors.

Association of systolic and diastolic blood pressure and all cause mortality in people with newly diagnosed type 2 diabetes

In this cohort study of 126 092 adult patients with a new diagnosis of type 2 diabetes who had been registered with participating practices for at least 12 months, blood pressure below 130/80 mm Hg was not associated with reduced risk of all cause mortality. However, the researchers found that low blood pressure, particularly below 110/75 mm Hg, was associated with an increased risk for poor outcomes.

Prevalence of abnormalities in knees detected by MRI in adults without knee osteoarthritis

In this observational study of 710 people older than 50 (the Framingham Osteoarthritis Study), magnetic resonance imaging showed lesions in the tibiofemoral joint in most participants in whom knee radiographs did not show any features of osteoarthritis, regardless of pain. The authors conclude that the clinical significance of MRI findings in such knees is not clear.

Low glycaemic index diet in pregnancy to prevent macrosomia (ROLO study)

In this randomised controlled trial, a low glycaemic index diet in pregnancy did not reduce the incidence of infants who were large for their gestational age in a group at risk of fetal macrosomia. However, the researchers found that it did have a positive effect on gestational weight gain and maternal glucose intolerance.

WHAT OUR READERS ARE SAYING

Effect of systemic steroids on post-tonsillectomy bleeding and reinterventions

According to this meta-analysis of 29 randomised controlled trials (p 14), systemic steroids do not seem to increase bleeding events after tonsillectomy, but their use is associated with a raised incidence of operative reinterventions for bleeding episodes, which may be related to increased severity of bleeding events. A rapid respondent adds:

"What is rarely considered in preventing unintended excessive bleeding is the fact that a patient might have an underlying bleeding disorder. This is surprising, as the incidence of von Willebrand's disease is 1 in 50. In the assessment of someone's risk of postoperative bleeding, it doesn't take much trouble to take a bleeding history. That way, patients at high risk can be identified preoperatively and managed appropriately intraoperatively—for example, with the concurrent use of desmopressin, clotting factors, and tranexamic acid. It would be a feather in the cap to ear, nose, and throat surgeons were they to pilot this."

MARK THOMAS/SPL

Effect of assertive outreach after suicide attempt in the AID (assertive intervention for deliberate self harm) trial: randomised controlled trial

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EDITORIAL by Kaess

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STUDY QUESTION

Does an assertive outreach intervention assigned after suicide attempt reduce the frequency of later suicidal acts, compared with standard treatment?

SUMMARY ANSWER

We found no significant effect of the intervention.

WHAT IS KNOWN AND WHAT THIS PAPER ADDS

International reviews and clinical studies have not provided evidence for treatment recommendations to patients with recent suicide attempts. This trial indicates no basis for recommending assertive case management in preference to standard treatment.

Design

Randomised, parallel group, superiority trial with blinded outcome assessment. The randomisation procedure ensured adequate sequence generation and allocation concealment. The intervention consisted of case management with assertive outreach by specialised nurses who provided crisis intervention and flexible problem solving, incorporating motivational support, and actively assisting patients to scheduled appointments. The intervention was used as an add-on to standard treatment. The control group received standard treatment.

Participants and setting

Patients older than 12 years with a recent suicide attempt admitted to regional hospitals in Copenhagen, Denmark.

Primary outcome

Repeated suicide attempt recorded in medical records or by self report at one year follow-up.

Main results and the role of chance

We included 243 patients. During 12 months' follow-up, 20/123 (16%) patients in the intervention group were registered in hospital records with subsequent suicide attempt compared with 13/120 (11%) in the control group (odds ratio 1.60, 95% confidence interval 0.76 to 3.38; P=0.22). Self reported data on new events showed 11/95 (12%) in the intervention group and 13/74 (18%) in the control group (0.61, 0.26 to 1.46; P=0.27). By imputing missing data on self reported outcomes, we estimated rates of 15/123 (12%) in the intervention group and 23/120 (19%) in the control group (0.69, 0.34 to 1.43; P=0.32).

Rates of subsequent suicide attempt at one year follow-up

Data source	Intervention group	Standard group	P	Odds ratio (95% CI)
Hospital recorded	20/123 (16)	13/120 (11)	0.22	1.60 (0.76 to 3.38)
Self reported	11/95 (12)	13/74 (18)	0.27	0.61 (0.26 to 1.46)
Estimated by multiple imputations	15/123 (12)	23/120 (19)	0.32	0.69 (0.34 to 1.43)

Values are number of patients with one or more new events/number in group with available data (percentage) unless otherwise stated.

Harms

No side effects to take into consideration.

Bias, confounding, and other reasons for caution

Differences between register data and self reports on subsequent events could indicate detection bias.

Generalisability to other populations

Findings can be generalised to clinical populations apart from patients with psychosis.

Study funding/potential competing interests

All authors have completed the ICMJE uniform disclosure form at www.icmje.org/coi_disclosure.pdf (available on request from the corresponding author) and declare: the study received funding from the Ministry of Health and Internal Affairs, Denmark, the National Board of Social Services, an independent subdivision of the Ministry of Social Affairs and Integration, TrygFonden, and Aase og Ejnar Danielsens Foundation; no financial relationships with any organisations that might have an interest in the submitted work in the previous three years; no other relationships or activities that could appear to have influenced the submitted work.

Trial registration number

ClinicalTrials.gov NCT00700089.

Suicides associated with the 2008-10 economic recession in England: time trend analysis

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- Editorial: Protecting health in hard times (*BMJ* 2010;341:c5308)
- Editorial: The economic crisis and suicide (*BMJ* 2009;338:b1891)
- News: Austerity measures will lead to rise in unemployment and suicides, says Marmot (*BMJ* 2012;344:e2887)

STUDY QUESTION

Is the 2008-10 economic recession in England linked to rising suicides?

SUMMARY ANSWER

The recent recession in the United Kingdom has led to about 1000 excess suicides in England (846 in men and 155 in women); increases in male unemployment were associated with about two fifths of these rises in suicides among men.

WHAT IS KNOWN AND WHAT THIS PAPER ADDS

In 2008, suicide rates began to rise in England, reversing a long term decline, although it is not clear whether this increase can be attributed to the economic recession of 2008-10. English regions with the largest rises in unemployment have shown the largest increases in suicides, particularly among men.

Participants and setting

People with a record of death from suicide or injury of undetermined cause from 93 English regions (based on the Nomenclature of Territorial Units Statistics level 3 groupings of counties and groups of unitary local authorities), in 2000-10.

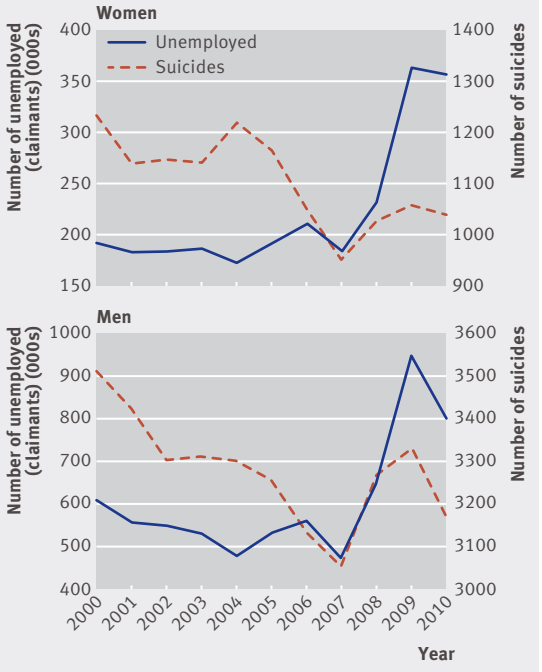
Design, size, and duration

Time trend analysis comparing the actual number of suicides with those expected if pre-recession trends had continued. We obtained annual panel data for the number of deaths from suicides and injuries of undetermined cause (from the National Clinical Health Outcomes Database), and the number of unemployed people (based on claimant data). We included a dummy variable for the financial crisis years of 2008-10 in the model to capture a break from past time trends and estimate the excess number of suicides in this recessionary period. Multivariate regression models assessed the association between changes in unemployment and suicides stratified by region and sex.

Main results and the role of chance

Between 2008 and 2010, we found 846 (95% confidence interval 818 to 877) more suicides among men than would have been expected based on historical trends, and 155 (121 to 189) more suicides among women. Historically, short term yearly fluctuations in unemployment have been associated with annual changes in suicides among men but not among women. We estimated that each 10% increase in the number of unemployed men was significantly associated with a 1.4% (0.5% to 2.3%) increase in male suicides. These findings suggest that about two fifths of the recent increase in suicides among men (increase of 329 suicides, 126 to 532) during the recession in 2008-10 can be attributed to rising unemployment. These results could also explain a small reduction in suicides in 2010, which coincided with a slight recovery in male employment.

Suicide and unemployment trends in England, 2000-10



Bias, confounding, and other reasons for caution

Although we could compare subregional variations in unemployment and suicide, the data cannot account for differences across employed and unemployed groups, and our results could indicate increasing risks among both groups during economic downturns. Within local areas, there may be differences in those groups most vulnerable to the effects of unemployment, such as people with low levels of education or pre-existing mental health problems. On its own, our study cannot ascertain whether the association between job loss and suicides is causal, although it is supported by the strength of the study's effect size, timing, consistency, and coherence with previous research.

Generalisability to other populations

Our findings reflect the experience of people claiming unemployment benefits due to job loss in England. The results may not generalise to settings with stronger labour market protections.

Study funding/potential competing interests

BB and DTR are supported by fellowships from the National Institute for Health Research and Medical Research Council, respectively. The authors declare no competing interests.

Effect of systemic steroids on post-tonsillectomy bleeding and reinterventions: meta-analysis of randomised controlled trials

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Response on bmj.com

"What is rarely considered in preventing unintended excessive bleeding is the consideration that a patient might have an underlying bleeding disorder. This is surprising, as the incidence of Von Willebrands disease is one in 50.

In the assessment of someone's risk of postoperative bleeding, it doesn't take much trouble to take a bleeding history. That way, patients at high risk can be identified preoperatively and managed appropriately intraoperatively."
Malcolm John Dickson, Nicola R K Anders, and Fiona Mackie, Royal Oldham Hospital, Oldham, UK

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STUDY QUESTION

What are the risks of postoperative bleeding, admission, and reintervention for a bleeding episode with the use of systemic steroids in patients undergoing tonsillectomy?

SUMMARY ANSWER

Although systemic steroids do not seem to increase the incidence of bleeding events or admissions after tonsillectomy, their use is associated with an increased incidence of surgical reinterventions for a bleeding episode.

WHAT IS KNOWN AND WHAT THIS PAPER ADDS

Systemic steroid use to reduce postoperative nausea and vomiting has increased, although it has been linked with postoperative bleeding after tonsillectomy. In this meta-analysis, perioperative administration of systemic steroids in patients undergoing tonsillectomy did not increase the risk of postoperative bleeding but did increase the incidence of reinterventions associated with steroids, which probably represents a greater severity of bleeding associated with steroid use.

Selection criteria for studies

We systematically searched Medline, Embase, Cochrane Central Register of Controlled Trials, Scopus, Web of Science, Intute, Biosis, OpenSIGLE, National Technical Information Service, and Google Scholar for randomised controlled trials comparing the administration of systemic steroids during tonsillectomy with any other comparator, and reporting the presence or absence of bleeding episodes (of any severity) or for which this information could be obtained from authors. No language restriction was applied.

Primary outcome(s)

Postoperative bleeding episodes.

Main results and role of chance

Administration of systemic steroids did not significantly increase the incidence of bleeding after tonsillectomy (29 studies, n=2674 patients; odds ratio 0.96, 95% confidence interval 0.66 to 1.40, I^2=0%). The incidence of admission due to a bleeding episode was not increased in the steroid group (17 studies, n=1722 patients; 1.16, 0.68 to 2.00, I^2=19%). We observed a significant increase in the incidence of surgical reinterventions in patients who received systemic steroids (12 studies, n=1178 patients; 2.27, 1.03 to 4.99, I^2=0%). No deaths were reported. Sensitivity analyses were consistent with the findings. The quality of evidence was high for post-tonsillectomy reinterventions, using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach.

Bias, confounding, and other reasons for caution

None of the included studies were designed to evaluate adverse complications of steroid use after tonsillectomy, and no study systematically screened for post-tonsillectomy bleeding events. A large proportion of studies had a limited follow-up period, precluding the evaluation of the incidence of secondary bleeding episodes. Moreover, the majority of included studies were of limited methodological quality, and many studies had substantial numbers of patients who were lost to follow-up. As a result, bleeding episodes may have been missed. Furthermore, the inclusion in meta-analyses of studies reporting no bleeding event in either group using a continuity correction could have underestimated the association. Since bleeding episodes are relatively rare events, unreported episodes could have greatly affected the study results.

Study funding/potential competing interests

This study was funded by personal funds. AFT and FL are recipients of a research career award from the Fonds de Recherche Québec-Santé and are supported by the Traumatology Research Consortium of the Fonds de Recherche Québec-Santé. LM and DAF are recipients of New Investigator awards from the Canadian Institutes for Health Research. RZ is a recipient of a randomised controlled trials mentorship award from the Canadian Institutes for Health Research. The authors declare no competing interests.

Summary of evidence for key outcomes

Outcome	No of studies	No of participants				Summary		Quality of evidence (GRADE)
		Steroids		Control		Relative effect, Peto odds ratio (95% CI)	Study events rates (steroids/control groups (%))	
		Events	Total	Events	Total			
Post-tonsillectomy bleeding episodes	29	65	1407	53	1267	0.96 (0.66 to 1.40)	4.6/4.2	Very low
Admission	17	37	908	25	814	1.16 (0.68 to 2.00)	4.1/3.1	Very low
Reintervention	12	19	634	8	544	2.27 (1.03 to 4.99)	3.0/1.5	High

Risk of fracture after bariatric surgery in the United Kingdom: population based, retrospective cohort study

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STUDY QUESTION

Does bariatric surgery increase the risk of fracture in morbidly obese patients in the United Kingdom?

SUMMARY ANSWER

Although bariatric surgery did not affect fracture risk significantly, our results suggest an increase in risk after three to five years, and in patients who have a greater decrease in body mass index after surgery.

WHAT IS KNOWN AND WHAT THIS PAPER ADDS

Bariatric surgery has been associated with a postoperative decrease in bone mineral density, but the influence on fracture risk has not been evaluated. This study shows that bariatric surgery is not associated with an increased fracture risk in the first few years, but does not exclude the possibility of a more detrimental association in the longer term.

Participants and setting

Within the UK General Practice Research Database, now known as the Clinical Practice Research Datalink, we selected all 2079 bariatric surgery patients with a body mass index of at least 30 before surgery between January 1987 and December 2010. A total of 10 442 controls without bariatric surgery were matched by age, sex, body mass index, practice, and year.

Design, size, and duration

In this retrospective cohort study, all patients were followed up for fracture (any, osteoporotic, or non-osteoporotic fracture), with a mean follow-up time of 2.2 years. Cox proportional hazards models were used to compare fracture rates between bariatric surgery patients and matched controls. Time-interaction terms were included to evaluate fracture timing patterns.

Main results and the role of chance

Compared with matched controls, overall risk of fracture did not increase significantly in bariatric surgery patients (8.8 *v* 8.2 per 1000 person years; adjusted relative rate 0.89, 95% confidence interval 0.60 to 1.33). Bariatric surgery also did not affect risk of osteoporotic and non-osteoporotic fractures. There was a non-significant trend towards an increased fracture risk in the first three months after surgery, and then after three to five years. Fracture risk also tended to increase in patients who had a greater decrease in body mass index after surgery, but again, this difference was not significant.

Bias, confounding, and other reasons for caution

We took account of changes over time in potential confounders, including classic risk factors for fracture. Since 2004, body mass index has been well registered in the Clinical Practice Research Datalink, which allowed careful selection of controls matched by body mass index; however, body mass index data were not routinely collected over short time intervals, which limited our statistical power when evaluating the influence of excess reduction in body mass index. We used a widely accepted definition of osteoporotic and non-osteoporotic fracture types, but did not have information on the level of trauma. We also did not have information on whether patients were considered for bariatric surgery and then did not undergo an operation because of lack of associated comorbidities. Finally, because of a limited period of follow-up, we cannot exclude the possibility of an increased fracture risk in the longer term.

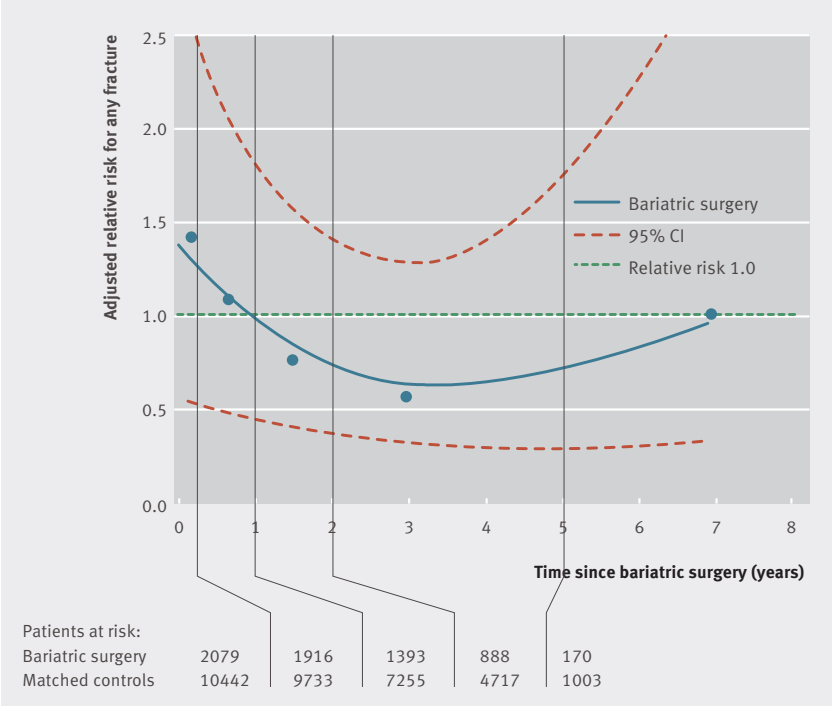
Generalisability to other populations

The Clinical Practice Research Datalink is a UK generalisable dataset, covering 8% of the UK population.

Study funding/potential competing interests

This study was funded by the International Osteoporosis Foundation and Servier. The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript. The authors have no competing interests.

Time since bariatric surgery and fracture risk



Migraine and cognitive decline among women: prospective cohort study

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STUDY QUESTION

Do women who experience migraine with or without aura or have a past history of migraine have different rates of cognitive decline compared with women who have no history of migraine?

SUMMARY ANSWER

In this prospective cohort of women, migraine status was not associated with faster rates of cognitive decline.

WHAT IS KNOWN AND WHAT THIS PAPER ADDS

Although several cross sectional studies and a few prospective studies have examined the association between migraine and cognitive decline, many were small or unable to stratify the association between migraine and cognitive decline by aura status.

Participants and setting

Women aged 65 or older enrolled in the Women's Health Study who provided information about migraine status at baseline and participated in cognitive testing during follow-up.

Design, size, and duration

Of the 6349 women, 853 (13.4%) reported any migraine; of these, 195 (22.9%) reported migraine with aura, 248 (29.1%) migraine without aura, and 410 (48.1%) a past history of migraine (ever having migraine headache but not reporting migraine headache within the year before baseline). The women were followed for an average of 3.4 years.

Multivariable adjusted associations between rates of change in global score for cognitive function by migraine status

Migraine status and assessments*	Coefficient (SE)	P value
Migraine with aura:		
Second assessment	−0.02 (0.05)	0.69
Third assessment	0.05 (0.05)	0.28
Migraine without aura:		
Second assessment	0.03 (0.04)	0.48
Third assessment	0.08 (0.04)	0.09
Past history of migraine:		
Second assessment	−0.0047 (0.03)	0.89
Third assessment	−0.01 (0.04)	0.75

The coefficients shown are the results of the joint effects of migraine status and the respective follow-up time.
*Follow-up assessments about two years apart.

Main results and the role of chance

Compared with those with no history of migraine, women who experienced migraine with aura or without aura or who had a past history of migraine did not have significantly different rates of cognitive decline in any of our cognitive scores. Women who experienced migraine were also not at increased risk of substantial cognitive decline (worst 10% of the distribution of decline).

Bias, confounding, and other reasons for caution

As migraine was self reported, women may have reported their migraine status incorrectly. However, all participants were health professionals, who are known to report health information accurately. Furthermore, validation studies have shown good agreement between self reported migraine and the *International Classification of Headache Disorders*. Finally, we did not observe a large amount of cognitive decline among the participants, possibly because of the age of the participants and the short follow-up period. However, other studies using this cohort have detected risk factors for cognitive decline.

Generalisability to other populations

Our cohort was composed of women aged 65 and older, mostly white, female health professionals, which might limit the generalisability of our results to other populations. We do not believe, however, that the biological mechanisms linking migraine with cognitive decline would be any different in our cohort from others.

Study funding/potential competing interests

The Women's Health Study is supported by grants from the National Heart, Lung, and Blood Institute (HL-043851, HL-080467, HL-099355) and the National Cancer Institute (CA-47988). The cognitive substudy of the Women's Health Study was supported by a grant from the National Institute of Aging (AG-15933). PMR was supported by a training grant from the National Institute of Aging (AG-00158). TK is supported in part by a chair of excellence grant of the French National Research Agency (Agence Nationale de la Recherche, R09177DD).

Kidney stones and kidney function loss: a cohort study

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Clinical review: Management of renal colic (*BMJ* 2012;345:e5499)

STUDY QUESTION

Are kidney stones associated with end stage renal disease (ESRD)?

SUMMARY ANSWER

Yes, development of a kidney stone that causes presentation to healthcare services is associated with an increased risk of ESRD.

WHAT IS KNOWN AND WHAT THIS PAPER ADDS

The association between kidney stones and the risk of subsequent kidney failure is uncertain. This population based study found that one or more episodes of stones during follow-up increases the risk of developing kidney failure over a median period of 11 years.

Participants and setting

All adults (≥18 years old) residing in Alberta, Canada, between April 1997 and March 2009 who were registered with Alberta Health and Wellness (the provincial health registry) were included in this study. More than 99% of residents participate in this coverage.

Design, size, and duration

We used a cohort study design and validated algorithms based on claims and facility use data. Individuals who developed a kidney stone during this time (n=23 706) were compared with the rest of the population (n=3 065 488) for risk of developing end stage renal disease (ESRD) by means of Cox proportional hazard models adjusted for potential confounders. We treated the development of a stone as a time-varying covariate. Individuals were followed for a median of 11 years.

Main results and the role of chance

One or more stone episodes during the follow-up period was associated with an increased risk of ESRD (adjusted hazard ratio 2.16 (95% CI 1.79 to 2.62)). The number of individuals who developed ESRD in the entire cohort was 5333 (0.2%) compared with 129 (0.5%) in the kidney stone cohort. In analyses of the effect modification of age and sex the risk of ESRD after one or more stone episodes seemed greater for women than men ($P_{interaction}$=0.003).

Association of first kidney stone episode during follow-up (*v* no stone) and risk of end stage renal disease by age and sex

	End stage renal disease
Age	
≥50 years:	
No of events/No of patients (%)	3554/722 035 (0.5)
Adjusted hazard ratio (95% CI)	2.01 (1.61 to 2.49)
<50 years:	
No of events/No of patients (%)	1762/2 370 325 (0.07)
Adjusted hazard ratio (95% CI)	2.81 (1.96 to 4.03)
Interaction between age and kidney stones	P=0.11
Sex	
Male:	
No of events/No of patients (%)	3270/1 558 442 (0.2)
Adjusted hazard ratio (95% CI)	1.87 (1.49 to 2.34)
Female:	
No of events/No of patients (%)	2036/1 533 918 (0.1)
Adjusted hazard ratio (95% CI)	3.36 (2.42 to 4.66)
Interaction between sex and kidney stones	P=0.003

Bias, confounding, and other reasons for caution

People with kidney stones were identified by their presentation to health services, and so our findings may not apply to those who did not seek medical care for a stone episode. Consequently, we cannot comment on the association between asymptomatic kidney stones and adverse renal outcomes. We were not able to determine the composition of the kidney stones and thus cannot assess the specific risk associated with different stone types. The absolute magnitude of the excess risk in people with stones was small.

Generalisability to other populations

Given the size of the cohort (>3 million individuals) and the diverse nature of the population in Alberta, Canada, this study is probably generalisable to other Western countries including the UK and US.

Study funding/potential competing interests

This work was supported by a team grant to the Interdisciplinary Chronic Disease Collaboration from the Alberta Heritage Foundation for Medical Research and by the University Hospital Foundation, the Kidney Foundation of Canada, and the National Institutes of Health. There are no competing interests.

Medical students' characteristics as predictors of career practice location: retrospective cohort study tracking graduates of Nepal's first medical college

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STUDY QUESTION

What characteristics of medical students predict doctors' eventual location of practice?

SUMMARY ANSWER

A cluster of medical students' characteristics, including paramedical background, rural birthplace, and lower academic rank, was associated with a doctor remaining in Nepal and with working outside the capital city of Kathmandu.

WHAT IS KNOWN AND WHAT THIS PAPER ADDS

Migration of doctors from low income to high income countries and from rural to urban areas is extensive, but evidence is mostly limited to high income countries. The association found between several pre-graduation factors and practice location for one low income country could be used to guide entrance criteria for medical school.

Participants and setting

We included 710 of the 727 graduates of the first 22 classes of Nepal's first medical college.

Design, size, and duration

We contacted doctors 4-26 years after graduation to collect demographic data, including locations of medical practice.

Main results and the role of chance

Of the 710 graduates we located, 193 (27.2%) were working in Nepal in districts outside the capital city Kathmandu, 261 (36.8%) were working in Kathmandu, and 256 (36.1%) were working in foreign countries. Of the 256 working abroad, 188 (73%) were in the United States. Students from later graduating classes were more likely to be working in foreign countries. Those with pre-medical education as paramedics were twice as likely to be working in Nepal and 3.5 times as likely to be in rural Nepal, compared with students with a college science background. Students who were academically in the lower third of their medical school class were twice as likely to be working in rural Nepal as those from the upper third. In a regression analysis adjusting for all variables, paramedical background (odds ratio 4.4, 95% confidence interval 1.7 to 11.6) was independently associated with a doctor remaining in Nepal. Rural birthplace (odds ratio 3.8, 1.3 to 11.5) and older age at matriculation (1.1, 1.0 to 1.2) were each independently associated with a doctor working in rural Nepal.

Bias, confounding, and other reasons for caution

This study included medical graduates from one low income country. Four hundred and thirty-six (60%) graduates provided full data, whereas 274 (38%) had only partial data recorded; these subsets were similar but not identical.

Generalisability to other populations

The findings should be validated for other countries. However, they generally align with other authors' preliminary findings and published theories about retention of doctors.

Study funding/potential competing interests

Nick Simons Institute funded this study. Some of the authors were staff of the Institute of Medicine, the medical school from which graduates were studied.

Odds ratio of remaining in Nepal (versus working in foreign countries) (n=351)

	Unadjusted		Adjusted	
Covariates	Odds ratio (95% CI)	Wald x^2 P value	Odds ratio (95% CI)	Wald x^2 P value
Male sex	2.4 (1.1 to 5.2)	0.03	1.1 (0.4 to 2.9)	0.82
Paramedical background	12.0 (6.3 to 22.8)	<0.001	4.4 (1.7 to 11.6)	0.003
Final academic score	0.6 (0.4 to 0.8)	<0.001	0.8 (0.6 to 1.1)	0.18
Birthplace in rural district	2.0 (1.2 to 3.5)	0.01	0.7 (0.3 to 1.7)	0.39
Rural high school	2.6 (1.6 to 4.5)	<0.001	1.7 (0.7 to 4.2)	0.27
Age at matriculation	1.5 (1.3 to 1.6)	<0.001	1.1 (1.0 to 1.3)	0.09

Odds ratios are from logistic model for specified outcome and adjusted for all covariates listed.